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☞ *Readers in search of a given subject will find it useful to bear in mind that the references are in several cases distributed under two or more separate but nearly synonymous headings—such, for instance, as Brain and Cerebral, Heart and Cardiac, Liver and Hepatic, Bicycle and Cycle, Child and Infant, Enteric and Typhoid, Bronchocele, Goitre, and Thyroid, Diabetes, Glycosuria, and Sugar, Eye, Ophthalmic, and Vision, &c., &c.*

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# A Lecture

ON

# THE CAUSES AND SIGNIFICANCE OF PHANTOM TUMOURS.

*Delivered at St. George's Hospital*

y Sir WILLIAM H. BENNETT, K.C.V.O., F.R.C.S. Eng.,

ENIOR SURGEON TO THE HOSPITAL; MEMBER OF THE COURT OF EXAMINERS, ROYAL COLLEGE OF SURGEONS OF ENGLAND, ETC.

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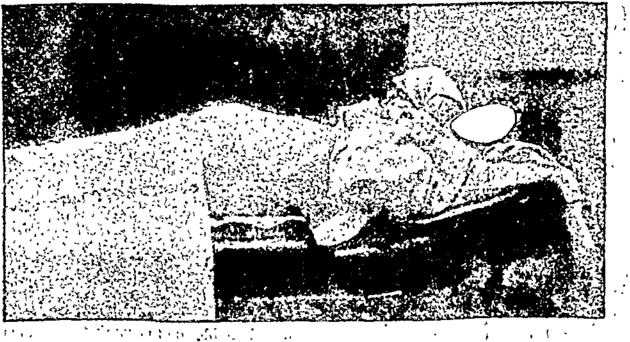
GENTLEMEN,—Phantoms, whatever their kind may be, ve a certain fascination for the majority of us, even if we e not superstitious. The very word recalls an early time of o when ghosts and other unpleasant things appealed ther strongly to the imagination; moreover, many of us ve, later in life, to face phantoms of some sort more often rhaps than we quite care to admit.

To-day I wish to call your attention to a surgical phantom" which differs from the phantoms of our youth, asmuch as it is not only visible but palpable—it can be en and handled. It is what is commonly known as a phantom tumour." This tumour comes and goes often thout obvious reason and generally without method; it is, a rule, painless, but sometimes it is the cause of great scomfort. The tumour is the result of muscular conaction; it is not in itself a disease, but it is a gn pointing to the existence of abnormal conditions which ay be close by or which may be somewhat remote. The aracteristics of these tumours are very uniform: they are ard and resistant, smooth, and in shape they conform to at of the muscle, or groups of muscles, concerned; over e abdomen they are always resonant, but less so than the rrounding parietes. Sometimes they disappear during eep, sometimes they do not; profound anæsthesia always ds to their disappearance. As I have already said, pain the tumour is generally conspicuous by its absence—the verse of what happens in muscular contractions occurring cramp; and it is a little difficult to understand how muslar contraction like that producing a phantom tumour can as a rule, so painless, although the contraction may in me cases persist, with certain intervals, for weeks or nths, or even longer. The fact, however, is undeniable. e causes of these tumours may be classified in the followg way: 1. Irritation.—(*a*) Irritation of the skin or of er superficial parts either immediately over the muscle muscles concerned or over the course of the nerves hich supply them; (*b*) the existence of underlying disease abnormality—for an example, supposing the tumour to be in the abdominal wall, some disease in the abdominal cavity which, by reason of its situation or relation, causes *nerve* irritation leading to contraction of a corresponding muscular area (such tumours, when occurring immediately over the underlying disease, are usually "protective"). 2. *Occupation.—In a certain number of cases* in which the occupation of the individual entails the use of a particular muscle or group of muscles for a long period continuously the muscles concerned come, as it were, into permanent action, and remain hard and enlarged, although the occupation has been temporarily discontinued. These are "occupation" phantoms." 3. Imitation.—In a certain type of neurotic people the tendency to imitate the diseases or deformities of others is very strong. "Nervous mimicry of disease" was the admirable term applied to these cases by Sir James Paget. The nervous mimicry of hip-disease is, perhaps, one of the commonest examples with which we meet of this curious tendency. Tumours are sometimes imitated in the same way, although the scope for the deception is necessarily very limited. These are "imitative phantoms."

Let me now give you a clinical example of each of these types.

FIG. 1.



Abdominal phantom simulating pregnancy, the result of irritation about the umbilicus (Case 1). From a photograph by Mr. Drake-Brockman.

### IRRITATION PHANTOMS.

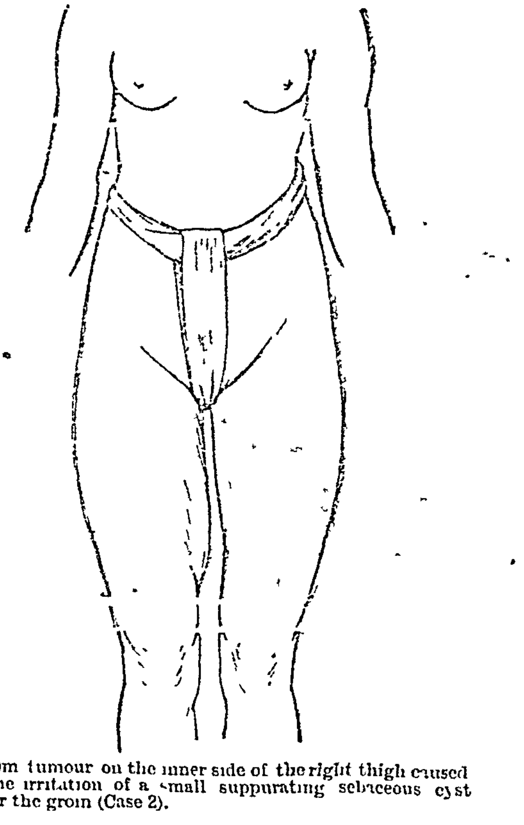
*Superficial Irritation.*—CASE 1.—About six months ago there was admitted into St. George's Hospital under my care a girl, 16 years of age, who presented all the appearances of being the subject of a large abdominal tumour below the umbilicus, and the suggestion had been seriously made that she was pregnant—a fact which shows how important a matter the proper appreciation of a thing of this kind may be. Upon examining the patient as she lay flat on her back the lower segment of the abdomen was exactly of the size and shape of that of a woman seven months pregnant, and nothing more characteristic in the way of outline could have been imagined (Fig. 1). The swelling, however, was resonant, and nothing could be grasped in the way of a tumour inside the abdomen either by the examination of the anterior abdominal region or by bimanual examination per rectum. The affected area of the anterior abdominal parietes, however, could be felt as a rounded, tense swelling very distinctly. The only other obvious abnormality was an area of acute eczema about the lower border of the navel. Bearing in mind what I have just said—viz., that the tumour was resonant and that no mass or disease of any kind inside the abdomen could be detected—I came to the conclusion that the case was one of phantom tumour due to the irritation of the patch of eczema, although, as sometimes happens, the tumour in this case persisted during sleep. The patient was placed under an anæsthetic, and as profound anæsthesia supervened the tumour could be felt to melt away under the hand, *leaving the abdominal outline normal.* A few hours afterwards, the patient having recovered from the effects of the anæsthetic, the tumour had returned in the *same shape and* situation as before. The obvious indication

No. 4088.

was to cure the eczema; this was, as so often happens, by no means easy, but finally little or no eczema was left, and the tumour was not noticeable. Later, however, the patient returned to the hospital with the eczema rather worse than before, the tumour being somewhat larger than it was when she first came under observation

CASE 2.—A well-nourished woman, 34 years old, consulted me on account of a swelling along the inner aspect of the right thigh, mainly over the adductor muscles, the shape of which it seemed somewhat to take. The history was one of a slight injury following upon a slip, which caused her to fall rather heavily, a year previously. Some bruising followed and a "bleb" (?) burst high up at the point at which the thigh joins the groin. This gave some trouble and was very slow in healing, as "matter formed." Three months after the injury the swelling of the thigh was first noticed on rising one morning; it was then large and was thought to have come suddenly; neither tenderness nor pain had, as a rule, been felt excepting after much exertion—e g., a longer walk than usual—when a feeling of great tiredness, stiffness, and aching pain occurred in the swelling which became temporarily larger and harder. The patient was well nourished and presented no appearance of serious disease. Upon examination the inner side of the right thigh was occupied by an elongated swelling along the adductor area extending above to within two inches of the pubic spine; it was hard, elastic, slightly moveable laterally, and seemed to involve the adductor longus muscle, extending downwards along the adductor magnus nearly to its lower end (Fig 2). A skiagram showed a slightly stronger shadow over the area of the tumour than over the other soft parts. As the peculiar elasticity raised a suspicion of fluid deeply seated several punctures with an exploring syringe were made with, however, a purely negative result, a little normal blood and nothing more coming away. As neither rest nor medicinal means affected the tumour in any degree whatever an exploratory incision was decided upon. The thigh was therefore packed in the usual way preparatory to operation and an anæsthetic was administered. Upon removing the packing and exposing the thigh the tumour had entirely disappeared. I confess that at the moment I was entirely at a loss to explain the disappearance of the swelling, but having in my mind the suspicion of fluctuation which existed I thought that the disappearance might perhaps be accounted for by the bursting of some deep thin-walled cyst whilst the patient was being lifted from her bed on to the operating table after the administration of the anæsthetic, although the disappearance seemed really to be too complete to be accounted for in this way. At any rate, nothing in the way of an exploratory operation was justifiable, and the patient was returned to her bed, nothing having been done. Upon seeing her again later in the day after she had recovered from the anæsthetic the tumour was as large and as manifest as usual. The diagnosis of the tumour as a phantom followed as a matter of course, but no source of irritation could be found excepting the remains of a small sebaceous cyst not quite healed in the vulvo-femoral chink. A little later this sebaceous residuum gave some trouble and was removed. Up to the time of the removal of this remnant of the sebaceous cyst the tumour had remained unchanged, but after the small operation necessary the tumour disappeared spontaneously and four months later had shown no sign of recurrence.

FIG 2.



Phantom tumour on the inner side of the right thigh caused by the irritation of a small suppurating sebaceous cyst under the groin (Case 2).

There can, I suppose, be no doubt that in this case the irritation of the sebaceous cyst gave the necessary stimulus for the production of the muscle tumour. The case is the most interesting of its kind with which I have met.

*Deep irritation.*—CASE 3.—A woman, 45 years old, had suffered for three years occasionally from vague abdominal pains; these, although somewhat diffused generally over the whole abdomen, were as a rule concentrated over the left hypochondriac and lumbar regions. On two occasions there had been very severe attacks of pain accompanied by vomiting with high temperature and on each of these occasions considerable swelling over the region of the cæcum had shown itself, subsiding slowly as the pains disappeared. On one occasion she had been jaundiced for nearly a week, but of this she thought nothing, as she had when quite young, had several attacks of jaundice. I first saw her at a time when the pains were worse than usual and confined to the right side of the abdomen. They were not acute enough to cause great distress, but there was some nausea and a slightly raised temperature (100° F.). Upon examining the abdomen the right side moved less freely than the left and over the cæcum was a well-marked swelling a little less resonant than the surrounding area, precisely like that seen in certain cases of appendicitis. There was, however, no great tenderness except at McBurney's point, where moderate pressure elicited acute pain which shot upwards, the swelling at the same time becoming more tense and hard. No other objective abnormality could be detected, but pressure just below the ninth costal cartilage caused the patient to "flinch." The motions were pale but not without bile, and the urine contained a faint trace of albumin. The patient looked ill, was losing flesh, and was clearly the subject of disease of some importance. Upon the subsidence of this slight exacerbation I thought that there was a suggestion of yellowishness about the conjunctivæ but it was too faint to be of consequence The diagnosis was clearly doubtful, but it seemed to lay between appendicitis and gall-bladder trouble It was manifest, however, that surgical interference was necessary, and I therefore opened the abdomen by an incision which would enable me to examine the appendix and gall-bladder. The appendix and the parts about it were perfectly normal. the gall-bladder was contracted, connected by inflammatory adhesions to the liver and duodenum, and contained a small pyramidal stone impacted in its duct The stone was removed (the gall-bladder having first been freed from adhesions), the opening was sewn up, and the abdominal wound closed by fish-gut, sutures in the ordinary way. A severe attack of jaundice supervened upon the operation and was slow in subsiding although it ultimately disappeared. The patient recovered from the operation without any drawback and six months later was perfectly well in all respects. The swelling over the cæcal region never became manifest after the operation.

This case is interesting inasmuch as it shows how very misleading a phantom may be when it is remote from the irritation which gives rise to it, and it is further of interest as it, together with the next case, shows the fallacy of trusting to tenderness over McBurney's point as a sure sign of appendix disease.

### PROTECTIVE PHANTOMS.

These are irritation phantoms, but they differ from those just described, inasmuch as the phantom immediately overlies and conceals the true disease beneath—"protective" is therefore a convenient name by which to describe them, as they protect the underlying condition from pressure, &c. They are practically confined to the abdominal wall.

CASE 4.—A young married woman, three months pregnant, was admitted into Wright's Ward under my care about 18 months ago on account of what was said to be appendicitis. It was the first attack of the kind from which she had suffered, and the history, although somewhat vague, seemed to point to the disease referred to. Upon examining the abdomen there was found a very distinct globular tumour in the right iliac region such as is frequently seen in appendicitis. The tumour was resonant but slightly less so than the surrounding parietes; "sub-resonant" would be a fair description of the result obtained by percussion. There was general pain over the lower abdominal region and some tenderness concentrated over McBurney's point; no deep pressure was tolerable, as the tenderness was so acute. The temperature was high (104° F.), a rigor was said to have occurred, and the patient was apparently in a serious condition. My impression was that the case was not one of appendicitis, but still on the whole I thought it better to operate as if for that disease. The patient was therefore anæsthetised in the usual way and upon removing the antiseptic packings the tumour was found to have entirely disappeared. This confirmed me in my impression that the case was not one of appendicitis, for although in certain cases of appendix disease *some* of the obvious swelling is of the phantom kind and disappears under profound anæsthesia I have never in appendicitis seen the *whole* of the swelling disappear. I felt pretty sure that the objective swelling was a "phantom" connected with some pelvic disease, although nothing abnormal could be felt on palpation either through the abdominal wall or per vaginam. I operated as if for appendicitis and found the appendix and cæcum quite normal. Upon examining the right ovary it was a little enlarged, bright red in colour, with several white patches scattered over its surface; on pricking one of these a drop of pus came away. The ovary was removed in the usual manner and the abdominal wound was closed. The patient recovered rapidly and was up and about in a fortnight. The ovary when it was examined after its removal was found to be in a condition of acute inflammation with spots of commencing suppuration scattered throughout its substance.

Acute suppurative ovaritis during early pregnancy is rare, but some cases have been recorded.

The commonest protective phantom is probably that which occurs in certain conditions of the liver, and is of a good deal of importance as it is more commonly mistaken for hepatic abscess than is generally supposed. The next case provides an example.

CASE 5.—A soldier, 38 years old, was invalided from South Africa with disease of the liver, the history and signs of which pointed strongly to abscess, and immediately upon landing (April 23rd, 1901) he came under my care with a view to immediate operation. He was a colonial who had been in South Africa from the beginning of the war and had remained well until nine months before he arrived in this country. The illness commenced apparently with an attack of dysentery of a mild type. After this he never felt well; he had frequent attacks of "fever" (?malarial) with rigors and rapid loss of flesh. For six months there had been constant pain about the liver, sometimes better, sometimes worse. For about the same time there had been tenderness, sometimes extreme, below the ribs on the right side. For two months there had been jaundice which for a fortnight had been intense. Upon coming under observation the patient was greatly emaciated and looked very ill. The skin and conjunctivæ were of a deep yellow tint, and the motions were void of bile, which was present in the urine in great quantity. The temperature ranged from 101° F. in the morning to 104·5° at night. Two-thirds of the abdominal cavity was occupied apparently by a very large liver which on the right side reached to within one inch of the iliac spine; it was generally smooth except at a point which corresponded to the upper segment of the right rectus muscle where a prominent tumour bulged forwards. This tumour was dull and elastic and upon very gentle pressure was extremely painful; moreover, upon pressure the bulging part became harder to the touch. There was some general tenderness over the whole of the large liver, but only of a moderate degree. By some who felt it the bulging portion seemed to fluctuate, but of this I could not satisfy myself. An abdominal exploration was clearly indicated, so the patient was prepared for operation in the usual way and the anæsthetic was administered on the bed, the patient being afterwards lifted on to the operating table. Upon removing the antiseptic packing it was seen that the bulging portion of the tumour had entirely gone and that the enlarged liver presented a uniformly smooth surface. I concluded at once that the tumour was a phantom, but as there was a possibility that its disappearance may have been due to the bursting of an abscess I opened the abdomen through the site of the previously bulging part. No abscess or inequality of the large liver existed and its surface was perfectly smooth. I have never seen so large a liver exposed by operation; it seemed to occupy the best part of the abdominal cavity, the intestines being pushed down to a small space in the left iliac region. On the surface it was rather darker in colour than normal; to the touch it was very hard. It was punctured in all directions by a long trocar and cannula, but nothing but blood came away. In all, 14 punctures were made. Free hæmorrhage followed each puncture but stopped spontaneously. The abdominal wound was closed by fish-gut sutures and one grain of calomel night and morning was prescribed. The patient recovered rapidly from the operation. The temperature became normal at the end of 10 days, and on August 18th, when last seen, the patient was apparently well. All jaundice had gone, he had gained nearly two stones in weight, and the liver, almost of normal shape, extended only two inches below the ribs. The bulging area in this case was clearly a "phantom" in the rectus muscle.

The case was remarkable in many respects, but the only point which I wish to emphasise here is the way in which the bulging phantom simulated the coming forward of an hepatic abscess. As I have already said, these supra-hepatic phantom tumours are of much more importance in relation to the diagnosis of liver abscess than is commonly supposed.

### OCCUPATION PHANTOMS.

These are unusual, and their diagnosis is not always easy. The following case affords a remarkable example.

CASE 6.—A man, whom most of you must well remember, was admitted under my care a short time since into the Fitzwilliam Ward; he was a compositor, 35 years of age, a very spare and sober man. Two months before his admission, as he was suffering from a bad cough, which he had been told was due to consumption, he applied for treatment at the Brompton Hospital for Consumption, and was there told that nothing of consequence was wrong in his chest, but his attention was called to a tumour above the left clavicle, of the existence of which he was previously quite ignorant. Now, it so happened that his wife was the subject of carcinoma of the breast of a most painful kind, and the discovery of the tumour came upon him as a considerable shock, mainly by reason of his wife's condition, which led him to think that he might be suffering from a cancer. The patient's thoughts now became concentrated upon this tumour with the result that first it became painful and then that it steadily grew—at least, that was his firm conviction. He consequently came to St. George's Hospital for advice and treatment. Upon examination there was occupying the left subclavian region a very distinct tumour which to the touch was as hard as bone; it was not tender, but a constant aching pain was complained of which at times shot down the arm like a "sharp toothache" (Fig. 3). Taking into consideration the health of the man and the feel of the mass the first impression naturally was, especially as the subclavian artery was very high in situation, that the swelling was due to the growth of an exostosis or to the existence of a "cervical rib" A skiagram, however, showed nothing whatever abnormal about the bony parts, nor did it show anything suggestive of sarcoma. A further inquiry into the man's history at this stage elicited the following interesting facts. In the course of his work as a compositor the patient was in the habit of holding in his left hand daily, and often for hours together, a "stick" which held the type which he was using, and he stated that for some time he had become unusually tired about the shoulder whilst at work, and he knew that when he was tired he was in the habit of holding the shoulder very high, as the change of position relieved him temporarily to some extent. The man's anxiety was so great that nothing short of an operation of some kind would satisfy him, so after he had been prepared in the usual way he was anæsthetised with a view to operation, although, as I was fortunate enough to say at the time, I should not have been surprised diseases. It acts both by its influence on digestion and by causing cutaneous hyperæmia. It does least harm when taken with food and when the percentage of alcohol present is small. On the whole the lighter wines are less prejudicial in their effects than other forms of alcohol, but spirits (except when well diluted), champagne, and beer should be avoided. Tea frequently does much harm, chiefly because it is taken in excess and apart from food; it is also often infused too long. Coffee and cocoa are less injurious, but these, too, should be taken in moderation.

I may mention now the influence of tobacco. The connexion between disease of the skin and tobacco is not so obvious as in the case of alcohol, but I have little doubt of the harmful effect of tobacco, especially in excess; caution on the part of the patient in this respect is therefore advisable.

There are, however, other ingesta deserving notice, as they can give rise to disease of the skin. These are drugs. Many medicines have the power of evoking skin manifestations even in those who are in health, and still more likely is the skin to be affected in disease, so that the possibility of some part of the lesion being the result of medication must always be borne in mind.

The climate and air have much influence on many diseases of the skin. On the whole, a fairly dry inland situation is best for these cases, for sea air is very irritating in many forms of eczema; but for conditions in which the general nutrition is impaired, as in lupus, sea air may have a markedly beneficial effect. It is difficult to lay down general rules on the subject and each case must be treated on its merits.

The effect on cutaneous disease of soap and water is so important as to require special mention. Even in health frequent washing damages the skin by depriving it of much or all of its natural fat, so that it becomes unnaturally dry and also probably more easily invaded by parasitic micro-organisms. The effect is still more harmful in disease. Except in the skin diseases due to the animal and some of the vegetable parasites washing is of no therapeutic value, and in many morbid cutaneous conditions, especially in eczema, it may be exceedingly harmful. Where washing cannot be avoided the injurious effect of the water may be to some extent mitigated by the addition to it of oatmeal or gelatin, so that a demulcent action is exerted on the skin. In cases in which washing is admissible the choice of a soap is generally not difficult. That soap is beneficial to the individual patient the use of which is not followed by redness or smarting. It is hardly necessary to say that there is no soap that far surpasses all others. Of recent years superfatted soaps have been introduced, and they are certainly less irritating to most skins; they are not, however, so pleasant to use, and naturally their detergent effect is less. Of medicated soaps I have little to say, as I do not consider soap to be a convenient vehicle for the application of drugs except in very peculiar cases.

We now come to the more directly therapeutic part of the subject. It is obvious that if the general health be impaired we should endeavour to restore it, although we may be unable to recognise that any causal connexion exists between the general condition and the cutaneous lesion. The digestion should be treated if dyspepsia be present, and any abnormal condition of the bowels, such as constipation or diarrhœa, should be corrected. In many cases, however, the general health appears to be perfect.

There is a very definite opinion prevalent amongst the public and held even by some medical men that there is some risk in curing a disease of the skin. The eruption and the discharge from it are imagined to be beneficial and it is thought that if these are removed then the disease is "driven inwards" and produces very serious symptoms. These ideas were formerly very widespread among the medical profession and they are to be found in all the older works on dermatology. Yet at the present time it cannot be said that we have any definite facts to support such an opinion. It is known that in some of the specific fevers, if the rash does not come out well, or if it recedes, the constitutional symptoms tend to be more severe and a fatal result often follows. This is probably the foundation or part of the foundation for the idea that the rapid removal of a cutaneous malady may give rise to severe internal disease. Possibly since the skin is a great excretory organ the cessation of its secretion may cause the retention in the body of noxious substances, but of this we know very little. At all events, no apprehension of doing harm to the patient need deter us from removing as speedily as possible a disease of the skin.

An accurate diagnosis is the first essential for the satisfactory treatment of skin diseases, as of disease in any other part of the body. Our aim in treatment should be to remove the cause of the disease, if possible; but if the cause is unknown or if it cannot be removed we must treat the symptoms, and even when the cause is known and the disease is readily amenable to treatment the symptoms, or some of the symptoms, may need treatment, either because they are especially distressing to the patient or because it is not possible to remove the cause immediately. For instance, it is sometimes necessary to treat the itching of psoriasis because it may be very troublesome in itself, although we can in a few weeks or months completely remove the disease. It must not be imagined that when we know the cause the treatment which is the most obvious is necessarily the best. Many cutaneous diseases are now known to be microbic in origin, yet the direct application of antiseptics will in many cases not lead to recovery. Indirect methods are thus sometimes indicated.

The treatment of a disease of the skin may be internal or external. At one time the internal treatment was considered of very great importance in all forms of cutaneous disease, while external applications were thought to be of much less importance. On the whole the recent tendency has been to exalt the efficacy of external treatment and to discredit somewhat internal medication. It should be obvious from even a superficial study of the etiology of the diseases of the skin, even so far as we are acquainted with it, that in one disease internal treatment and in another external treatment must be of the most value, but in nearly all diseases of the skin both methods of treatment are desirable or even necessary.

Here seems to be the most convenient place to speak of the use of the natural mineral waters in dermatology. I think there can be no question that their value has been overrated. Doubtlessly in some cases the pure air, the simple diet, and the early hours observed at a spa contribute materially to the improvement of the condition of the skin, but it is improbable that the mineral waters themselves have any more than a very slight beneficial effect. Yet there is a very general opinion that these waters are of great efficacy, but disappointment will almost certainly follow any very exalted expectation of the benefit likely to result from their employment.

I have no intention of considering all the drugs which may be administered in cutaneous disease, but I think it well to say a few words on one of them—namely, arsenic. For many years arsenic has been looked upon as the special drug to be employed in many skin diseases, and, in fact, many medical men administer arsenic in almost every case of disease of the skin with which they have to deal. Yet, curiously, those who have most to do with the treatment of cutaneous disease employ the drug comparatively rarely—in fact, I am inclined to think that they employ it more rarely every year that goes by. Some 30 or 40 years ago a Mr. Thomas Hunt advocated the administration of arsenic in all skin diseases; he gave it very systematically and for very long periods, even for many years. This very prolonged use of arsenic is not common nowadays, yet at the recent Dermatological Congress in Breslau one speaker maintained that arsenic could not be said to have failed until it had been administered for several years. Arsenic is indeed of value, even of great value, in several cutaneous disorders, for instance, in psoriasis, pemphigus, and lichen planus, but its action is by no means certain; it is often slow in manifesting itself and the drug cannot or should not be given if the skin is distinctly inflamed, for it increases the inflammation and may cause the spread of the disease which it was intended to cure. Moreover, arsenic is capable of giving rise itself to morbid changes in the skin; not only does it increase, as I have said, any inflammation which is already present, but when the drug is administered for a prolonged period, even in small doses, the skin becomes pigmented, and on the palms and soles great thickening of the epidermis occurs, and in a few cases multiple epitheliomata have developed. Enough has been said to show that arsenic should not be given unnecessarily or hastily; indeed, as a rule arsenic should only be tried late in a disease, when other modes of treatment have failed. There is no other drug about which I think it necessary to speak in this connexion, for there is no other which has been so misused as arsenic.

With regard to the external remedies the dermatologist has an extensive choice. Baths are in certain cases of great value. In no other way is it possible to obtain so thorough an action on the skin, but, on the other hand, there is the risk of the absorption by the skin of substances from the bath, so that a bath should never contain any substance the absorption of which might be dangerous. "Permanent" baths, in which a patient is immersed for days or even weeks, are but little used in this country and though occasionally of great use they are troublesome and are of very limited application. The capacity of an ordinary bath is about 30 gallons, and the quantity of drug to be added must be calculated for that amount. Many modern baths, however, do not hold much more than 20 or 25 gallons, so that a little less medicament should be ordered.

Ointments are certainly more frequently prescribed than any other form of application, and they are very convenient, especially when inunction is required, but they are uncleanly and may often usefully be replaced by other applications. Ointments are usually at the present day made up with hard and soft paraffin. These keep well, never becoming rancid, and therefore do not tend to irritate even though they have been made long previously. This advantage does not appear to me to be of any great moment, for ointments are better for being freshly prepared, but the animal and vegetable fats seem to me to be *much better suited for ointment bases than the paraffins,* and I think that a drug made into an ointment with a basis of fat is able to exert a deeper effect on the skin It is important for you to bear in mind that ointments containing mercury and its salts must not be applied over too large an area as there is great risk of absorption. Ointments are not suited for any condition in which there is a large amount of exudation, for this exudation raises the ointment from the surface of the skin and to a great extent prevents it exerting its effect. When there is a profuse secretion from the skin lotions and dusting powders are suitable. When lotions are applied it is generally advisable to keep the part continuously moist, but no oil-silk should be applied over the dressing Dusting powders act chiefly by absorbing any exudation that may be present. They have to be used freely to obtain the best effect, and are hardly suited for patients who have to go about their work. Traumaticin, which is a solution of gutta-percha in chloroform, forms a very convenient vehicle for many drugs. When painted on the surface of the skin it dries quickly and forms an impermeable covering, which maintains the medicament in close contact with the part and at the same time effectually prevents any staining of the clothes Bassorin and gelanthum are two *very pleasant bases. They can be* smeared on the skin, and in a short time they dry and form a closely-adherent pellicle, which is, however, readily soluble in water, so they can be removed quickly. Unna's plaster muslins and salve muslins are useful vehicles when it is desired to obtain the prolonged action of a drug on a part. Pastes are also of value as they allow an exudation to make its way through them and they are therefore often superior to ointments. Pastes are practically composed of a combination of an ointment with a powder.

I need say but little of surgical treatment, scraping, excision, skin-grafting—all have their place in dermatological therapeutics—nor need I here describe the treatment of disease of the skin with light or the Roentgen rays; they are both of them of considerable value in suitable cases You will find that as the disease varies from time to time so will it be necessary to alter the drugs employed and the mode of their application.

Finally, I might suggest that to become well acquainted with the therapeutics of a few substances and the best mode of employing them will be better than to make a hasty inconclusive trial of every new preparation or treatment that is devised.

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HOSPITAL FOR EPILEPSY AND PARALYSIS, REGENT'S PARK.—In aid of the funds of this hospital there will be an amateur production of a new and original four-act play (for the first time in London) entitled *The Scarred Hand*, by Val de Garno and Leopold Montague, on Monday, Jan. 13th, at St George's Hall, Langham-place, W. We understand that the pen-name of Val de Garno veils more or less closely the identity of a member of the medical profession and that the play itself, which has had considerable success in the provinces, possesses a strong medical element.

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# A Clinical Lecture

ON

# SEVENTEEN CASES OPERATED ON FOR SO-CALLED "INTERNAL DERANGEMENT OF THE KNEE-JOINT."

*Delivered at University College Hospital*

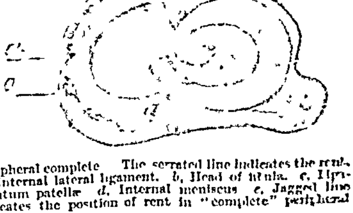
BY ARTHUR E. J. BARKER, F.R.C.S. ENG. AND IREL.,

PROFESSOR OF THE PRINCIPLES AND PRACTICE OF SURGERY AT UNIVERSITY COLLEGE AND SURGEON TO UNIVERSITY COLLEGE HOSPITAL, LONDON.

GENTLEMEN,—It so happens that an interesting group of cases of "internal derangement of the knee-joint" has comparatively recently been operated on in my wards at University College Hospital. These are well deserving of study, helping us as they do to understand something of the pathology, clinical history, and treatment of this affection. But for any safe generalisation on these points we must take larger numbers To this end I have looked up the notes of all the cases which have fallen to my lot for operation within the past five years or so in hospital and added some seven on which I have operated in private during the same period All these, taken together, in which the joint has been opened are safer guides than others treated by palliative measures in which the structures involved have *not* been seen and in which the actual details of the lesions must accordingly remain to some extent doubtful. Of the latter, of course, one sees a much larger number; for it must be obvious at once to anyone who goes into the matter that all cases of "internal derangement of the knee-joint" do not require operation.

Now, first of all, what is meant by the title just employed, which was, I believe, first used by Mr. Hey of Leeds many years ago? Although the usual name now given to the condition described formerly as "internal derangement of the knee-joint" is "dislocation of the semilunar cartilage," it becomes quite clear to anyone who sees many cases of the lesion in open joints that there are several varieties of displacement, both as to position and degree, included under the term. It is important to bear this in mind, inasmuch as the same treatment is *not applicable to all. In order* to obtain some clear notion on these points let us glance at what has been actually seen when operating on the joints in this group of cases alluded to In the first place, the cartilage affected has been in every case the *internal.* And in the many other cases which I have seen but not operated on there has been clear evidence that the internal meniscus was the one at fault in all but one doubtful case This may be only a coincidence, but it is at least significant. The next point observed was that the semilunar cartilage was in all these cases split in the direction of its fibres, which run, as is well known, in a semicircle. In none of them was the cartilage torn across at any point between its two ends. Such lesions are said to occur, and I know of one most competent observer

FIG. 1.



"Peripheral complete The serrated line indicates the rent. *a*, Internal lateral ligament. *b*, Head of tibia. *c*, Ligamentum patellæ *d*, Internal meniscus *e*, Jagged line indicates the position of rent in "complete" peripheral separation.

"central splitting," also in cases where the "partial rent" s behind the internal lateral ligament. Here it is better to omplete the rent and to take away the whole meniscus.

It goes without saying that all these measures must be arried out without any manipulation of the parts involved vith the fingers. Nothing should touch the open surfaces xcept carefully sterilised metal instruments and sterile gauze. Antiseptics must be avoided They are calculated nly to increase the irritation in the joint. Moreover, the vound should not be kept open one moment longer than is bsolutely necessary. An ice bag over the dressings for the irst week or so is pleasant to the patient and probably keeps lown the effusion which usually follows to some slight extent he traumatic insult to the structures of the articulation. Treated on these lines there should be but little risk in these perations and all should heal well without trouble as these ave done.

*List of Cases of Internal Derangement of the Knee-joint.*

| No. | Sex. | Age. | Year. | Nature of derangement. |
|---|---|---|---|---|
| 1 | M. | 24 years. | 1895 | Partial anterior. |
| 2 | M. | 44 " | 1896 | Complete internal dislocation. |
| 3 | M. | 26 " | 1896 | " " " |
| 4 | M. | 33 " | 1896 | " " " |
| 5 | M. | 40 " | 1896 | Partial posterior. |
| 6 | M. | 21 " | 1897 | Complete internal dislocation. |
| 7 | M. | 26 " | — | Partial anterior. |
| 8 | M. | 29 " | 1898 | Polypoid tag. |
| 9 | M. | 40 " | 1898 | Partial anterior. |
| 10 | M. | 24 " | 1898 | Complete internal dislocation. |
| 11 | M. | 18 " | 1899 | Partial anterior. |
| 12 | M. | 19 " | 1900 | Central complete. |
| 13 | M. | 16 " | 1901 | " " |
| 14 | M. | 28 " | 1901 | Partial posterior. |
| 15 | M. | 21 " | — | Complete internal dislocation. |
| 16 | M. | 22 " | 1901 | — |
| 17 | M. | 32 " | 1901 | — |

These 17 cases are made up as follows: Complete internal dislocation, six (Fig. 5); partial anterior peripheral, 5 (Fig. 3); partial posterior peripheral. 3 (Fig. 4); central complete, 2 (Fig. 2); and polypoid tag. 1 (Fig. 6); total 17.

# ON THE ETIOLOGY AND PATHOLOGY OF SCURVY.

By GEORGE LAMB, M.B. Glasg.,
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*(From the Research Laboratory, Bombay.)*

THE disease clinically designated as "scurvy"—that is, a collection of symptoms known to clinicians as scurvy or the scorbutic condition—has during the last few years received renewed attention from pathologists with the view of determining what is the pathological condition which underlies these symptoms and what is the cause of this pathological condition. Three hypotheses have recently been put forward by different observers. These hypotheses are founded for the most part on direct observations on cases of scurvy and on the result of experiments on animals. They may be briefly summarised as follows.

1. Professor A. E. Wright[1] of Netley in 1895 put forward the theory that the scorbutic condition was probably a condition of acid intoxication—that is, a condition in which there was a marked diminution in the normal alkalinity of the blood plasma, the result of a dietary of food-stuffs which contained a large excess of mineral acids over bases—a dietary, in fact, of meats, especially salted meat, and cereals, to the exclusion of green vegetables, tubers, and potatoes. This condition of acid intoxication he compared to the acid intoxication which can be experimentally produced in herbivora by the ingestion of a surplus of mineral acids. It is unnecessary for my purpose to follow Professor Wright through the close reasoning which runs through this communication. At a later date he was able to test the correctness of the inferences which he had previously set forth. Thus, in THE LANCET[2] he recently recorded the results of the estimation of the alkalinity of the blood serum in the case of seven soldiers who had been invalided from South Africa to Netley. These patients all presented the classical symptoms of scurvy, in most instances in a marked degree. In every case the alkalinity of the blood serum was found to be strikingly reduced below the normal. Not only was this the case, but a very striking amelioration of the condition followed upon the exhibition of lactate of soda and other similar substances. It would appear, therefore, from these facts, that Professor Wright had established beyond a doubt that scorbutic symptoms are, in some instances at least, associated with a condition of acid intoxication which can easily be rectified by the administration of salts of the vegetable acids. If this hypothesis could be supported by observations in India similar to his own the prophylaxis and treatment of this condition would become a simple matter. Scurvy, which is so commonly seen in Indian jails and which is such a frequent cause of invaliding during active service on the frontier of India, would soon become a thing of the past.

2. Lieutenant W. Glen Liston, I.M.S.,[3] investigated in the jail at Akola, Berar, four cases which showed marked scorbutic symptoms. In the fæces of all these patients he found the ova of ankylostoma duodenale in large numbers He therefore put forward the opinion that the symptoms noticed were in all probability dependent on the presence in large numbers of this intestinal parasite. It would further appear from Major Reilly's remarks[4] on Lieutenant Liston's observations that several cases of scurvy which were almost moribund were ultimately cured as soon as the parasites had been expelled from the intestine by the exhibition of thymol. Lieutenant Liston's description of the symptoms in these cases does not, to my mind, convey the idea that he was dealing with true cases of scurvy. A profound anæmia seems to have been the predominant condition. Further, it is apparent, in view of the great prevalence of this intestinal parasite in healthy natives of India, that these observations would have to be greatly extended before any definite conclusion could be arrived at.

3. Finally, Mr. F. G. Jackson and Dr. Vaughan Harley[5] have come to the conclusion that neither lime-juice nor fresh vegetables prevent scurvy or cure it. They consider that scurvy is a condition of ptomaine poisoning produced through the eating of tainted animal food. This opinion, which was first propounded by Professor Torup of Christiania, is advocated by Mr. Jackson and Dr. Harley as being in consonance both with the observations of sojourners in the Arctic and Antarctic regions and with the results of certain experiments on monkeys which were made by themselves. This last theory may at once be dismissed from consideration in connexion with the explanation of the scorbutic symptoms so commonly seen amongst the prisoners in Indian jails and amongst the sepoys and followers in native regiments when employed on field service on the frontier of India.

The symptoms of the disease as seen in these bodies of men are the ordinary and classical symptoms known as scurvy. There can therefore be no doubt as to the identity. from a clinical standpoint at least, of the ordinary scurvy and of scurvy as seen and described by numerous medical officers of the army of India. Now these men are for the most part cereal eaters. In jails the meat ration, as we shall see later, consists of four ounces of fresh meat without bone. This ration, as a rule, is given only once a week. Further. on field service the native army is not supplied with any tinned meat. The only meat ration which is issued is, as circumstances permit, the flesh of goats or sheep. Even this ration is, from caste prejudice, not taken advantage of by many men. From personal experience, moreover, I can say that many of those men who suffered from severe scurvy during the Waziristan expedition of 1894-95 never ate meat of any kind, confining themselves entirely to a cereal and vegetable dietary. Such, also, I know to be the common experience of other medical officers. It is apparent, therefore, that in the light of these facts the ptomaine theory of the etiology of scurvy will not explain the causation of this disease as it is commonly seen in India.

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[1] Army Medical Report for the year 1895

[2] THE LANCET, August 25th, 1900, p. 565.

[3] Indian Medical Gazette, October, 1900. p. 330.

[4] Ibid., July, 1900, p. 268.

[5] THE LANCET, April 28th, 1900, p. 1134.

The observations in 11 cases of scurvy which I have now to put on record were made solely with the object of ascertaining if more evidence could be obtained in support of either of the hypotheses mentioned above (No. 1 and No. 2)—viz., the hypotheses put forward by Professor Wright and Lieutenant Liston respectively. In each case the alkalinity of the blood serum was estimated and the fæces were examined carefully for ova of dochmius duodenalis.

The method which was used to measure the alkalinity of the blood serum was the method which has been devised and described by Professor Wright.[6] I may mention in passing that I had the advantage of having been taught the technique of this method by Professor Wright himself and of having made many observations on animals and on man under his direct supervision. There can therefore be no doubt on the question of the comparability of my results from the point of view of the technique employed with those of Professor Wright. Dilutions of deci-normal sulphuric acid in multiples of 10, or when necessary of five, were employed in titrating the serum. I have to thank Major Collis-Barrie, I.M.S., chemical examiner to the Government of Bombay, for supplying me with the standard deci-normal acid solution. The dilutions of this were made with normal saline solution. The indicator employed was, as recommended by Professor Wright, a sensitive red litmus paper, for which also I am indebted to Major Collis-Barrie.

As a preliminary step I estimated, as controls, the alkalinity of several samples of blood serum taken from healthy natives, servants in this laboratory. I found that among these natives the maximum value of the alkalinity of the serum was $\frac{N}{25}$—that is, that the blood serum was exactly neutralised by an equal quantity of a 25-fold dilution of normal sulphuric acid. The average alkalinity was found to be equivalent to $\frac{N}{30}$ sulphuric acid. This result would appear to show that the alkalinity of the blood of natives of India is slightly greater than that of the blood of Europeans, for Professor Wright[6] has stated that on the average he found the normal alkalinity to be $\frac{N}{35}$. In conducting the examination of the fæces, undertaken to test the theory of Lieutenant Liston above referred to, slides were prepared either from the fresh fæces, when these were available, or from a sample which had been kept in a weak solution of carbolic acid. From three to six specimens were carefully examined in every case for the ova of ankylostoma.

I have first to detail the result of the examination conducted in the case of a series of five cases of scurvy occurring in prisoners in Thana Jail, an institution situated a few miles out of Bombay. I am indebted to Dr. Moos, the medical officer of this jail, for his kindness in bringing these cases under my notice and also in affording me every opportunity of investigating them.

CASE 1.—The patient was a Hindu of the Koli caste, aged 35 years, who had been admitted into the jail on Dec. 7th, 1899. The patient had enjoyed good health until just before his admission into the hospital. He was received into the hospital on Sept. 5th, 1900, complaining of pains in the legs and presenting symptoms which warranted a diagnosis of scurvy. He came under my observation on the 25th, when his condition was as follows: The gums were very much swollen; they were spongy and bled easily on being touched; the teeth were very loose. There was slight œdema of the face. Both legs below the knees were swollen, hard, and brawny in appearance; they were very painful on the slightest pressure. This condition of the legs was due to subcutaneous and intermuscular extravasations, especially in the calves, but also affecting the anterior tibial muscles. There was no skin eruption of any kind. Diarrhœa had never been present nor had any external hæmorrhages occurred. The alkalinity of the blood was found to be $\frac{N}{30}$, and the blood coagulation time was about four minutes. Since admission to the hospital the patient had been treated with lime-juice and citrate of iron and quinine along with a special diet. As all the five cases which I had under my observation in the jail at this time received this diet I shall mention it more in detail later. No improvement had taken place under this treatment. The further progress of this case was interesting. On the 27th the lime-juice and citrate of iron and quinine were stopped and lactate of soda (60 grains daily) was substituted. The special diet was continued. In spite of this treatment the patient got gradually worse and died on Oct. 11th. In my absence Dr. Moos made a necropsy. He reported that he found the usual intermuscular extravasations and serous effusions which are met with in fatal cases of scurvy.

CASE 2.—The patient was a Hindu of the Koli caste, aged 35 years, who had been imprisoned on Jan. 3rd, 1900. The patient was admitted into hospital on Sept. 5th presenting the usual symptoms of scurvy. He came under my direct observation on the 25th, when his condition was as follows: The gums were markedly swollen and spongy and bled readily. The teeth were very loose. There was a large unhealthy-looking ulcer over the right inner malleolus. There was considerable œdema of both feet and legs. The calves were swollen, hard, hot to the touch, and brawny in appearance. There were no subcutaneous ecchymoses. The alkalinity of the blood was found to be $\frac{N}{30}$ and the blood coagulation time was four and a quarter minutes. Since admission to hospital there had been neither diarrhœa nor external bleeding. He had been treated with lime-juice and citrate of iron and quinine, as well as receiving the extra diet to be mentioned hereafter. There had been no improvement in his condition under this treatment. On the 27th the lime-juice and citrate of iron and quinine were stopped. Instead of these medicines lactate of soda (60 grains daily) was administered, the special diet being at the same time continued. On Oct. 6th the fæces were examined for ova of dochmius duodenalis. The results of this examination were negative. On the 12th Dr. Moos reported that there had been no improvement since the new treatment was begun. After this date, however, the patient began to improve slightly and was ultimately discharged cured on Nov. 30th.

CASE 3.—The patient was a Hindu of the Koli caste, aged 28 years, who had been imprisoned on June 6th, 1900. He was admitted into hospital on Sept. 17th, 1900, presenting the usual symptoms of scurvy. He had only recently recovered from an attack of cholera. He came under my observation on the 25th, when his condition was as follows. The gums were spongy, although not so markedly spongy as in Case 1 and Case 2. The right leg below the knee was much swollen, hard, and painful, with marked œdema of the foot. The left leg was normal. The alkalinity of the blood was found to be $\frac{N}{35}$. Since admission to hospital there had been no diarrhœa or external hæmorrhage. He had been treated with citrate of iron and quinine as well as the extra diet, the same as in Case 1 and Case 2. He had had no lime-juice. There had been no improvement in his condition since admission. On the 27th the citrate of iron and quinine were stopped and lactate of soda (20 grain doses three times a day) was substituted. The extra diet was continued. On Oct. 6th the fæces were examined for ova of ankylostoma duodenale. The examination was negative. On the 12th Dr. Moos wrote to me that there had been no, or only very slight, improvement since the patient had been admitted to the hospital, but after this date he gradually improved and was discharged practically well on Nov. 12th.

CASE 4.—The patient was a Hindu of the Agree caste, aged 40 years, who had been imprisoned on Sept. 3rd, 1899. He was admitted into hospital on Sept. 18th, 1900, when he showed slight symptoms of scurvy. He came under my observation on the 25th, when his condition was as follows. There was only slight sponginess of the gums; the teeth were all very loose. There was well-marked œdema of the left foot, while the left leg below the knee was swollen, hard, and brawny. Great pain was complained of on the slightest pressure of this leg. The right leg and foot were normal. The alkalinity of the blood was found to be $\frac{N}{30}$. Since his admission to the hospital there had been neither diarrhœa nor any external hæmorrhage. Patient had been treated with citrate of iron and quinine as well as the special diet. No lime-juice had been given. On this treatment there had been very slight or no improvement. On the 27th the citrate of iron and quinine were stopped and the administration of lactate of soda (60 grains per diem) was begun. The extra diet was continued. On Oct 6th the fæces were examined carefully for ova of ankylostoma duodenale. The result of this examination was negative. On the 12th Dr. Moos reported that there had been no further improvement since the lactate of soda was begun. A month later (on Nov. 12th) the patient was discharged cured.

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[6] THE LANCET, Sept. 18th, 1897, p. 719.

CASE 5.—The patient was a Hindu of the Lincayeb caste, aged 45 years, who had been imprisoned on Oct. 23rd, 1899. He was admitted into hospital on Sept. 5th, 1900, showing some of the usual symptoms of scurvy. He came under my observation on the 25th when his condition was as follows. There was only slight sponginess of the gums. Both legs below the knee were much swollen, hard, brawny, and extremely painful on the slightest pressure. There was well-marked œdema of both feet. The alkalinity of the blood was estimated to be $\frac{N}{30}$. Since admission to the hospital the patient's condition had remained *in statu quo*. During this time he had not suffered from diarrhœa nor had there been any external hæmorrhage. No lime-juice had been given. He had been treated with citrate of iron and quinine and was also given the special diet. On the 27th lactate of soda (60 grains daily) was substituted for the citrate of iron and quinine. The special diet was continued. On Oct. 6th an examination of the fæces was made for the ova of dochmius duodenalis No ova were found On the 12th Dr. Moos reported that there had been no improvement in the symptoms since the patient's admission to the hospital. On Nov. 14th the patient was discharged to light work.

Before proceeding to record the remaining six cases, who were natives from the bazaar under treatment in a general hospital in Bombay, it would be well to consider further the well-marked series of cases detailed above and to draw attention to a few points which bear on the questions under discussion.

In the first place, then, as regards the etiology of these cases it is interesting and important to be able to put on record the dietary which these patients had been fed upon before admission to hospital, for inasmuch as all these men had been resident in the jail for periods varying from three to twelve and a half months before symptoms of scurvy developed it is evident that any error or deficiency in diet before their incarceration can hardly be brought forward as a factor in the etiology of the scorbutic symptoms. The scale of this diet may be tabulated as follows:—

TABLE I.—*Showing the Scale of Ordinary Diet of Prisoners.*

| Articles. | Sunday. | Monday. | Tuesday. | Wednesday. | Thursday. | Friday. | Saturday. |
|---|---|---|---|---|---|---|---|
| | Oz. | Oz | Oz. | Oz. | Oz | Oz. | Oz |
| Wheat flour or rice | 12 | *Nil* | *Nil.* | 12 | *Nil* | *Nil.* | *Nil* |
| Jowari, bajiri, or nagli flour . ... .. ... | 12 | 24 | 24 | 12 | 24 | 24 | 24 |
| Dhall toor* ... . ... | *Nil* | 5 | 5 | 5 | 5 | 5 | 5 |
| Mutton (without bone) | 4 | *Nil* | *Nil.* | *Nil.* | *Nil.* | *Nil* | *Nil* |
| Vegetables† .. .. | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| | Dr. | Dr | Dr | Dr. | Dr | Dr. | Dr |
| Onions .. . | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Condiments .. .. . | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Salt ... ... ... ... ... | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| Oil .. ... ... ... | Six drachms daily between April 1st and Sept. 30th; 10 drachms daily between Oct. 1st and March 31st. | | | | | | |
| Tamarinds (without husk and seeds) .. .. | Four drachms daily between April 1st and Sept. 30th; two drachms daily between Oct. 1st and March 31st. | | | | | | |

* A pulse similar to the lentil.
† Vegetables consist of potato, bringal, bhagee, and sweet gourds.

Considered in the light of Professor Wright's hypothesis it is manifest that the ordinary jail diet cannot be said to be deficient in fresh vegetables. No less than half a pound of these is given daily. It is therefore unlikely that the acid food-stuffs (viz., the cereals and meat) here preponderated over the alkaline food-stuffs (viz., the fresh vegetables, onions, and dhall) in such a manner as to bring about a condition of acid intoxication. Now the jail diet which has been tabulated above is practically the same diet which is in use by the great majority of the natives of India living in their natural conditions, and it cannot be said that scurvy is at all common among them. Further, when we consider that out of an average population of 1095 prisoners these five patients, along with one other who had just died before they came under my observation, were the only cases which had occurred in this jail for some time, and when we consider that all prisoners are fed on practically the same diet—the slight differences in the various scales of diet depending upon the work which each man has to perform—it would seem useless to look for a cause of this limited outbreak of scurvy to any *deficiency in dietary. Had such a general* cause as deficiency or error in diet been operative one would have expected a much greater number of cases to have taken place. Further, the diet is a fixed one and under control and careful inspection. It is, moreover, just sufficient for the work done and does not satisfy hunger so thoroughly as to lead one to think, notwithstanding the known artfulness of the Indian prisoner in malingering, that it is likely that a prisoner would willingly pass over any item in the bill of fare for the purpose of producing scorbutic symptoms. It is also doubtful as to whether or not he would have sufficient intelligence or scientific knowledge to enable him successfully to malinger in this way. We may therefore take it as almost certain that there is no waste and that the regulation diet is all consumed. These facts relating to the dietary therefore lend no support to Professor Wright's hypothesis that scurvy is always associated with a diet in which the alkaline food-stuffs are deficient.

Again, the ptomaine theory of the etiology of scurvy put forward by Mr. Jackson and Dr. Harley receives no support from a consideration of the diet-table detailed above, for a glance will show that the patients had only been receiving four ounces of fresh mutton once a week. Further, as in Indian jails meat is eaten the same day as that on which the animal is killed and is subjected to careful inspection, there can be no question as to the development of bacterial poison in the meat before consumption.

In harmony with the inferences based on the consideration of the dietary are the results of the blood examination. We have seen that no diminution in the alkalinity of the blood serum was found to be present in any one of the cases which are detailed above. These cases all presented well-marked scorbutic symptoms and one of them was so severe that death took place a short time after it came under observation. This result, then, would definitely point to the conclusion that these cases of scurvy were, at any rate, not cases of acid intoxication. In consonance with the conclusion are the effects of treatment. We have noted above that the course of the disease was not in any instance noticeably affected by the treatment. This treatment consisted in the earlier period in an extra special diet, supplemented in two of the cases with a fairly large quantity of lime-juice. This extra diet consisted of the ordinary hospital diet given to non-working prisoners and, in addition, an extra allowance of milk, sugar, fresh mutton, potato, and ghee. The quantities of the various articles of the total diet are tabulated as follows:—

TABLE II.—*Showing the Scale of Diet of Prisoners suffering from Scurvy.*

| Articles. | Quantity. | How often. |
|---|---|---|
| Rice and wheat (jowari, bajiri, or nagli) ... ... ... ... . .. . | 18 ounces. | Daily. |
| Dhall toor ... . ... ... .. ... | 5 ,, | ,, |
| Milk ... ... ... ... . . ... .. | 1 pound. | ,, |
| Sugar... ... ... ... ... ... ... ... | 1 ounce. | ,, |
| Mutton (fresh) ... ... ... . ... | 8 ounces. | ,, |
| Potatoes ... ... .. .. ... ... ... | 4 ,, | ,, |
| Vegetables ... ... ... ... .. ... | 8 ,, | ,, |
| Onions ... ... ... ... ... ... ... | 4 drachms. | ,, |
| Ghee ... ... ... . .. ... ... .. | 1 ounce. | ,, |
| Oil . ... .. ... . ... ... .. | 4 to 6 drachms. | ,, |
| Salt ... .. ... ... .. ... ... ... | 8 drachms. | ,, |
| Tamarinds (without husks or seeds) ... .. ... ... ... ... ... | 2 to 4 drachms | ,, |
| Condiments ... ... ... ... ... . | 4 drachms. | ,, |

No improvement of the condition had followed this treatment. On the first day on which I saw the patients I asked Dr. Moos to continue this diet, but to substitute lactate of soda for the lime-juice and any other medicine they were taking. This request was made before the result of the blood serum examination was known, but not a grain of this drug had been given before the blood had been collected. Professor Wright[7] has recorded that in the cases of scurvy which he observed (these were cases which were associated with a marked diminution in the alkalinity of the blood) marked and rapid improvement followed immediately on the administration of lactate of soda and other similar substances, some of the patients, in fact, being rescued from the jaws of death.

We have seen that in my cases, which, as I have shown, were not associated with any diminution in the alkalinity of the blood, lactate of soda, although given in large doses—viz., 60 grains daily—brought about no improvement whatever in the clinical aspect of the cases. One case, indeed, ended fatally 17 days after the exhibition of this drug was begun. The facts, therefore, which go to show that these cases, although presenting all the symptoms of the scorbutic condition, were not cases of acid intoxication due to a dietary deficient in alkaline food-stuffs, may be briefly summarised as follows.

1. There was no marked deficiency in the alkaline food-stuffs of the dietary before the onset of the symptoms. The diet was common to about 1095 prisoners, and of these only six men developed scorbutic symptoms.

2 There was no diminution of the alkalinity of the blood serum observed when the symptoms were well marked.

3. There was no improvement in the symptoms either as a result of the giving of a diet consisting of abundant alkaline food-stuffs or on the administration of large doses of lactate of soda.

The remaining six cases which I have to record bear out the same conclusions. These cases were all patients in the Jamsetjee Jeejeebhoy Hospital, Bombay. They had been admitted from the streets suffering from the symptoms detailed below. It was found impossible in any of these cases to get a reliable history of the quantity or of the exact nature of the diet on which the patients had been living before admission into the hospital. I am greatly indebted to the several physicians under whose care these cases were being treated for affording me every facility for examining them and for furnishing me with the clinical notes of the cases. The cases are given here in chronological order.

CASE 6.—This case was under the care of Major L. F. Childe, I.M.S., professor of pathology, Grant Medical College. The patient was a Hindu, aged 30 years. He was admitted into the hospital on Nov. 14th, 1900, and he came under my observation two days later. During this interval he had had no treatment of any kind. His condition on the 16th was as follows. The teeth were very loose; the gums were spongy and bleeding and were separated from the teeth. There was considerable œdema of the right foot. The right leg from the knee to the ankle was much swollen, hard, and very painful on pressure. There was no purpuric eruption; diarrhœa was present, the stools numbering three or four per diem; there had been no hæmorrhage from the bowel. The conjunctivæ were pale and indicated a certain amount of anæmia. The red blood cells numbered 4,000,000 per cubic millimetre. The blood coagulation time was four and three quarter minutes. The alkalinity of the blood was $\frac{N}{30}$. An examination of the fæces was made for ova. In all three slides were examined. The following ova were found: (1) one ovum of trichocephalus dispar; (2) one ovum of ascaris lumbricoides; and (3) one ovum of dochmius duodenalis. The treatment adopted by Major Childe was as follows. The usual diet of hospital patients of Hindu caste was given. This consisted principally of rice and vegetables. As well some alkaline mixtures consisting chiefly of sulphate of magnesium and citrate of potash were administered. The patient was discharged cured on Dec. 27th.

CASE 7.—This case was under the care of Dr. N. F. Surveyor. The patient was a Hindu woman, a widow, aged 24 years. She was admitted into the hospital on Oct. 29th, 1900, complaining of swelling of the left leg and pain in the right knee-joint. She was seen by me on Nov. 27th, when her condition was as follows. She was very thin, although not markedly anæmic. The red blood cells numbered 3,600,000 per cubic millimetre. The gums were spongy, but were neither ulcerated nor bleeding. Diarrhœa was present. The stools contained mucus and blood. The diarrhœa, however, became less after admission. On the front of the right tibia there was a small subperiosteal swelling which was very painful on pressure. The calf of the left leg was swollen, hard, and brawny; it was very tender on pressure. There was considerable œdema of this foot. The anterior tibial region was also swollen, hard, and tender, although this condition was not so marked in this region as it was in the calf. The blood coagulation time was about one and a quarter minutes. The alkalinity of the blood was $\frac{N}{30}$. On Nov. 28th, six slides of fæces were examined for ova, but with the exception of one ovum of trichocephalus dispar, none were found. The future history of this case as supplied to me by Dr. Surveyor was as follows. On Dec. 2nd the patient began to get very feeble. From the 3rd to the 8th the temperature showed a marked evening rise each day. Diarrhœa became very troublesome, the stools containing much blood and mucus. On the 8th symptoms pointing to a cerebral hæmorrhage made their appearance. The patient died on that day. Unfortunately a post-mortem examination was not obtained. During her residence in hospital treatment had been directed to controlling the diarrhœa and as usual the routine treatment for scurvy had been given. She had taken also at different periods citrate of potash and digitalis, quinine, iodide of potash, and chlorate of potash as a mouth wash.

CASE 8.—This case also was under the care of Dr. Surveyor. The patient was a Hindu woman, aged 25 years. She was admitted into the hospital on Nov. 19th, 1900. She came under my observation on the 27th, when her condition was as follows. The gums were markedly swollen and spongy, and much ulcerated, and they bled readily on being touched. After admission the bleeding from the gums was very marked. It was controlled, however, by the internal administration of chloride of calcium. The patient was very anæmic, the red blood cells numbering 2,200,000 per cubic millimetre. The right leg below the knee was markedly swollen; it was hard, brawny, hot, and very painful to the touch; there was considerable œdema of this foot. On the left leg there was some swelling around the tendo Achillis; this swelling was also tender; there was also slight swelling of the left knee On the posterior surface of the right ulna there was a painful subperiosteal swelling about two inches long. This had only appeared the night before. There had been no diarrhœa She had been having lime-juice since admission, but no alkalies. The blood coagulation time was two minutes and the alkalinity of the blood was $\frac{N}{25}$. Four slides of fæces were examined, but no ova of any description were found. On Dec. 11th the patient was found to have greatly improved Since the last note, after a diminution of the calcium chloride to 15 grains per diem, there had been severe bleeding from the gums. This was easily controlled by increasing the calcium chloride again. The gums and swelling of the leg were much better than they were a fortnight before With the exception of the calcium chloride there had been no medicinal treatment. The patient was discharged from hospital on the 26th. There was then slight swelling of the right leg and ankle-joint. The gums were almost normal

CASE 9.—This case also was under the care of Dr. Surveyor. It was quite a mild case. The patient was a Hindu woman, aged 25 years. She was admitted into hospital on Dec 9th, 1900. She said that she had been ill for two months before this date. She came under my observation on the 11th when she complained of pain in most of the joints, but no effusion into any joint was observable. The gums were spongy, swollen, and bled easily on pressure. There had been no spontaneous bleeding from the gums. There were no extravasations, either subcutaneous or intermuscular, in either leg There was no œdema or purpura. The bowels were constipated. The temperature was normal. With the exception, therefore, of the condition of the gums there were no symptoms of scurvy. The blood coagulation time was four minutes. The red blood cells numbered 5,100,000 per cubic millimetre. The alkalinity of the blood was found to be $\frac{N}{25}$.

CASE 10.—This case was under the care of Major R. W. S. Lyons, I.M.S., professor of medicine, Grant Medical small rectal speculum was, however, passed into the vagina, but, as it was rather less than half the length of an ordinary Fergusson's speculum, it only showed the lower two inches of the vaginal walls, which were thinly covered with the yellow discharge above mentioned. I advised the patient to have the cervix dilated sufficiently to allow the interior of the body of the uterus to be examined with the finger. She consented to have this done, but as she wished to return to the north of England for a fortnight it was not till March 1st that she entered Fitzroy House. The next day, with the usual antiseptic precautions, a specially prepared laminaria tent was inserted into the cervix. To do this, owing to the narrowness of the vagina, it was necessary to have the patient anæsthetised. Speaking from memory, I believe I have only once before found it necessary to have the patient anæsthetised for the insertion of tents, so that it will be seen that the narrowness of the vagina was such as to cause real difficulty in dealing with the case. On March 3rd the dilatation of the cervix was completed under an anæsthetic with Hegar's dilators. A growth was found high up in the endometrium. A portion of it was removed for microscopical examination, though I felt little doubt after the digital examination of the endometrium that the growth was malignant. The portion of growth removed was sent to the Clinical Research Association and Mr. J. H. Targett reported that it was carcinomatous. The patient was accordingly advised to have the uterus removed, and to this she consented.

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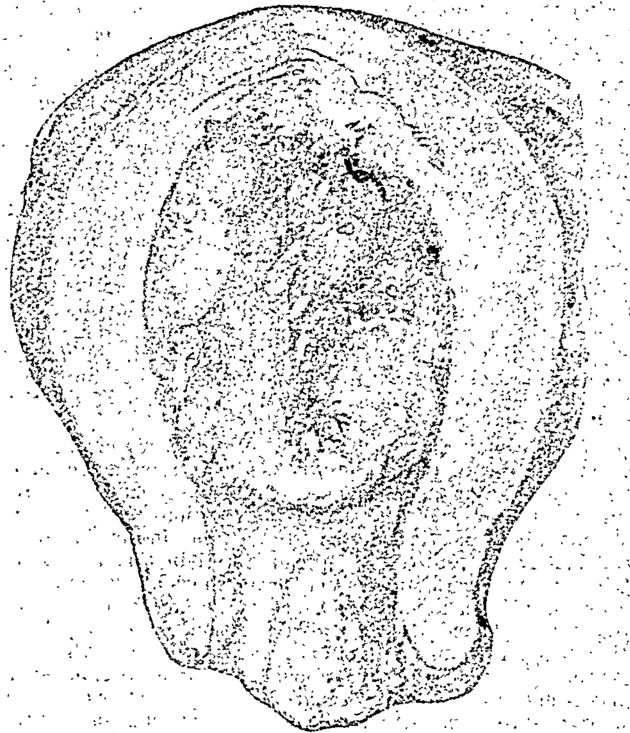
[7] THE LANCET, August 25th, 1900, p. 565.

The operation was performed on April 11th. The preliminary dilatation of the cervix for diagnosis had been so difficult on account of the narrowness of the vagina that I decided to remove the uterus by abdominal pan-hysterectomy. The method was the same as that adopted in four cases of pan-hysterectomy for fibroids, an account of which has already been published.[1] In this case the vagina was douched with a solution of perchloride of mercury (1 in 1000) just before the operation, but I did not make any attempt to occlude the cervix by a suture, or to pack it before beginning the abdominal section. The right uterine appendages were removed with the uterus, but the left appendages were not removed. The ligatures on the uterine arteries and on vessels in the cut edges of the vaginal walls were left long and drawn down into the vagina by long Wells's forceps passed up from the vagina by an assistant. A gauze drain was drawn down from above into the vagina, about an inch of it being left projecting into the peritoneum. The abdominal wound was completely closed. The patient made an uninterrupted recovery, and the ligatures came away at the end of the fifth week.

The following is a description of the specimen: "The uterus has been laid open by an incision from the external os to the fundus through the anterior wall. The extreme length of the uterus is three inches. At the extreme highest point of the endometrium, and extending downwards for an inch and a quarter on the posterior wall, is a new growth projecting only slightly above the general surface of the endometrium. Its surface is faintly papillary. A sagittal section has also been made through the growth and the wall of the uterus from which it springs. This shows that the growth penetrates deeply into the uterine wall, the limit of its penetration, to the naked eye, being marked by a sinuous, irregular, whitish border." A portion of the growth was sent to the Clinical Research Association and Mr. Targett reported on it as follows: "The wall of the uterus is deeply invaded by a very soft columnar-celled carcinoma. The growth is much degenerated and therefore stains badly. It is a primary carcinoma of the body of the uterus."

CASE 2.—A woman, aged 57 years, was admitted under my care into the London Hospital on Oct. 5th, 1901, at the request of Dr. W. C. Taylor of Victoria Dock-road, London, E. She had been married for 36 years, and had had six children, the last 21 years ago, and two miscarriages, the last 19 years ago. Menstruation began when she was between 16 and 17 years of age and occurred regularly every four weeks without any pain. Two and a half years ago menstruation ceased for 10 months. Then the periods came on for three months at monthly intervals. Each of these periods was like what she had always had except that she lost a larger quantity than formerly and clots were passed. She had been subject to bronchitis and asthma up to last year; she used to have quinsy 20 years ago. There was no history of syphilis, nor had she ever had any severe illness. Her family history was good. Two and a half years ago the periods ceased for 10 months, then they recurred three times at monthly intervals; after that, however, the loss of blood became more or less continuous. Sometimes clots were passed, but the discharge was never offensive. The discharge during the previous three months had not been quite so profuse as before, but she had had constantly to wear a diaper. Since April she had had pain on the right side running from the back to the right groin, and also aching in the right thigh. It was not constant, for sometimes she would be free from pain for 12 hours. When present it was aching, with an occasional severe shooting or cramping feeling. Sometimes the pain made her sick, and caused her to perspire, especially at night. It was relieved by sitting up or by walking about, and sometimes by alcohol. She had had no trouble with micturition, but the bowels had been constipated and she took aperients frequently. During the eight months before admission she had lost two stones in weight. From the above account it appears that there had been more or less constant blood-stained discharge for about 17 months and that she had had pain for six months prior to her admission to the hospital. On admission she was found not to be anæmic. She had a rather worried expression. Her weight was nine stones two pounds. On the 7th she was anæsthetised and a careful examination was made with the patient in the lithotomy position. With Sims's speculum it was seen that the vaginal portion of the cervix was healthy except for a slight erosion on the posterior lip. The cervix when drawn upon with a volsella did not come down well. Bimanually the uterus was found to be enlarged, but only fairly moveable; the sound passed three and a half inches. The cervix was dilated up to Hegar's dilator No. 19 without any difficulty, there being only slight resistance as each dilator was passed, and that at the external os. The finger passed into the uterus came upon a growth, chiefly on the posterior wall; it was not of the soft papillary variety. It terminated below by a raised, somewhat rounded border. The growth extended so low in the body of the uterus that it was not quite certain at this examination that the growth had not extended into the cervical canal. (Subsequent examination of the specimen, however, showed that it had not involved

FIG. 2.



The uterus removed in Case 2 and laid open by an incision through the anterior wall. *The malignant growth occupies nearly all the endometrium and terminates below by a raised border slightly convex towards the internal os.* It is worth noticing that, contrary to the usual experience in similar cases, the patient from whom this specimen was removed had been pregnant 8 times. (The specimen was shown at the meeting of the Obstetrical Society of London on Jan. 1st.)

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[1] THE LANCET, July 8th, 1899, p. 82.

the cervix.) There was no offensive smell about the examining finger.

The operation was performed on the 14th. The patient was anæsthetised and put in the lithotomy position. After disinfecting the vagina as well as possible with a lotion of perchloride of mercury (1 in 1000) the cervix was exposed and seized with a volsella. A stout silk ligature was passed through the vaginal portion with a strong needle in a handle from behind forwards on the left side of the os uteri. The needle, unthreaded, was then passed similarly on the right side of the os, threaded with the anterior end of the ligature already passed, and withdrawn. The ligature was then tied as tightly as possible, thus occluding the external os. The patient was then put into the Trendelenburg position and abdominal pan hysterectomy was performed. The right uterine appendages were removed, but the left appendages were allowed to remain. There were some adhesions on the left side which had to be separated before the uterus could be drawn out freely. The limited mobility of the uterus observed at the previous examination was no doubt due to these adhesions. When the uterus had been removed all the ligatures were drawn into the vagina and a strip of iodoform gauze was also drawn into the vagina. About one inch of it was left projecting into the peritoneal cavity. The abdominal wound was then completely closed. The subsequent progress of the case was uneventful. The ligatures were not loose when she left the hospital, they were cut a good deal shorter a few days before she went away so that it would be impossible for any of them to project from the vagina. She went to a convalescent home on Nov. 9th.

The following is a description of the specimen: "The uterus has been laid open from the front. Its extreme length is three and three quarter inches. The cervix to the naked eye appears quite healthy, and is very short. Almost the whole of the endometrium is occupied by a new growth; this is raised about a quarter of an inch above the general level and its edge distinctly overhangs the adjacent apparently healthy endometrium. In the downward direction the growth extends very nearly to the internal os and terminates by a semicircular border convex downwards." A portion of the growth was sent to the Clinical Research Association and Mr. Targett reported on it as follows: "This is a columnar celled carcinoma of the body of the uterus originating in the endometrium and invading the muscular coat. The tubular arrangement of the cells is very distinct."

Harley-street, W.

# ON TWO CONTRASTED CASES OF HYSTERECTOMY: ONE DURING PREGNANCY, THE OTHER IN PUERPERY.

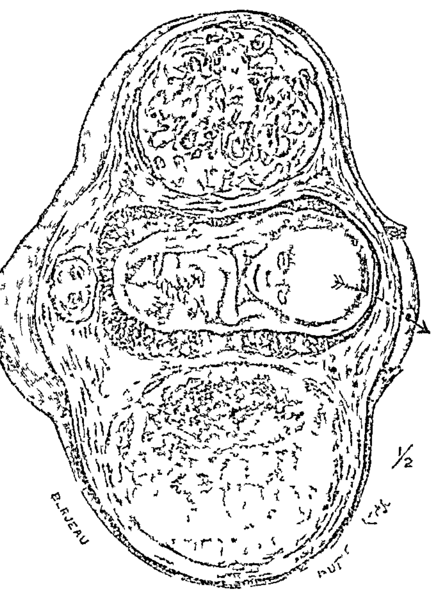
BY J. BLAND SUTTON, F.R.C.S. ENG.,
ASSISTANT SURGEON TO THE MIDDLESEX HOSPITAL.

ON August 28th, 1901, at the Middlesex Hospital I performed abdominal hysterectomy on two patients for conditions in regard to the proper treatment of which gynæcologists and obstetricians hold anything but unanimous opinions. The two cases stand in striking contrast for in Case 1 the operation was undertaken with the view of averting a dangerous condition which had actually supervened in Case 2 and not only placed the patient's life in the gravest peril but surrounded the operation and the convalescence with great danger.

CASE 1.—A well developed woman, 28 years of age, sought advice for an abdominal swelling which she said, had recently grown much larger and had become painful. On careful inquiry we elicited two very important facts—first, that her menstruation never profuse, had been in abeyance three months. On examination a hard rounded swelling as big as a fist occupied the right iliac fossa; a larger rounded tumour could be felt immoveably impacted in the pelvis to the left of the cervix, whilst the vaginal portion of the cervix was pushed to the left side and in order to reach it the finger had to sweep over the rounded contour of the impacted tumour which appeared to usurp all the available space in the true pelvis. Pressure on the tumour caused pain and there was some difficulty with the rectum, but fortunately there was no interference with the bladder. The nature of the case was very clear—namely, fibroids impacted by pregnancy. So firmly was the tumour incarcerated that I had no hesitation in recommending the patient to submit to operation. I was very careful to explain to the class the reason for this advice. When the uterus is distorted by fibroids and so much displaced as in this case abortion is sure to occur, the damage to the fibroid which is inevitable in such circumstances would place the patient's life in the gravest peril if she should become septic. Even apart from this risk we now realise that pregnancy in itself leads to some little understood changes in fibroids quite apart from septic infection. In deciding the question of pregnancy I was careful to point out that there were no physical facts to guide me but I relied on the three months' amenorrhœa in a buxom woman, her statement that the tumour had lately very markedly increased in size, and the firmness of the impaction.

At the operation the uterus was found to be more displaced than had been anticipated. A large tumour in the anterior wall was impacted in the pelvis, the gravid uterine body was situated in the hypogastrium and the tumour in the posterior wall of the uterus occupied the right iliac fossa, so that the uterus was not only rotated through 90°, but also acutely flexed. I performed supra-vaginal hysterectomy and left both ovaries and Fallopian tubes, as they appeared healthy. The patient made a quick and satisfactory convalescence.

The uterus with the tumours was carefully hardened and then sectioned in a sagittal direction (see Figure). It measured in its antero-posterior (sagittal) axis 20 centimetres after it had been hardened and as the conjugate diameter of the pelvis is at most 10 centimetres it is clear that a great amount of rotation had slowly taken place to allow the parts to accommodate themselves in the pelvis. I have already drawn attention in THE LANCET[1] to a very similar case. The tumours in this specimen on section exhibited irregular dark red streaks; they were most marked in the larger tumour which had in addition undergone myxomatous changes and its central portion was diffluent.



A gravid uterus shown in section. It is deformed by fibroids. Removed from a woman 23 years of age. The arrow lies in the cervical canal.

CASE 2.—This patient was a married woman, 36 years of age. In 1896 she had been delivered of a healthy child. Two years later a fibroid of the size of a turkey's egg was small rectal speculum was, however, passed into the vagina, but, as it was rather less than half the length of an ordinary Fergusson's speculum, it only showed the lower two inches of the vaginal walls, which were thinly covered with the yellow discharge above mentioned. I advised the patient to have the cervix dilated sufficiently to allow the interior of the body of the uterus to be examined with the finger. She consented to have this done, but as she wished to return to the north of England for a fortnight it was not till March 1st that she entered Fitzroy House. The next day, with the usual antiseptic precautions, a specially prepared laminaria tent was inserted into the cervix. To do this, owing to the narrowness of the vagina, it was necessary to have the patient anæsthetised. Speaking from memory, I believe I have only once before found it necessary to have the patient anæsthetised for the insertion of tents, so that it will be seen that the narrowness of the vagina was such as to cause real difficulty in dealing with the case. On March 3rd the dilatation of the cervix was completed under an anæsthetic with Hegar's dilators. A growth was found high up in the endometrium. A portion of it was removed for microscopical examination, though I felt little doubt after the digital examination of the endometrium that the growth was malignant. The portion of growth removed was sent to the Clinical Research Association and Mr. J. H. Targett reported that it was carcinomatous. The patient was accordingly advised to have the uterus removed, and to this she consented.

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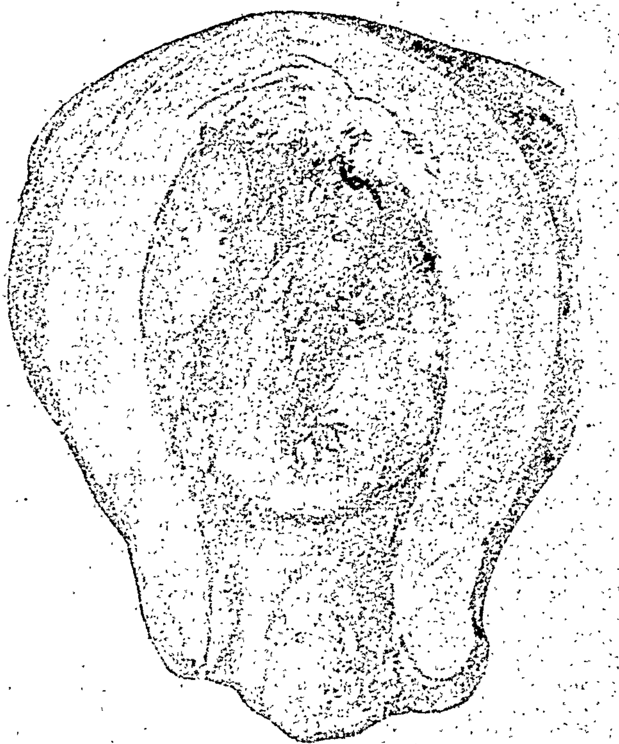
[1] THE LANCET, Feb. 16th, 1901, p. [illegible]

The operation was performed on April 11th. The preliminary dilatation of the cervix for diagnosis had been so difficult on account of the narrowness of the vagina that I decided to remove the uterus by abdominal pan-hysterectomy. The method was the same as that adopted in four cases of pan-hysterectomy for fibroids, an account of which has already been published.[1] In this case the vagina was douched with a solution of perchloride of mercury (1 in 1000) just before the operation, but I did not make any attempt to occlude the cervix by a suture, or to pack it before beginning the abdominal section. The right uterine appendages were removed with the uterus, but the left appendages were not removed. The ligatures on the uterine arteries and on vessels in the cut edges of the vaginal walls were left long and drawn down into the vagina by long Wells's forceps passed up from the vagina by an assistant. A gauze drain was drawn down from above into the vagina, about an inch of it being left projecting into the peritoneum. The abdominal wound was completely closed. The patient made an uninterrupted recovery, and the ligatures came away at the end of the fifth week.

The following is a description of the specimen: "The uterus has been laid open by an incision from the external os to the fundus through the anterior wall. The extreme length of the uterus is three inches. At the extreme highest point of the endometrium, and extending downwards for an inch and a quarter on the posterior wall, is a new growth projecting only slightly above the general surface of the endometrium. Its surface is faintly papillary. A sagittal section has also been made through the growth and the wall of the uterus from which it springs. This shows that the growth penetrates deeply into the uterine wall, the limit of its penetration, to the naked eye, being marked by a sinuous, irregular, whitish border." A portion of the growth was sent to the Clinical Research Association and Mr. Targett reported on it as follows: "The wall of the uterus is deeply invaded by a very soft columnar-celled carcinoma. The growth is much degenerated and therefore stains badly. It is a primary carcinoma of the body of the uterus."

FIG. 2.



The uterus removed in Case 2 and laid open by an incision through the anterior wall. The malignant growth occupies nearly all the endometrium and terminates below by a raised border slightly convex towards the internal os. It is worth noticing that, contrary to the usual experience in similar cases, the patient from whom this specimen was removed had been pregnant 8 times. (The specimen was shown at the meeting of the Obstetrical Society of London on Jan. 1st.)

CASE 2.—A woman, aged 57 years, was admitted under my care into the London Hospital on Oct. 5th, 1901, at the request of Dr. W. C. Taylor of Victoria Dock-road, London, E. She had been married for 36 years, and had had six children, the last 21 years ago, and two miscarriages, the last 19 years ago. Menstruation began when she was between 16 and 17 years of age and occurred regularly every four weeks without any pain. Two and a half years ago menstruation ceased for 10 months. Then the periods came on for three months at monthly intervals. Each of these periods was like what she had always had except that she lost a larger quantity than formerly and clots were passed. She had been subject to bronchitis and asthma up to last year; she used to have quinsy 20 years ago. There was no history of syphilis, nor had she ever had any severe illness. Her family history was good. Two and a half years ago the periods ceased for 10 months, then they recurred three times at monthly intervals; after that, however, the loss of blood became more or less continuous. Sometimes clots were passed, but the discharge was never offensive. The discharge during the previous three months had not been quite so profuse as before, but she had had constantly to wear a diaper. Since April she had had pain on the right side running from the back to the right groin, and also aching in the right thigh. It was not constant, for sometimes she would be free from pain for 12 hours. When present it was aching, with an occasional severe shooting or cramping feeling. Sometimes the pain made her sick, and caused her to perspire, especially at night. It was relieved by sitting up or by walking about, and sometimes by alcohol. She had had no trouble with micturition, but the bowels had been constipated and she took aperients frequently. During the eight months before admission she had lost two stones in weight. From the above account it appears that there had been more or less constant blood-stained discharge for about 17 months and that she had had pain for six months prior to her admission to the hospital. On admission she was found not to be anæmic. She had a rather worried expression. Her weight was nine stones two pounds. On the 7th she was anæsthetised and a careful examination was made with the patient in the lithotomy position. With Sims's speculum it was seen that the vaginal portion of the cervix was healthy except for a slight erosion on the posterior lip. The cervix when drawn upon with a volsella did not come down well. Bimanually the uterus was found to be enlarged, but only fairly moveable; the sound passed three and a half inches. The cervix was dilated up to Hegar's dilator No. 19 without any difficulty, there being only slight resistance as each dilator was passed, and that at the external os. The finger passed into the uterus came upon a growth, chiefly on the posterior wall; it was not of the soft papillary variety. It terminated below by a raised, somewhat rounded border. The growth extended so low in the body of the uterus that it was not quite certain at this examination that the growth had not extended into the cervical canal. (Subsequent examination of the specimen, however, showed that it had not involved the cervix ) There was no offensive smell about the examining finger

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[1] THE LANCET, July 8th, 1899, p. 82.

The operation was performed on the 14th The patient was anæsthetised and put in the lithotomy position After disinfecting the vagina as well as possible with a lotion of perchloride of mercury (1 in 1000) the cervix was exposed and seized with a volsella A stout silk ligature was passed through the vaginal portion with a strong needle in a handle from behind forwards on the left side of the os uteri. The needle unthreaded was then passed similarly on the right side of the os threaded with the anterior end of the ligature already passed and withdrawn The ligature was then tied as tightly as possible, thus occluding the external os The patient was then put into the Trendelenburg position and abdominal pan hysterectomy was performed The right uterine appendages were removed, but the left appendages were allowed to remain There were some adhesions on the left side which had to be separated before the uterus could be drawn out freely The limited mobility of the uterus observed at the previous examination was no doubt due to these adhesions When the uterus had been removed all the ligatures were drawn into the vagina and a strip of iodoform gauze was also drawn into the vagina About one inch of it was left projecting into the peritoneal cavity The abdominal wound was then completely closed The subsequent progress of the case was uneventful The ligatures were not loose when she left the hospital , they were cut a good deal shorter a few days before she went away, so that it would be impossible for any of them to project from the vagina She went to a convalescent home on Nov 9th

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Harley street W

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ON August 28th, 1901 at the Middlesex Hospital I performed abdominal hysterectomy on two patients for conditions in regard to the proper treatment of which gynæcologists and obstetricians hold anything but unanimous opinions The two cases stand in striking contrast for in Case 1 the operation was undertaken with the view of averting a dangerous condition which had actually supervened in Case 2 and not only placed the patient s life in the gravest peril but surrounded the operation and the convalescence with great danger

CASE 1 —A well developed woman 28 years of age sought advice for an abdominal swelling which she said had recently grown much larger and had become painful On careful inquiry we elicited two very important facts—first that her menstruation never profuse had been in abeyance three months On examination a hard rounded swelling as big as a fist occupied the right iliac fossa a larger rounded tumour could be felt immoveably impacted in the pelvis to the left of the cervix, whilst the vaginal portion of the cervix was pushed to the left side and in order to reach it the finger had to sweep over the rounded contour of the impacted tumour which appeared to usurp all the available space in the true pelvis Pressure on the tumour caused pain and there was some difficulty with the rectum but fortunately there was no interference with the bladder The nature of the case was very clear—namely, fibroids impacted by pregnancy So firmly was the tumour incarcerated that I had no hesitation in recommending the patient to submit to operation. I was very careful to explain to the class the reason for this advice When the uterus is distorted by fibroids and so much displaced as in this case abortion is sure to occur , the damage to the fibroid which is inevitable in such circumstances would place the patient s life in the gravest peril if she should become septic Even apart from this risk we now realise that pregnancy in itself leads to some little understood changes in fibroids quite apart from septic infection In deciding the question of pregnancy I was careful to point out that there were no physical facts to guide me, but I relied on the three months amenorrhœa in a buxom woman her statement that the tumour had lately very markedly increased in size and the firmness of the impaction

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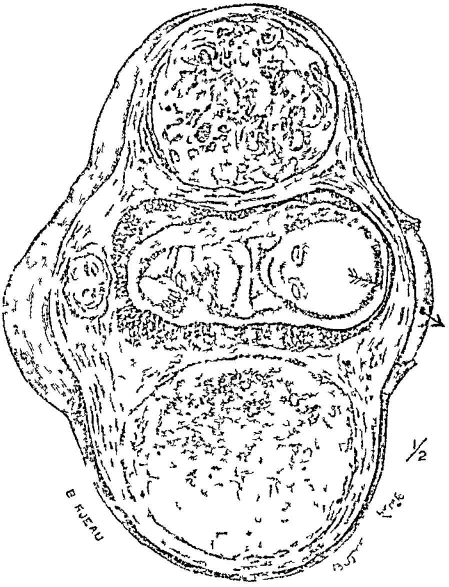
The uterus with the tumours was carefully hardened and then sectioned in a sagittal direction (see Figure) It measured in its antero posterior (sagittal) axis 20 centimetres after it had been hardened and as the conjugate diameter of the pelvis is at most 10 centimetre it is clear that a great amount of rotation had slowly taken place to allow the parts to accommodate themselves in the pelvis I have already drawn attention in THE LANCET[1] to a very similar case The tumours in this specimen on section exhibited irregular dark red streaks they were most marked in the larger tumour which had in addition undergone myxomatous changes and its central portion was diffluent.



A gravid uterus shown in section it is deformed by fibroids Removed from a woman 28 years of age The arrow lies in the cervical [illegible]

CASE 2 —This patient was a married woman 35 years of age In 1896 she had been delivered of a healthy child Two years later a fibroid of the size of a turkey s egg was detected in her hypogastrium. Towards the end of 1900 she became pregnant a second time and was delivered of the child in July, 1901. A few days after the birth of the child the fibroid became very tender and the woman had irregular losses of blood from the uterus. and at the end of three weeks she had a severe "flooding" which Mr. W. K. Loveless feared would end her life, and a repetition of this severe bleeding a few days later induced him to place the patient under my care. The woman was profoundly anæmic and had a tumour of the size of a cricket-ball, very tender, freely moveable, but sessile, in a puerperal uterus. A few days later I exposed the parts through an abdominal incision and found a smooth fibroid sessile on the anterior wall of the uterus, resembling in shape an acorn in its cup. The ovarian and uterine vessels were secured and the uterus with the tumour cut away at the junction of the body with its neck. Immediately a lot of fœtid fluid and débris escaped, but I had carefully isolated the parts with sterilised dabs. The ovaries and Fallopian tubes were then removed as the tubes contained pus. I did not dare to allow the stump to return into the pelvis, so after surrounding it with the parietal peritoneum and completely isolating it I imbedded it in the lower angle of the incision and secured it with sutures of fish-gut. For 10 days after the operation there was a free discharge of sloughs from the stump and also from the vagina, but by assiduous dressing the parts were kept sweet and they quickly cleaned. Five weeks after the operation the patient left the hospital convalescent.

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[1] THE LANCET [illegible] 16th 1901, [illegible]

The tumour on section was of the colour of mahogany; its central parts and that segment of its circumference in relation with the uterine cavity were soft and almost diffluent. Bacteriologic examination of the solid peripheric portion of the tumour was negative and on microscopic investigation the tumour presented the structure of a typical fibro-myoma thickly splashed with blood pigment, but no obvious extravasation of blood corpuscles.

A careful study of a number of fibroids obtained from gravid uteri shows that under these conditions fibroids are very prone to undergo degenerative changes and are especially liable to soften. The peculiar alteration in colour is another feature which in my observations has been entirely confined to fibroids complicating pregnancy. The common colour of a fibroid is dirty-white or a very pale yellow; in many degenerating fibroids the yellow deepens In pregnancy the fibroid usually assumes a deep red or a mahogany tint. In the early stages the tumour exhibits this colour in streaks, but as the pregnancy advances the whole tumour becomes affected. The clinical facts of the two cases considered in this communication are interesting from another point of view. In ordinary circumstances fibroids are painless tumours, hence it may be taken as an axiom that *when a fibroid becomes painful it signifies that the tumour is undergoing secondary changes or that some complication has arisen in the pelvis.*

Queen Anne-street, W.

# THE DISAPPEARANCE OF THE ADDIMENT FROM ANTI-MICROBICS ERA.

By E. W. AINLEY WALKER, M.A., M.D. OXON.,
RADCLIFFE TRAVELLING FELLOW IN THE UNIVERSITY OF OXFORD; GORDON LECTURER IN EXPERIMENTAL PATHOLOGY, GUY'S HOSPITAL.

## A PRELIMINARY NOTE.

IN a previous communication[1] I have shown by animal experiments that the bacteriolytic addiment of fresh normal serum tends to disappear with considerable rapidity, and is no longer present in a serum which has been kept for several days. In order to examine further the phenomenon of its disappearance I have lately made experiments of which the following is a brief summary.

A number of rabbits were immunised by the successive injection of increasing doses of living typhoid culture and were subsequently bled for the preparation of serum. The sera thus obtained were examined for bacteriolytic action on the bacillus typhosus and were compared with the fresh sera of five normal healthy rabbits. The following procedure was employed. The blood was received in sterile test tubes, and so soon as fluid began to separate from the clot a specimen was removed. After an interval of from four to six hours from the time of bleeding a second specimen was taken, and at the end of 24 hours the remaining serum was separated from the clot and tubed for future use.

Anti-bacterial action was tested as follows. A given number of drops of the specimen of serum to be examined were measured into test tubes by means of a pipette, the same pipette being used throughout the observations. Each tube was then inoculated with one loopful of a typhoid culture grown for 24 hours in 10 cubic centimetres of bouillon. The tubes were incubated during a period of three hours; to each was then added a given quantity of gelatin which had been previously melted and the contents were thoroughly mixed and rapidly plated. Colonies were counted after three days' growth. In every case a control-plate was made with uninoculated serum to test its sterility, and another with one loopful of the typhoid culture inoculated for three hours in a few drops of ordinary bouillon for comparison with the inoculated serum. Where the colonies were numerous they were approximately estimated by means of an apparatus in which about 500 squares were equal to the area of the plates employed. Up to 100 colonies per square could be counted with the magnifying-glass with moderate accuracy. Above this number I have used the term "uncountable" where the colonies were obviously less numerous than those in the control without serum, and the sign ∞ where no such difference was appreciable. Where there were upwards of 5000 colonies the number is given approximately to the nearest 1000 and where the colonies were present in many thousands their number was estimated to the nearest 5000 or 10,000. The results are given in Table II., where N. 1, 2, 3, 4, 5 are sera of five healthy normal rabbits, and I., *a*, *b*, *c*, *d*, *e*, those of five rabbits lightly immunised against the bacillus typhosus under the following table (Table I.).

Similar observations made with the fresh sera of two horses immunised for the production of anti-streptococcic serum gave with a streptococcus virulent for animals the following results, the horse sera being denominated S. 1 and S. 2 :—

TABLE III.—*Streptococcus Plates.*

| Age of serum. | Drops of serum. | Strepto-coccus bouillon culture. | N. 4. | S. 1. | S. 2. |
|---|---|---|---|---|---|
| 1 hour ... | 5 | 1 loopful. | ∞ | — | 50,000 |
| | 10 | ,, | ∞ | — | 16,000 |
| 3 hours .. | 5 | ,, | ∞ | 1600 | — |
| | 10 | ,, | ∞ | 900 | — |
| 4 ,, ... | 5 | ,, | ∞ | — | 10,000 |
| | 10 | ,, | ∞ | — | 6,000 |
| 6 ,, ... | 5 | ,, | ∞ | 40,000 | — |
| | 10 | ,, | ∞ | 16,000 | — |
| 24 ,, ... | 5 | ,, | ∞ | Unc. | Unc. |
| | 10 | ,, | ∞ | 50,000 | 40,000 |
| 2 days ... | 5 | ,, | ∞ | ∞ | ∞ |
| | 10 | ,, | ∞ | Unc. | Unc. |
| 3 ,, ... | 5 | ,, | ∞ | ∞ | ∞ |
| | 10 | ,, | ∞ | ∞ | ∞ |

Unc. = uncountable. A dash signifies that no observation was made.

Several interesting points appear in these results with which I hope to deal more fully on a subsequent occasion, but that to which I wish at present more particularly to direct attention is the fact that the bacteriolytic power of a fresh serum rapidly diminishes both in the immune and in normal sera, and ceases to be recognisable within a few days from the time of bleeding. Hence it appears that as regards experiments in *bacteriolysis* the age of the serum which supplies the addiment is a factor of the first importance, and that observations on *bacteriolytic* action with an addiment-containing serum cannot be properly compared unless they are performed at the same time, since the *bacteriolytic*

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[1] THE LANCET, Oct. 19th, 1901, p. 1030.

TABLE I —IMMUNISATION OF RABBITS

| Rabbit | Day 1 | Day 3 | Day 5 | Day 10 | Day 14 | Day 21 |
|---|---|---|---|---|---|---|
| I *a* | $\frac{1}{20}$th of a 24 hours old agar culture subcutaneously | $\frac{1}{10}$th of a 24 hours old agar culture subcutaneously | $\frac{1}{15}$th of a 48-hours old agar culture subcutaneously | Bled | — | — |
| I *b* | | | | $\frac{1}{10}$th of a 48-hours old agar culture subcutaneously | Bled | — |
| I *c* | | | | | | — |
| I *d* | | | | — | — | Bled |
| I *e* | | | | $\frac{1}{10}$th of a 48-hours old agar culture subcutaneously | — | |

TABLE II —SHOWING THE NUMBER OF COLONIES IN THE TYPHOID PLATES

| Age of serum | *Drops of serum* | *Typhoid culture* | N 1 | N 2 | N 3 | N 4 | N 5 | I *a* | I *b* | I *c* | I *d* | I *e* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 2 hours | 5 | 1 loopful | — | — | — | — | — | — | — | — | 450 | 2 |
| | 10 | | 1 000 | 800 | — | — | — | [illegible] | 600 | 300 | 300 | 1 |
| | 20 | | 400 | 250 | — | — | — | 100 | 250 | 100 | — | — |
| | 30 | | 250 | 70 | — | — | — | — | 150 | 20 | — | — |
| 4-6 | 5 | | — | — | 1 500 | 3 500 | 2 000 | — | — | — | 3 | 3 |
| | 10 | | 3 000 | 600 | 700 | 1 500 | 800 | 20 | 600 | 100 | 1 | 1 |
| | 20 | | 2 000 | 120 | — | — | — | 10 | 300 | 35 | — | — |
| | 30 | | 1 000 | 40 | — | — | — | — | 150 | 10 | — | — |
| 24 | 5 | | — | — | *8 000* | 9 000 | *10 000* | — | — | — | *70* | *800* |
| | 10 | | 5 000 | 1 000 | 3 000 | 4 000 | 4 500 | 300 | 2 000 | 1 500 | 20 | 400 |
| | 20 | | 2 500 | 200 | — | — | — | 100 | 800 | 500 | — | — |
| | 30 | | — | 50 | — | — | — | — | 300 | 200 | — | — |
| 2 days | 5 | | — | — | 20 000 | Unc | Unc | — | — | — | 2 000 | 7 000 |
| | 10 | | 16 000 | 5 000 | 7 000 | 20 000 | 30 000 | 20 000 | 30 000 | 15 000 | 800 | 3 000 |
| | 20 | | 9 000 | 1 500 | — | — | — | 10 000 | 12 000 | 7 000 | — | — |
| | 30 | | — | 300 | — | — | — | — | — | — | — | — |
| 3 | 5 | | — | — | 50 000 | ∞ | ∞ | — | — | — | 10 000 | 55 000 |
| | 10 | | Unc | 8 000 | 30 000 | Unc | Unc | Unc | Unc | 50 000 | 2 500 | 40 000 |
| | 20 | | Unc | 5 000 | — | — | — | Unc | Unc | 30 000 | — | — |
| 4 | 5 | | — | — | Unc | ∞ | ∞ | — | — | — | 50 000 | Unc |
| | 10 | | ∞ | 40 000 | Unc | ∞ | ∞ | ∞ | ∞ | Unc | 30 000 | Unc |
| | 20 | | ∞ | — | — | — | — | ∞ | ∞ | Unc | — | — |
| 5 | 5 | | — | — | ∞ | — | — | — | — | — | Unc | ∞ |
| | 10 | | — | Unc | ∞ | — | — | ∞ | ∞ | ∞ | Unc | ∞ |
| | 20 | | — | — | — | — | — | ∞ | ∞ | ∞ | — | — |
| 6 | 5 | | — | — | ∞ | — | — | — | — | — | ∞ | — |
| | 10 | | — | ∞ | ∞ | — | — | — | — | ∞ | ∞ | — |
| | 20 | | — | — | — | — | — | — | — | ∞ | — | — |

*Unc* = uncountable A dash signifies that no observation was made.

addiment of the given serum may undergo considerable diminution in a few hours This fact may throw some light upon the want of harmony in many of the results which have been published and certainly affects the value of a number of recorded observations

Berne

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# BEEF-WORM IN THE ORBITAL CAVITY

BY THOMAS W F GANN, M R C S ENG,
L R C P LOND, L S A,
DISTRICT SURGEON COROZAL BRITISH HONDURAS

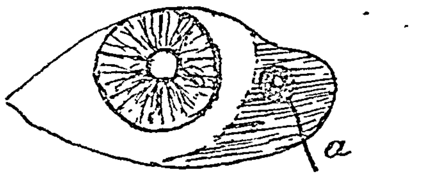
To anyone who has lived for any length of time in either Central America or South America the parasite known as the "beef worm" must be familiar either from hearsay or possibly from painful personal experience as, though fortunately not of common occurrence, it is one of the most distressing and painful of the innumerable insect pests of these regions

The creature starts in life as an egg which being laid by the parent fly beneath the human skin or mucous membrane soon hatches out into a small worm which rapidly increases in size and reaches in a few months a length of from one to two inches and a diameter of from three eighths to three-quarters of an inch The worm is of a dull greyish white colour, divided into from 12 to 20 segments and covered by stiff black hairs or bristles according to its age along the middle two thirds of its body each segment possessing a separate row of hairs completely surrounding its anterior and posterior margins The tail end communicates with the exterior by a circular orifice surrounded by a prominent raised margin, the head end being deeply embedded in the tissues and supplied with two strong semicircular, black hooks, by means of which it attaches itself firmly, rendering its expulsion extremely difficult. It advances and withdraws its tail with a sort of rhythmic motion which gives rise to the characteristic sensation of "something moving and alive" within the swelling caused by it upon the skin or mucous membrane. The parts most affected by this parasite are the extensor surfaces of the arms and legs, the back, and shoulders and the chest; but exceptional cases have been recorded of its occurrence in the face and even upon the penis.

Certain individuals appear to be particularly susceptible to the worm, and if one of these should go into a district infested by it he is practically certain to become the host of one or more. Negroes are far more susceptible than are whites. Other persons, again, appear to enjoy complete immunity from the pests; they may go into a district swarming with the worms, sleep on the ground out of doors without a net for months at a time and never get a single one, though other persons of the same colour and nationality would under similar circumstances be literally eaten alive. The worm appears to be limited to small and clearly-defined districts within which a man may, if he sleeps uncovered for a single night, be almost certain of contracting it, though less than a mile distant perfect immunity is enjoyed.

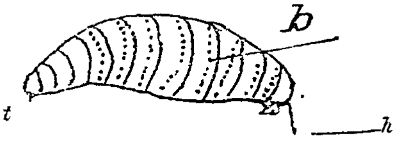
The present case of a beef-worm in the orbit is, so far as I am aware, unique. The patient, a Spanish lad, about 18 years of age, came to me on Sept. 16th, 1901, stating that he had been living for some considerable time in the bush and that during the last three months he had been suffering from pain and inconvenience in the left eye, together with a sensation as if something were moving about within the socket. On examination the eye was seen to be a good deal more prominent than its fellow; the conjunctiva was more or less congested throughout its whole extent and the entire inner canthus of the eye was enormously bulged forward. Immediately to the inner side of the caruncula lacrymalis was a circular opening about one-twelfth of an inch in diameter, surrounded by a prominent rim, and at the bottom of this opening appeared a small, whitish knob which from time to time was slightly protruded beyond the opening, but if touched it was immediately withdrawn so far back as to become almost invisible (Fig. 1). The negro method of treating the worm is first to cover the hole over with a plug of wet tobacco for a day or two, and then with great force to squeeze it out, the tobacco appearing to make the creature lose its hold with the hooks attached to its head. This method was obviously impossible in the eye, so I injected a few minims of a strong solution of tobacco into the aperture with a hypodermic syringe and then covered it over with a plug of moist tobacco-leaf and left it for a couple of hours. On removing the tobacco-plug I found the creature much less active, and after some little trouble I managed to seize the tail-end with a fine forceps and little by little to withdraw the whole worm. The patient made a good recovery and did not lose the sight of his eye.

FIG. 1.



Rough diagram of the eye of the patient, the shaded portion indicating the inflammation and protrusion of the inner canthus. *a*, Circular aperture with prominent raised margin through which the tail-end of the worm protruded from time to time.

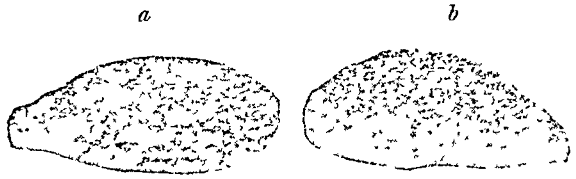
FIG. 2.



Rough diagram of the beef-worm. *h*, Head, showing two short black hooks with which the worm affixes itself to deep tissues; *t*, tail; and *b*, bristles. These bristles are set in rows around each segment of the middle two-thirds of the worm.

I inclose a rough sketch and two photographs of the worm (Figs. 2 and 3), as well as the creature itself preserved in alcohol; it measured when first extracted one and three-eighths inches in length by three-eighths of an inch in diameter and was covered over the middle two-thirds of its body by short dark bristles. It is only about half-grown, as in the full-grown worm these bristles attain a length of half an inch or more.

FIG. 3.



(*a*) The ventral aspect, and (*b*) the left dorsal aspect—of the actual worm; life-size. From photographs.

The curious point about this case is how the fly managed to lay its egg in such an exceedingly sensitive spot as the inner canthus of the eye without the sufferer becoming aware of the fact.

Corozal, British Honduras.

# Clinical Notes:

## MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

### A CASE OF VAGINAL ATRESIA.

BY F. SIDNEY GRAMSHAW, M.D. ST. AND.

A WELL-DEVELOPED, tall girl, aged 18 years, was brought to me on Dec. 17th, 1901, under the suspicion that she was pregnant. She complained of much pain, and her abdomen was very hard and enlarged, so as to give the impression that she was at least seven months advanced in pregnancy. I ordered her to bed and found on examination that the breasts were quite virginal and that the abdomen was distended by what appeared to be a tumour of extreme hardness. The mother informed me that the girl had never menstruated. The vagina was perfectly occluded by a firm tense hymen which on examination presented no trace of any orifice or cicatrix. It bulged outwards, putting all the soft structures on the stretch. Having placed the patient in the lithotomy position I made a small transverse incision with a tenotomy knife, when a column of dark brown, thick grumous fluid spurted up more than two feet into the air. I inserted a tube and gradually allowed about five pints of this fluid to escape. It was so thick that two hours were occupied in its withdrawal. I then flushed out the vagina with boric lotion and left the tube *in situ*. In the next 12 hours about two pints more drained away. The patient is now going on well, the uterine cavity and vagina being flushed out daily with 1 to 80 lysol solution. I propose to enlarge the opening when the uterus is of normal size.

Stillington, Yorks.

### NOTE ON A CASE OF STRANGULATED INGUINAL HERNIA IN AN INFANT NINETEEN DAYS OLD; OPERATION; RECOVERY.

BY JOHN D. RICE, M.B., B.CH. R.U.I.,

ELTHAM COTTAGE HOSPITAL.

ON the evening of Oct. 27th an infant, aged 19 days, was brought to me by his mother with a lump in his left inguinal region. On examination I found a tense swelling partly filling the left side of the scrotum and the inguinal canal. No impulse could be felt or seen when the child cried. A percussion note could only be considered doubtful, if anything dull. There was considerable œdema, with redness of the skin and subcutaneous tissues. The swelling (which I could not reduce) was also painful and the child cried lustily when touched. As there had been no vomiting or retching and the general condition of the child was good I prescribed an evaporating lotion and told the mother to put the little one to bed and to raise the buttocks on a pillow, as I thought that it might possibly be hydrocele of the cord. The next day there was a marked change for the worse. Vomiting had commenced and bloody mucus in small quantities was passed per anum. Without delay I had the child removed to the Eltham Cottage Hospital and at 6 P.M., after the administration of an anæsthetic, I cut down on the swelling and found a very tight stricture at the upper end of the inguinal canal. When this was divided the gut slipped back into the abdomen; the colour of the intestine though dark was not black. I put in a few deep sutures of silk and closed the wound rapidly, as the patient's condition was becoming alarming. A collodion and antiseptic dressing was applied and the usual stimulants to combat shock were administered. The child rallied well, ceased to vomit, and took the breast vigorously a few hours after operation. Convalescence was uninterrupted, and at the end of a fortnight the little patient was sent home, the wound having practically healed by first intention, and now after nine weeks there is only a fine scar with no bulging even on crying lustily.

I may add that immediately before operation the child was almost moribund, and I warned the parents that the chances were against his surviving the operation (the stricture having then lasted 39 hours and also considering the age of the patient). My best thanks are due to Mr. H. Sandford Smith, who administered the anæsthetic, and to the nursing staff of the Eltham Cottage Hospital for their assiduous care of the infant.

New Eltham.

## A NOTE ON THREE CASES ILLUSTRATING THE VALUE OF SUPRARENAL EXTRACT.

BY WALTER HENRY BROWN, F.R.C.S. IREL.

CASE 1.—A man, aged 53 years, had been for the last 12 months suffering from profuse sweating following on an attack of nephritis. The sweating was so severe that latterly he had to change his clothing two or three times daily. He was passing only about six ounces of urine in the 24 hours. During the year he had lost two stones in weight. For the whole year he had been under treatment, but the sweating persisted and even increased. I put him on suprarenal tabloids. In two days the sweating began to subside and at the end of four days it had entirely ceased. Further, on the fourth day a normal quantity of urine was passed.

CASE 2.—A patient, aged 30 years, a "bleeder," suffered from hæmorrhoids. The bleeding was very severe, often soaking through his clothes, and he was beginning to suffer from the effects of the continuous drain. From the family history it did not seem to be a suitable case for operation, so I put him upon suprarenal extract, with the result that in a week's time the bleeding ceased and it has not yet returned.

CASE 3.—The patient, a woman, aged 36 years, had been much reduced by persistent hæmorrhage from a uterine myoma. Ergot and mineral acids had been tried without benefit; but within 48 hours of her taking suprarenal extract the bleeding ceased.

I record these instances of the power of this animal extract in the hope that my experience may be of benefit to others. In the first case related the patient had been examined by several medical men, but not one had seen such terrible distress in a man who was otherwise quite well. It is interesting to note that the quantity of urine passed increased as rapidly as the sweating diminished.

Leeds.

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**SOUTH DEVON AND EAST CORNWALL HOSPITAL.**—As a result of the recent Hospital Saturday in Plymouth the sum of £563 has been handed over to the South Devon and East Cornwall Hospital.

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# A Mirror

OF

# HOSPITAL PRACTICE,

## BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

## GREAT NORTHERN CENTRAL HOSPITAL.

### A CASE OF EXTREME DILATATION OF THE LARGE INTESTINE NOT DUE TO STRICTURE, TERMINATING FATALLY.

(Under the care of Dr. H. W. SYERS.)

THE rarity of idiopathic dilatation of the colon is very great Some of the cases certainly seem to be congenital in origin, while in another group the disease is apparently acquired. We have practically no knowledge of the etiology of the disease. One of the most striking examples of the disease was described by Dr. H. D. Rolleston and Mr. Warrington Haward.[1] Early colotomy appears to be the only treatment likely to be of any use. In a case under the care of Dr. Osler[2] recovery followed colotomy, but that case was congenital in origin.

In December, 1900, a carpenter, aged 59 years, presented himself in the out-patient room of the Great Northern Central Hospital giving a history of discomfort and distension after food during a period of many months. The abdomen was enormously distended and very tense. He was treated as an out-patient for a few days and then admitted to the ward. He had always been in good health until about 12 months before coming to the hospital. At that time he first noticed uneasy sensations after food and a feeling of fulness. He also observed that the abdomen was larger than was formerly the case. At this time he was much troubled with a frequent desire to defecate but without result; these efforts were attended with considerable straining. When the bowels acted the motions were loose, but no blood was passed, neither was the action accompanied by pain. The swelling of the abdomen gradually increased and he was able to work intermittently only. Six weeks before admission he was compelled to leave off work altogether. At this time the swelling sometimes became much less marked, but it always reappeared, the periods of improvement being of short duration only. He had not noticed that the symptoms were in any way influenced by the nature of the diet, and at no period of the illness had he been troubled with vomiting. The patient's previous health had always been good with the exception that he suffered from acute rheumatism in 1871; he had not, however, experienced any further attack. He appeared to have been a free drinker, but there was no history of syphilis. The family history was altogether unimportant. On admission he was thin and wasted but of good colour. He was somewhat short of breath. There was no complaint of pain. The tongue was clean and the pulse and respiration were of normal frequency. The abdomen was uniformly and greatly distended, being also very tense. The percussion note was everywhere resonant and the liver dulness was altogether obliterated. There was no evidence of the presence of fluid in the peritoneal cavity. Over the back of the chest on the left side the abdominal resonance extended to the angle of the scapula; below this point the breath sounds were almost inaudible. The lungs were healthy at the apices and the heart sounds were normal. The specific gravity of the urine was 1016; it was acid and free from albumin. On rectal examination it was found that the anal orifice was drawn up and contracted, the rectum being greatly distended. There was no growth in this locality. The long rectal tube was passed and a very large quantity of gas escaped, its removal giving the patient much relief. After the use of the long tube the abdomen was still distended, but less so than before the passage of the instrument. When the extreme distension was overcome in this way the outlines of the distended intestine could be clearly made out and very marked peristaltic movements were also discernible. No enlarged glands were anywhere to be detected. The patient was ordered a dry diet, the quantity of liquids being restricted as far as possible, and he was kept in bed. No drug treatment had any but the most fleeting influence on the patient's symptoms and physical signs Neither turpentine, nor strychnine, nor belladonna had any effect in permanently reducing the distension, the only relief, and that purely temporary, being afforded by the passage of the long rectal tube. This proceeding was invariably followed by the passage of great quantities of flatus The condition of the patient being unsatisfactory and the possibility of a stricture being in question, Mr. E. C. Stabb was asked to see the patient, and it was agreed that the only treatment likely to be of service was surgical. The advisability of laparotomy being performed was then submitted to the patient, but he absolutely declined operation of any kind and left the hospital just after Christmas, against advice. Nothing more was heard of him until the middle of January, when he again applied for admission. His condition was now very serious. He stated that since leaving the hospital the distension had much increased, causing great distress, and that for some days before his second admission he had been troubled with more or less constant vomiting. His pulse was now rapid and feeble and vomiting of stercoraceous matter was frequent. Immediate operation being deemed necessary Mr. Stabb performed median laparotomy; this revealed an enormous distension of the whole of the large intestine, while the small intestine and stomach appeared to be more or less collapsed, owing, doubtless, to the great pressure upon them exerted by the distended colon. The abdomen, so greatly distended before operation as to appear to cover the body of the patient, was practically filled by the enormously distended large intestine, the abdominal wall being stretched to all but the utmost limit of its capacity. No stricture or other obstruction could anywhere be detected. Colotomy was performed, leading to the discharge of an enormous quantity of gas and to the escape of about two gallons of very offensive fluid fæcal matter. A Paul's tube was tied in. The whole operation only occupied a few minutes and was performed under slight anæsthesia, as the serious condition of the patient prevented his being thoroughly anæsthetised. The patient died the next day from heart failure.

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[1] Transactions of the Clinical Society of London, vol. xxix., 1896, p. 201.

[2] Archives of Pediatrics, 1893, vol. x., p. 3.

*Necropsy.*—At the post-mortem examination the body was found to be considerably wasted; rigor mortis was well marked. The abdomen was enormously distended, the stomach and the whole of the intestine being dilated to their utmost capacity and showing signs of atrophic catarrh. The transverse colon measured over 15 inches and the sigmoid flexure over 18 inches in circumference. The distended state of the stomach and small intestine differed widely from the condition found at the operation when they were small and collapsed. Doubtless their distension was due to the removal of the pressure of the large intestine when the latter was opened. For the same reason the dimensions of the large bowel during life and before operation were far in excess of the measurements just given. No stricture or growth was found in any part of the intestine large or small. The solar plexus was atrophic; the pancreas was very firm. There were adhesions at both pulmonary apices, otherwise the lungs were healthy except for the presence of œdema. The heart was large and fatty and the aortic valves were incompetent through atheroma. The left ventricle was dilated. The spleen was small and firm; the liver was large and of somewhat granular texture. The gall-bladder was healthy.

*Remarks by* Dr. Syers —This case must be classed amongst those of that extremely rare affection idiopathic paralysis of the intestine. From the article by Dr. W. H. White on the subject in Allbutt's System of Medicine I gather that only 12 such cases have been recorded in 40 years, and that since 1880, during which lapse of time 8000 post-mortem examinations have been made at Guy's Hospital, not a single case has been observed.

As regards the symptomatology in this case it is worthy of note that peristalsis was quite easily observed when the extreme distension had been relieved; no doubt the fact of peristaltic action being only exceptionally noticed was due to the extreme distension of the abdomen. The patient at no time complained of actual pain, but only of discomfort: the latter, however, was often extreme It was in all probability this absence of pain which led him to decline operation, to which, indeed, he was strongly opposed. At no period of his stay in the hospital was there actual constipation; on the contrary, the bowels were always more or less loose. Vomiting was not noticed during his first residence in hospital, setting in late in the course of the illness and becoming stercoraceous at the end. The use of the rectal tube always gave relief which was unfortunately of but very temporary duration.

As to the cause of the condition, it is impossible to speak definitely. The patient on the whole had always been in good health; he had not suffered from indigestion and the action of the bowels had always been regular. It is possible that the condition of the solar plexus may explain the occurrence of the malady. I have mentioned that the plexus was atrophic, and it is possible that this lesion may have led to the production of atony of the whole intestinal tract, but even assuming this mode of causation of the symptoms we remain completely in the dark as to the why and wherefore of the change in the solar plexus. As in so many other "explanations" of the origin of maladies, nothing more is effected than the removal of the difficulty one step further backwards. It should be mentioned that the suprarenal capsules were in a healthy condition.

As regards treatment the futility of the administration of drugs was strikingly illustrated, as it always is in this class of disease It is unfortunate that the patient refused operation when he was in hospital for the first time, as his general condition was then fairly good. From this period his health rapidly deteriorated, and when he again entered hospital an operation could do no more than afford a slender chance of prolonging his life. The case is an extremely unusual one, and its pathology is most difficult, indeed, impossible, according to our present lights, to understand. But on this account it is only the more worthy of record.

My best thanks are due to Mr. A. Whitmore, the house physician, from whose notes the history of the case has been abstracted.

## EGERTON HOSPITAL, PESHAWAR.

### A CASE OF GASTROTOMY FOR REMOVAL OF FOREIGN BODIES FROM THE STOMACH; RECOVERY.

(Under the care of Lieutenant-Colonel G. W. P. Dennys.)

The question of the treatment of foreign bodies in the stomach is sometimes difficult. If there is any chance of their passing into the intestine operation may be delayed until symptoms arise. Feeding with pultaceous food will generally be followed by the passage of the foreign body, but purgatives should be eschewed. The chief reason for operation in the following case was the large number of coins present. A very excellent example of the foreign bodies which can pass through the whole alimentary canal is to be found in The Lancet[1]; in this case a man had been in the habit for 14 years of swallowing stones. On one occasion he claimed to have swallowed nine and a half pounds, and when in the Peterborough Infirmary under the care of Dr. Cane 66 stones were removed from the rectum and 25 more were passed later.

A powerfully-built, healthy-looking, little man, about 30 years of age, came to the Egerton Hospital, Peshawar, on Oct. 20th, 1901, and gave the following extraordinary story. He said that he was an Afghan, that he resided in a village in Afghan territory several marches across the border, and that he was an ardent disciple of a mulla (holy man) who lived in the Peshawar district. He had been in the habit of making periodical visits to this mulla with the object of receiving religious instruction in the Mahomedan faith. Eight days before he consulted Lieutenant-Colonel Dennys he said that he was coming into British territory on a visit to his mulla. On arriving at a place called Dakhi (one march beyond Landi Kotal) he found that all travellers were searched by the Amir of Kabul's order and that all property in their possession, including money, was taxed. He said that a tax of 3 per cent was levied on all cash in the possession of travellers, and that in order to evade this tax he conceived the idea of swallowing all the money he had with him. While some of his companions were being searched he set to work to swallow, as fast as he could, a sum of 65 Kabuli rupees which he had with him. He had nearly completed his wonderful feat when the Amir's officials detected his game and rushed at him. He took to his heels and ran down the road, swallowing as fast as he could as he ran the remainder of the cash, but before he could finish his "meal" he was caught and six remaining rupees (some of which were in his mouth still) were seized by the officials and forfeited. As the patient had 65 rupees to start with, and as six only remained when he was caught, he was satisfied that he had swallowed 59 of the coins. He was, however, allowed to proceed on his journey. On his arrival next day at Landi Kotal he went at once to the small Government dispensary there, told his story, and asked for a strong purgative, which was given to him. This, though it purged him violently, failed to bring away any of his lost treasure. A day or two afterwards another purgative was given, but this was as unsuccessful as the first He then went on to Peshawar (three marches) and related his grievance The cash had then been inside him for eight days. The only symptoms he complained of were a feeling of weight in the stomach and some loss of appetite. His grief over the loss of his money was, however, very acute, and his only thought appeared to be the recovery of his hidden treasure. He wanted Lieutenant-Colonel Dennys to cut him open at once and to restore to him his money.

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[1] The Lancet, March 18th, 1899, p. 764.

A most careful examination by palpation of the abdomen when the patient lay on the table failed to reveal the smallest sign of the silver mine within him. The intestines were quite empty and the abdominal walls, being free from fat, facilitated the examination. But on making the man stand up and stoop forward and on applying intermittent pressure just above the pubes a moveable heavy mass could be felt most distinctly to come in contact with the tips of the fingers It was, however, quite impossible to make out the size of this mass or to grasp it in any way between the fingers. It seemed just possible that the coins might have passed through the pylorus and have become lodged in a coil of some part of the small intestine, but against this were the facts that the man's bowels had at no time become obstructed and that nothing could be felt in the abdomen when the man was lying down. It was decided to feed him up for 24 hours with large quantities of solid food to be followed with a strong purgative. If this failed to remove the coins it was proposed to make an exploratory incision midway between the umbilicus and the pubes. The purgative acted very freely but not a single coin appeared in the dejecta. On the morning of the tenth day after the man had made his extraordinary and indigestible "meal" Lieutenant-Colonel Dennys decided to operate. By this time the patient's distress had become very acute. He complained of a continuous burning pain in his abdomen which was much aggravated by movement, and the only position which he could maintain for any length of time was sitting in a squatting attitude with his body thrown well forward His pulse was rapid, but there was no rise of temperature.

On Oct. 23rd he was placed under chloroform, the skin of the abdomen having previously been carefully washed and disinfected in the usual way. An incision three inches long was made in the middle line, commencing one inch below the umbilicus, and the peritoneum was opened. On passing two fingers into the abdominal cavity no sign of the heavy mass (so distinctly felt when the man was standing up) could be discovered. *Some coils of small intestine* presented in the wound. With much patience the whole length of the small intestine, from the pylorus to the cæcum, was slowly and gently passed through the fingers, but nothing was found. Lieutenant-Colonel Dennys then inserted his whole hand into the peritoneal cavity and explored the entire length of the large gut from the cæcum to the sigmoid flexure of the rectum, but it was also empty. He then passed his hand up between the coils of intestine and the anterior abdominal wall to the stomach, and he could distinctly feel the whole mass of rupees lying in that organ, dragging by their weight the posterior wall far back into the abdominal cavity It seemed obvious that the stomach could not be opened and its mine of wealth removed through the exploratory incision below the umbilicus, and it was a question whether the patient could stand the shock, prolonged anæsthesia, and further manipulation necessary for a gastrotomy operation. He had already been more than an hour under chloroform The immediate suturing of the lower abdominal incision was imperative This was done as rapidly as possible The peritoneal edges were brought carefully together by eight or 10 interrupted carbolised catgut sutures Four stout silk sutures were then passed through the skin and abdominal muscles, and, finally, some superficial fine silk sutures brought the edges of the skin neatly together. The patient was taking chloroform well, his pulse was *very fair, and there was remarkably little* shock. All through the operation his chest and abdomen and pelvis had been kept swathed in towels wrung out in hot carbolic lotion.

It was now decided to perform a gastrotomy and to remove the coins. The incision recommended by Mr. H. G. Howse[2] was made—i e, an oblique one three inches long, parallel with and one inch below the lower margin of the left costal cartilages and commencing about one and a half inches from the middle line. The muscles and abdominal fasciæ were incised in the same direction as the superficial parts Immediately the peritoneum was opened the lower border of the stomach with the omentum attached bulged into the wound. The anterior surface of the stomach was then drawn gently out, sufficiently to permit of an incision two and a half inches long being made in it. Sponges attached to strings were packed in the sides of the wound to prevent protrusion of coils of intestine, which at this period of the operation were very difficult to restrain owing to the patient making violent efforts to vomit Mr. Allah Jowaya, assistant *surgeon, held the anterior wall* of the stomach firmly in his fingers, and Lieutenant-Colonel Dennys made an incision through the peritoneal and muscular coats in the long axis of the stomach. This caused very profuse bleeding from a number of small arteries and veins which were seized and tied with fine catgut before the mucous coat of the stomach was opened. When the bleeding had ceased the knife was passed through the mucous lining of the organ Several small vessels in this coat began to bleed profusely; these were seized with Spencer Wells forceps. Lieutenant-Colonel Dennys then inserted his index and middle fingers into the stomach as far as they would go, but failed to find the coins which were lying out of reach at the back of the abdominal cavity. Owing to the extreme elasticity of the stomach wall no difficulty was found in inserting the whole of the left hand through the incision into the interior of the stomach. This procedure was preferred to groping about at the back of the viscus with a pair of forceps which might have pinched or injured the mucous membrane. Once the hand was inside there was no difficulty in gathering up the large number of coins that lay therein. The operator had, however, to insert his hand a second time before the whole of the coins could be removed. The patient began to strain and vomit again after the coins had all been extracted, and it was impossible to attempt to suture the stomach walls till the vomiting had ceased. The mucous coat showed a strong tendency to curl inwards along the incised edges, and it was with much difficulty that Lieutenant-Colonel Dennys was eventually able to bring the edges neatly into apposition with catgut sutures When this had been done catgut Lembert's sutures were applied to the peritoneal lining, and after satisfying himself that the incision was firmly closed and that all bleeding had ceased Lieutenant-Colonel Dennys returned the protruding portion of the stomach into the abdomen. The abdominal incision was then sutured in exactly the same way as the incision below the umbilicus The external wounds were dusted with iodoform, covered with dry antiseptic gauze, over which a thick pad of sal alembroth *wool was placed, and the patient was* removed to his bed and packed round with hot-water bottles He rapidly rallied from the slight shock caused by the operation and it was extremely difficult to restrain his exuberant joy at the news that his lost treasure had been safely recovered

On the second day after the operation his temperature rose to 99 4° F, and on the evening of the third day it was 100°, after which it never again went above normal The lower abdominal wound healed beautifully by first intention without a drop of pus, but the upper wound did not heal so well, and owing to a small collection of pus having formed under the skin a drainage-tube had to be inserted for a few days and the patient was fed by nutrient enemata three times a day for the first six days consisting of yelks of eggs, milk, and brandy He complained a good deal of thirst during the first two or three days, for which small lumps of ice were allowed by the mouth from time to time On the sixth day he was allowed a small quantity of milk every two or three hours On the eighth day he was given soup as well as milk, and on the tenth day he was promoted to milk, rice, butter, and soup.

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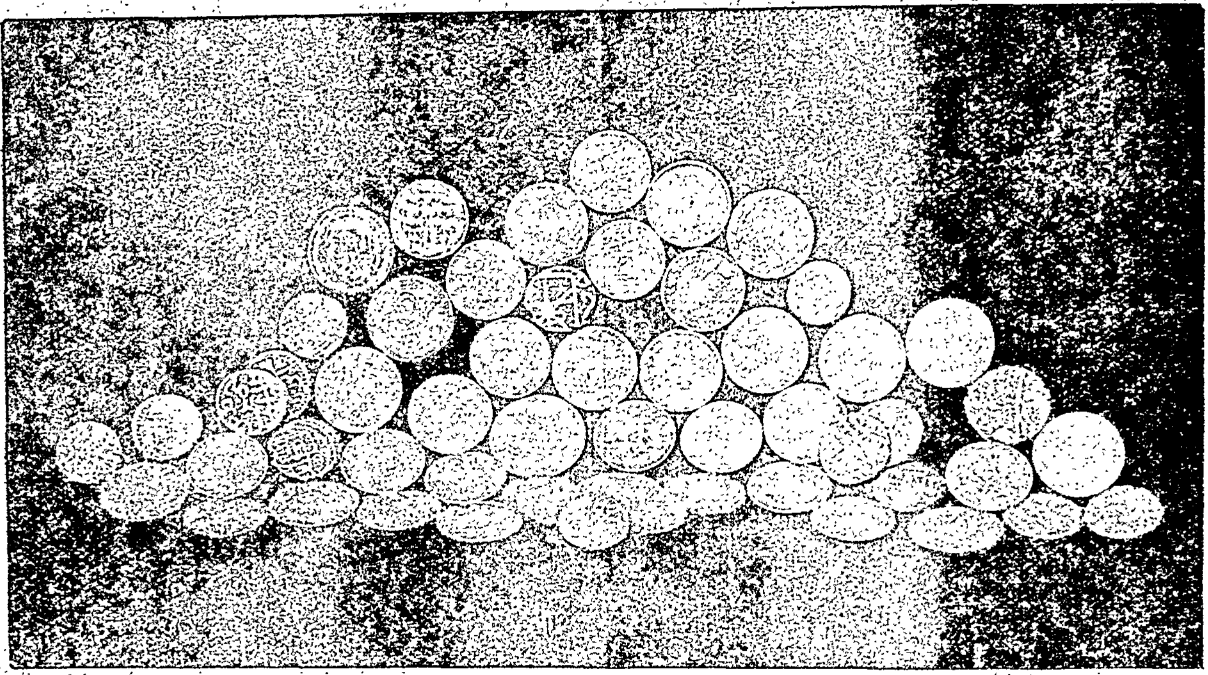
[2] Dictionary of Practical Surgery, p 590

The patient was a wild trans-border Pathan and could not be made to understand the danger of the operation which he had undergone. It was only by placing a man on duty over him night and day and keeping a watchful eye on him constantly that he could be prevented from tearing off his dressings and getting up. He admitted on the sixth day that he had stolen and drunk a pint of milk two hours after the operation which the dresser on duty had left on a small table and which was intended for administration by the rectum. But apparently no evil resulted from this rash act on his part. For the first three days it was found necessary to keep him more or less deeply under the influence of morphia by hypodermic injection owing to the impossibility of keeping him quiet otherwise.



Reproduction of a photograph of the coins recovered from the patient's stomach.

The actual coins found in his stomach were 55 Kabuli rupees (see Figure). The patient was very indignant when told that only Rs.55 had been found inside him, for he contended that he had swallowed 59, but he afterwards admitted that he might have dropped some when he was being chased by the Amir's officials. The exact weight of these 55 Kabuli rupees was found to be 17¾ ounces.

*Remarks by* Lieutenant-Colonel DENNYS.—The above case deserves to be recorded, not only on account of its surgical interest, but because of the extraordinary and, I believe, unique circumstances which led to the necessity for so serious an operation.

The most interesting points in connexion with this case may be summed up as follows. 1. The weight of the coins in the stomach when the patient was standing up dragged the lower portion of the stomach down almost into the pelvis, and the moveable mass which I could feel just above the pubes led me to believe that they had become lodged in some mysterious way in a coil of the small intestine without causing obstruction of the bowel. 2. The remarkable absence of any serious symptoms till the tenth day after the coins had been swallowed. 3. The extraordinary vitality of these wild frontier people and their power of resisting shock. This patient was two and a half hours under chloroform, four and a half ounces of the drug had been used through Junker's inhaler, the whole of the large and small intestines had been freely handled, many feet of gut had prolapsed through the wound when he was vomiting and were returned with no small difficulty, the stomach had been opened and my hand had been introduced into that organ, and yet at the end of the operation the patient had a very fair pulse and no shock worth mentioning. 4. The story which the patient gave of his having swallowed a pint of milk two hours after the operation when the dresser was out of the room. The stomach never after the operation showed the slightest tendency to be irritable. 5. The rapid and almost uneventful recovery of the patient who but for the suppuration that took place in the upper wound was practically quite well 10 days after the operation. The suppuration of the upper wound I attributed to the patient having inserted his fingers under the bandage and dressings to ascertain what sort of an incision I had made. He admitted having done this. The man's great terror all the time he was under my treatment—and nothing I could say would allay his fears—was that after all I had done for him I was sure to insist on his becoming a Christian.

On the fourteenth day after operation the man was in excellent health, able to eat anything, and left the hospital for his home on the twentieth day.

# Medical Societies.

## HARVEIAN SOCIETY OF LONDON.

### *Exhibition of Cases.*

A MEETING of this society was held on Dec. 19th, 1901, Dr. H. A. CALEY, Vice-President, being in the chair.

Dr. E. CAUTLEY showed a case of Infantile Scurvy Simulating Acute Epiphysitis. The patient, a female, was born on Dec. 13th, 1900, and came under observation on Dec. 2nd, 1901. She was the fourth child. Two children had died in infancy from diarrhœa. The patient was fed on cow's milk and barley-water during the first two months of life and since then on condensed milk and barley-water, with the addition of "Brighton biscuits" at the age of five months. The history of the dietary was not very trustworthy. The left arm and shoulder had been swollen for two weeks. The child was pale and ill and she cried when moved or touched. Four teeth were cut and the two upper lateral incisors showed signs of eruption. The lower gums were normal but the upper gums, round the teeth, were swollen and dusky red in colour. There was extensive swelling of the left shoulder, extending half way down the upper arm. The swelling seemed to be in front of the joint and under the periosteum of the humerus. There were moderate signs of rickets—beaded ribs and enlargement of the epiphyses, especially of the knees which were much swollen above the condyles and very tender. Exploration of the shoulder confirmed the diagnosis of scurvy, pure blood being obtained. In the course of two days the swelling extended downwards to the elbow. The child made a satisfactory recovery under anti-scorbutic diet, without drugs, but still presented considerable thickening of the left humerus, especially of the lower half. Pyrexia was slight and irregular.—Dr G. A SUTHERLAND suggested the possibility of fracture.—Dr. CALEY remarked on the rarity of the condition. He thought that a series of skiagrams in such cases would prove of interest.—Dr. CAUTLEY, in reply, pointed out that at first the swelling only extended as low as the middle of the humerus and that in the course of two days it extended down to the lower epiphysis. The gradual extension downwards was not in favour of fracture and there did not appear to be any bending of the bone He pointed out that the thickening was most marked in the lower half of the humerus by reason of absorption taking place from above downwards, the blood last effused being the last to be re-absorbed.

Mr. F. JAFFREY showed a child, aged 10 weeks, with Craniotabes. When first seen a month previously the child was suffering from congenital syphilis, and on examining the skull he was found to have craniotabes, which practically affected all the bones of the vertex, but was best marked on either side of the lambdoid suture. The child was at once weaned and put on grey powders and small doses of cod-liver oil. Mr. Jaffrey made a few remarks on the causes of craniotabes and said that the best marked cases he had seen were in subjects of congenital syphilis, though he had seen the condition not uncommon in rickets.—Dr. L GUTHRIE pointed out that many cases improved very rapidly, even as rapidly as the one brought before the society. He believed in the association of the affection with congenital syphilis, but had seen cases in ill-developed infants independently of either congenital syphilis or rickets.—Dr. CAUTLEY thought it important to have a clear understanding as to what was meant by the term "craniotabes" He considered that there were several varieties of the affection. One he regarded as due to delayed development. The bones of the vertex were sometimes not ossified at birth and remained membranous for some weeks. This was especially the case in premature infants, but it occurred also in infants born at full time. He thought that the present case was one of delayed ossification. To a second variety he gave the name, the "parieto-occipital type." It was characterised by softening along the sutures, mainly the lambdoid suture. This, he said, was extremely common in infants brought up on condensed milk, and especially so when the infant was kept in close, badly ventilated rooms Consequently it was found most often in the early months of the year. He ascribed it to a deficiency of the lime salts in the food. The text-book type, that in which scattered isolated spots of softening were found, he regarded as extremely rare, and he had never seen a case during life and verified post mortem. He had also seen very extensive craniotabes associated with congenital cerebral defects and with congenital hydrocephalus He was extremely sceptical as to any etiological association with congenital syphilis, beyond the general malnutrition so often present in this disease.—Dr. W. EWART discussed the tendency to primary atrophy of the tissues in connexion with congenital syphilis, and suggested that the presence of an analogous process in other bones would be confirmatory of the view that the disease was a cause of craniotabes.—Dr. SUTHERLAND thought that the question was not yet settled and that the book type of the affection was not very rare, especially in the parieto-occipital region He believed those cases to be due to congenital syphilis when the patches were circular with surrounding ossified bone. As to the mode of production, he thought that in some cases absorption took place from the outer surface of the bone.—Dr. CALEY suggested that in view of the possibility of a connexion with congenital syphilis it might be advisable to treat all such cases with mercurial preparations.—Mr JAFFREY replied shortly.

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## LIVERPOOL MEDICAL INSTITUTION.

*Exhibition of Case.—Fracture of the Fifth Metatarsal Bone.—Coxa Vara.—A Speedy Method of Removing the Pain of Piles.—Anæsthetist and Operator.*

THE fifth ordinary meeting of the session of this society was held on Dec. 19th, 1901, Mr. EDGAR A. BROWNE, the President, being in the chair.

Mr. T. H. BICKERTON showed a patient with Melanotic Sarcoma of the Conjunctiva.

Mr ROBERT JONES related: 1. Five cases of Fracture of the Fifth Metatarsal Bone due to direct violence. Although no reference to this fracture was found in the text-books he thought that the lesion was common. Radiographs of each case were shown and the fracture was found to be almost at the identical spot in each case, just below the base of the fifth metatarsal bone. The injury in each case was due to the body-weight acting upon the foot when in the position of equino-varus, and was evidently due to a cross breaking strain, the bone yielding close to the very strong ligaments which bound the metatarsal base to its surroundings The symptoms of the fracture were pain over the site, a little swelling, no crepitus, and pain on attempting to invert the foot 2. A series of cases of Coxa Vara, illustrating the bilateral infantile type and contrasting it with the changes in the neck usually present in extreme rickets. Mr Jones also showed the adolescent type, which in one instance was very extreme, the rounded head being enlarged, its lowest portion reaching three-quarters of an inch below the acetabulum. The skiagram distinctly explained the very marked limitation in movement which gave the patient great pain. It presented a very rare appearance. The head of each femur was opposite to the acetabulum, and the neck formed an acute angle to the shaft. The trochanters were not thickened. Three and a half inches from the top of the trochanter the lower border of the femoral head on the left side was within a quarter of an inch of the shaft. Part of the rounded head was excurvated out of the acetabulum towards the femoral shaft. The neck was irregular and somewhat narrowed in contact with the head The upper border of the left neck measured three and a half inches and the lower three-quarters of an inch. On the right side the head practically touched the shaft four and a half inches from the top of the trochanter. The superior border of the neck was four and a half inches in length and the lower one and a quarter inches. The same kind of irregularity was noted and the neck was very thinned towards the femoral head The head seemed also to be levered out of the joint.—The etiology and treatment were discussed

Dr. WILLIAM CARTER read a note on a Speedy Method of Relieving the Pain of Piles A suddenly protruded pile which caused extreme pain, the intensity of which was not diminished by a prolonged external use of several much-praised remedies, was almost immediately and permanently relieved by a single application of 10 cubic centimetres of cocaine and 20 cubic centimetres of menthol in oil of theobroma These were made into a cone which was rubbed over the part

Mr. A BURNS GEMMEL read a paper entitled "Anæsthetist and Operator," in which he stated that charges had been made against those engaged in the administration of anæsthetics of "want of knowledge and want of care," and that surgeons at the same time objected to anæsthetists claiming to be "supreme in their own place" and maintained that the surgeon should be master over the management of the anæsthetic as over every other detail of the operation. Medical men engaged in the administration of anæsthetics were divided into (1) those under direction and bound to obey orders, such as the medical student and the house surgeon; and (2) those who, recognising the great responsibility of the work, undertook it and therefore ought not to be interfered with in any way in the performance of their duty. The duties of the anæsthetist and the operator were briefly considered, and it was pointed out that each ought to give his whole attention to his own work. In the event of a fatality each for his own work was accountable (1) to his conscience, (2) to the relatives and friends, and (3) to the coroner and jury. Friends and relatives knew that the surgeon came to operate and in the event of disaster from the anæsthetic would blame the anæsthetist Young surgeons did not administer to the extent to which they did before the special anæsthetist came into existence and the older surgeons had ceased to administer. Seeing numerous cases merely as an operator did not give experience of anæsthesia and therefore the surgeon, old or young, had no right to dictate to the administrator. The special anæsthetist was only available for hospital patients and the richer portion of the community, consequently the greater part of this work was undertaken by the general practitioner who fully recognised his responsibility, and any attempt to deprive him of this responsibility and to lay it on the operator would tend to make him less careful and therefore less skilful He (Mr. Gemmel) was always ready to do whatever the operator wished if it could be done with safety, but he strongly objected to the assumption of the right to "dictate" by the operator. He who did the work must bear the responsibility, and he who bore the responsibility must be allowed to do his work without interference.—Dr. H. BRIGGS said that Mr. Gemmel might have saved himself a great deal of trouble and have avoided the useless discussion which was to follow by pointing out who was to be supreme authority or "captain of the ship" if not the operating surgeon.—Dr. WILLIAM ALEXANDER said that in the coroner's court the responsibility for the anæsthetic was distinctly thrown upon the operating surgeon. The patient selected his surgeon, left himself in his hands, and looked upon the anæsthetist as an assistant to the operator. In cases where the family medical attendant administered he had to bear the brunt of the disagreeable things said or thought by the relatives and so interposed between them and the surgeon, but even then the case was considered by them as a fatality in the practice of the operator. As a general rule the preliminary arrangements for the administration were agreed upon between the surgeon and the anæsthetist, but if there were any difference of opinion the surgeon should carry the day. In the present day patients often thought more of the danger of the anæsthetic than of the operation, and if this fear continued probably it might arrive at such a pitch that the patient would select his favourite anæsthetist first and leave him to call in the surgeon as the junior. Until that occurred the surgeon should lead the way. The surgeon would incur a grave responsibility if he asked the anæsthetist to give more anæsthetic when the latter declared that it would be dangerous to give more. In all cases the anæsthetist and the surgeon should stand shoulder-to shoulder, bearing the responsibility together and standing up for each other.—Mr. F. T. PAUL thought that the responsibility in regard to all preparatory treatment must generally rest between the practitioner and the surgeon. The choice of the anæsthetic in certain cases must lie with the surgeon. Responsibility in fatal cases would vary with the circumstances. When the death was entirely due to the anæsthetic the anæsthetist was naturally responsible; when entirely due to the operation the surgeon was. But in Liverpool it was customary to hold the surgeon responsible to the public. Practically friction between the surgeon and the anæsthetist was unknown in Liverpool, and very little give-and-take would render any such contingency impossible.—Mr. F. W. BAILEY was convinced that operator and administrator must work together dependently and not independently; they must coöperate. In cases of doubt or gravity in the course of the administration an opinion would be courted and none was better able to give it than the operating surgeon The operator and the anæsthetist were likened to a tandem team, each doing his share of the work dependently and to the best of his ability.—Sir W. M. BANKS said that after hearing the paper he was only the more strongly confirmed in the view that in the conducting of an operation there must be some one person in supreme command and that person must be the surgeon. The surgeon's position was compared to that of a general. A defeat was associated with the name of the general, however much it might have been caused by the fault of a subordinate In the case of a death from an anæsthetic it was the surgeon who had to bear the brunt of the odium, because his name was generally more widely known to the public than was that of the anæsthetist. As regarded legal responsibility the Liverpool coroner had stated that he regarded the surgeon as being answerable for all that occurred during the progress of an operation. With reference to the preliminary arrangements it was important to note that the surgeon had almost invariably seen the patient before the operation and necessarily knew something about his position, while the anæsthetist (unless he were also the medical attendant) saw him for the first time. If a patient during an operation were dying from hæmorrhage the anæsthetist might logically say that that was none of his business, but if the patient were dying, say, from some vomited matter sticking in his larynx, dare the surgeon say that he was not concerned with that and refuse to do a tracheotomy? Were an equal dual control established difficulties of a very serious character might occur. So far, maintaining these opinions as he had always done, he had never had on any occasion any difference of opinion with the anæsthetist, but he felt certain that but for his own supervision he would not have seen two deaths out of some 11,000 or 12,000 cases, but more likely 20. So far from producing harmony at an operation Mr. Gemmel's views would tend to produce discord and a sense of mutual distrust between operator and anæsthetist. But, after all, the whole discussion was purely an academical one—Mr. DAMER HARRISSON, Mr. G. G. HAMILTON, Dr. T. R. BRADSHAW, Mr. G. P. NEWBOLT, Dr. A. S. F. GRUNBAUM, and Dr. NATHAN RAW also spoke, and Mr. GEMMEL replied.

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# EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

## *Exhibition of Cases and Specimens.*

A SPECIAL clinical meeting of this society was held on Dec. 18th, 1901.

Mr. C. W. CATHCART exhibited a patient after Drainage of Both Pleural Cavities for Double Empyema. The boy, aged 15 years, had double pneumonia in January, 1900. On about the sixteenth day 25 ounces of pus were aspirated from the left pleural cavity. On the eighteenth day Mr. Cathcart aspirated about the same quantity of pus from the right pleural sac and three hours later under local anæsthesia and a whiff of ether excised a portion of rib and drained the left side. Four days later 36 ounces of pus were aspirated from the right side and in three days—i.e , a week after draining the left side—he drained the right pleural cavity in a similar manner. The patient was out of doors with both wounds healed on March 13th. His health was now excellent, expansion on both sides being quite satisfactory. The pus contained a pure culture of the pneumococcus. The factors aiding this satisfactory result were the youth and previous good health of the patient, the exclusion by careful precautions of any organisms other than the pneumococcus, and the vigorous and frequent use of inflation by the patient. A great deal of trouble was taken in trying to get Duncan's syphon arrangement to act in keeping up negative pressure in the pleural cavity, but while it drew off the pus it failed in its primary object of producing a *vis a fronte*.

Dr. W. ALLAN JAMIESON showed: 1. A case of Lupus Vulgaris treated at the London Hospital by Finsen's Light Treatment. The patient was a man, aged 28 years. When a child he struck his chin against the edge of a table and in the bruise so produced lupus developed He was treated by various methods by Dr. Jamieson, but in July, 1900, there was still a patch two inches long by one in vertical height of lupus persisting. He went to the London Hospital by his (Dr. Jamieson's) recommendation and was treated for five weeks there by Dr. J. H. Sequeira in September. Considerable improvement followed, but by July, 1901, the condition was as bad as before. He was then treated regularly till October, having had 55 exposures in all. The whole surface was now smooth and almost normal and so far no nodules had reappeared. 2. A case of Rodent Ulcer treated by the X Rays and apparently cured. The patient was a healthy country woman, aged 41 years. Three years since a small papule appeared on the left temple; it was itchy and was scratched. It gradually extended, became crusted, and a second patch formed alongside. When seen in September, 1901, there were two continuous patches of rodent ulcer, implicating the skin alone, and each rather larger than a florin. They were granular and crusted and had the typical rolled edge. For three weeks they were treated by the x rays alone, but the patches were then thoroughly scraped and on the next day they were cauterised with chromic acid fused on a probe to a bead. The surface was then dressed with Beiersdorf's zinc ichthyol salve muslin till it was healed and then the exposures to the rays were resumed. At the same time the margins were gently scraped twice and on the latter occasion they were also touched with nitric acid. Under the rays the disease melted away, so that in the middle of December there was a soft healthy normal integument over all the previously diseased areas. She had a 10-minutes' exposure four times a week There could be no question here of the curative effect of the x rays.

Mr. ALEXANDER MILES showed: 1. A patient after operation (Gastro-enterostomy) for Severe Hæmatemesis. The patient was a woman, aged 42 years, who on Sept. 8th last was suddenly seized with severe hæmatemesis. Four years previously she had been treated by Dr. Robert Stewart for dyspepsia, and the stomach, which was dilated, had been frequently washed out. She had never vomited blood nor did she exhibit any of the ordinary signs of gastric ulcer.

After this attack she regained her normal health and remained well until Sept. 8th, when the hæmatemesis occurred. The usual methods of treatment were unsuccessful in arresting the bleeding which continued for three days. As the patient's life was endangered an operation was advised and it was carried out in the Royal Infirmary on Sept. 10th. On opening the abdomen by a mesial incision and examining the stomach a densely indurated ulcer of about the size of a five-shilling piece was found close to the pylorus. It extended to the lesser curvature and fully two-thirds of the way to the greater curvature. It was therefore impossible to invaginate it without great risk of occluding the pyloric orifice, and the condition of the patient did not justify an attempt being made to excise the ulcer. It was therefore decided to perform a posterior gastro-enterostomy. After opening the stomach its interior was explored with the finger. No definite bleeding point was recognised in the ulcer. The communication between the stomach and the intestine was then completed with silk stitches. Before closing the abdomen about two pints of saline fluid were introduced into the peritoneum. During the first 24 hours after operation rectal injections of saline fluid were given every four hours and frequent nutrient enemata, which were all retained. The foot of the bed was raised. Although she continued to vomit bile-stained mucus at intervals there was no further loss of blood. Flatus was expelled in the evening. On the 12th the patient was better, though there was still sickness occasionally, but this became less frequent when the foot of the bed was lowered. On raising the head of the bed vomiting ceased entirely. On the 13th beef-tea and peptonised milk were given per os. She made an uninterrupted recovery, being up on the twenty first day and she left the hospital on the twenty-ninth day. Since then she has remained well. 2. A patient after operation for Intestinal Obstruction due to Tuberculous Peritonitis, with subsequent development of tuberculous pleurisy which was treated by drainage. The boy, aged 16 years, was admitted to Leith Hospital on August 19th, 1898, suffering from intestinal obstruction. Three weeks previously he had begun to complain of sickness and vomiting and irregular constipation and these symptoms lasted for about a week and then passed off. Three days before admission he was suddenly seized with pain in the abdomen. The pain was not severe and was not localised. He vomited everything that he took. The bowels did not act and no flatus was passed. On admission the abdominal walls were retracted and did not move with respiration Peristalsis was visible in the middle of the abdomen and in both flanks and suggested movements of both large and small intestines. No definite swelling could be palpated. In the right iliac region and in the line of the descending colon marked gurgling was elicited. The abdomen was uniformly tender all over. The rectum was empty and "ballooned." Several enemata were administered without effect. At 8.30 P.M. the abdomen was opened in the middle line below the umbilicus. The small intestine when exposed was distended, deeply congested, and thickly studded with miliary tubercles, as was also the parietal peritoneum. A fibrous band was found to constrict the small intestine a little to the right of the umbilicus. The collapsed bowel beyond the constriction was lying at right angles to the distended bowel and the two loops were united by recent adhesions for about an inch. After dividing the band and separating the adhesions the intestinal contents instantly passed into the collapsed bowel. The whole of the peritoneum was covered with tuberculous nodules but there were no further adhesions. A Keith's tube was introduced into the pelvis and the abdomen was closed For the next five weeks the patient continued to improve, and then the temperature began to rise and the boy complained of pain in the epigastrium and in the right side. These pains became more severe and "catching" and a loud, rubbing, creaking friction sound was heard over the front of the right side. The right base behind was absolutely dull. On Oct. 11th (18 days after the temperature began to rise) a portion of the eighth rib was excised in the posterior axillary line. On opening the pleural sac numerous recent adhesions were found between the chest wall and the lung and clear fluid with some flakes escaped The pleura was closed with catgut sutures and the external wound was closed without drainage. The physical signs gradually cleared up and the patient slowly recovered During the last three years he had enjoyed excellent health and had done his ordinary work as well as taking part in athletics 3 A patient after Excision of the Rectum by Kraske's Method. A labourer, aged 52 years, was admitted to Leith Hospital on Sept. 7th, 1901, complaining of increasing constipation during the preceding six months; his motions were tape-like and streaked with blood. He complained of feeling a lump permanently in the rectum with constant tenesmus. Griping pains across the lower part of the abdomen were present There was also difficulty in passing urine. On examination per rectum a tight stricture within one and a half inches of the anus was found which admitted only the tip of the finger. The edges were hard and ulcerated. The rectum was moveable except anteriorly, where it appeared to be attached to the prostate gland. On Sept. 12th a vertical incision was made from the middle of the sacrum to the anus The coccyx and lower part of the sacrum were removed. The rectum was exposed and isolated, clamped above the tumour, and cut across. The peritoneum was opened in clearing the bowel and was stitched with silk. The rectum was dissected out down to the anus. It was found to be adherent to the prostate, but the disease did not apparently infiltrate that gland. The cut end of the bowel was stitched to the upper angle of the wound and the rest of the wound was loosely sutured and iodoform gauze packing was introduced between the sutures The patient made an excellent recovery. He had not complete control of the bowels, but could keep himself comfortable and clean so long as the motions were solid and he was aware when the bowels were about to move.

Dr. W. G. SYM exhibited a patient, both of whose Lacrymal Sacs he had excised. This had been done for two reasons—viz., on account of impervious stricture with chronic abscess of the sac and long-standing fistula, a condition which gave the patient much distress; and on account also of the fact that in one eye he had a cataract ripe for extraction. Dr. Sym briefly pointed out the dangers of extraction in presence of a lacrymal stricture and showed how by means of removal of the sac these had been avoided and a good result secured. At the time of the first operation a cultivation experiment revealed abundance of pyogenic organisms and the extraction had therefore been postponed for a month; at the end of that time another cultivation from the conjunctiva proved sterile and the extraction was then successfully carried out. The cosmetic result was excellent and the patient was entirely freed from the troublesome lacrymation and discharge.

Mr. HAROLD J STILES exhibited: 1. A boy, aged six and a half years, after operation for Recurrent Tubercle and Stricture following amputation of the penis for tuberculous disease of the glans. In July last the patient had a deeply-excavated ulceration of the glans penis involving the meatus. The inguinal glands were only slightly enlarged Local treatment being ineffectual the penis was amputated. Three weeks before the boy returned to hospital with an aggravated stricture, the result of the recurrence of the tubercle in the stump. The tuberculous and cicatricial tissues around the stump were removed, the scrotum was split, and the penis was re-amputated at its root. The corpus spongiosum was dissected back as far as the perineum and the part in front of the bulb was removed. The bulb itself was then divided longitudinally on the ventral surface and the edges were united to the posterior part of the perineal wound about one and a half inches in front of the anus. The remainder of the wound was closed and infiltration of urine was prevented by the introduction of a catheter into the bladder and the use of Mr. Cathcart's "Sprengel pump." Mr. Stiles said that it would be desirable to remove the testicles, but thought that this should not be done until a few years after puberty. As regards the cause of the condition it was mentioned that the patient had been circumcised, but that the glans and prepuce did not become diseased until three years later. 2. A child, aged 14 months, after operation for Congenital Stricture of the Anus. The stricture admitted only a No. 6 catheter The usual operation was done—viz., the removal of skin around the orifice along, with separation of the mucous membrane and the suturing of it to the edges of the skin wound. The interest of the case lay in the fact that five plum-stones and one shirt-button were removed from the rectum 3 Four cases showing the results of treatment of Congenital Wry-neck by the "open operation." The patients had all been operated upon from 12 to 18 months previously. In each a very satisfactory result had been obtained. Mr. Stiles drew attention to the importance of dividing all the clavicular as well as the sternal fibres of the muscle, in addition to all the fascial bands in front of the depressor muscles of the hyoid bone and the outer part of the internal jugular vein. He preferred a transverse to a vertical incision, as the former gave better access to the deeper structures and the resulting cicatrix was less evident. In his opinion it was quite necessary to excise the lower two-thirds of the sterno-mastoid muscle as recommended by Mikulicz. If the simple open division were done thoroughly a perfectly satisfactory result was obtained without the subsequent use of any apparatus or gymnastic exercises.

Mr. **Alexis Thomson** showed a female patient, aged 52 years, the Pyloric Portion of whose Stomach he had Removed for Cancer three and a half years ago. The patient had suffered from gastric symptoms for nine months. There was a freely moveable tumour above and to the right of the umbilicus. There was no free hydrochloric acid in the gastric contents. The pyloric portion of the stomach was excised by Kocker's method. The tumour, as large as a fist, was a columnar epithelioma projecting into the interior of the stomach but causing no obstruction. Enlarged glands were removed from both curvatures, but they were found to be free from cancerous infection. The patient had since enjoyed perfect health.

Mr. F. M. **Caird** showed a patient after operation for High Shoulder due to an Osseous Plate which had developed between the scapulæ and the vertebral spines.

The following specimens were shown:—

Mr. **Miles**: (1) A Rectum Excised for Malignant Disease by Kraske's operation; (2) specimens of Preputial Calculi; and (3) specimens illustrating Fracture-dislocation of the Spine.

Mr. **Caird**: (1) Specimens and photographs from a case operated upon for High Shoulder; and (2) Carcinoma of the Transverse Colon from a case of Resection and Primary Suture.

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**Royal Academy of Medicine in Ireland.**—A meeting of the Medical Section of this society was held on Dec. 13th, 1901. In the absence of the President (Sir C. Nixon) the chair was taken by Dr. Walter Smith.—Dr. J. M. Finny exhibited a girl, aged 22 years, with all the typical symptoms of Disseminated Sclerosis. Four years ago, at the age of 18 years, she became completely paralysed as to motion in the arms and legs, with loss of control over the bladder and rectum, and with the formation of large bedsores on the sacrum and the nates. No cause could be found for her illness. She was a patient for 15 months in county Roscommon Infirmary under the care of Mr. E. T. Blakeney, and she left that institution so far recovered as to be in much the same state as that which she now presented. Having called attention to the rarity and peculiarity of this invasion of the disease, and having commented on the variability of its course and progress and the difficulties which such variability produced in the diagnosis of disseminated sclerosis in its earlier stage, Dr. Finny pointed out the signs which were typically demonstrable on the patient, taking them *seriatim* and in the order of their prominence. One of these was a notable complacency with her sad lot and a cheerful contentment with her surroundings, a feature laid stress on by Gowers as being very characteristic of disseminated sclerosis, more commonly met with in females. Mention was then made of the following organic nervous diseases which more or less closely might simulate one or more of the salient features of disseminated sclerosis: paralysis agitans, general paralysis, mercurial tremors, syphilitic diseases, ataxic paraplegia, intracranial tumours, especially of the cerebellum, and transverse myelitis, and although the subject of diagnosis was not entered on or discussed a warning was thrown out as to the risk of confounding it with hysteria, not when all the typical symptoms were present, as in Dr. Finny's case, but when they were ill-defined and varied in extent and gravity under the influence of time.—Dr. George J. Peacocke read a paper on Hemichorea and Parotitis Complicating a case of Diabetes. The patient, a man, aged 64 years, was admitted to the Adelaide Hospital on April 29th, 1901, suffering from diabetes. He presented the usual symptoms—loss of flesh, great thirst, and polyuria. The quantity of urine passed in the 24 hours varied from three to five pints, and quantitative analyses gave 2·7 ounces of sugar on May 2nd and somewhat smaller quantities on subsequent occasions. He continued very drowsy throughout his illness; at times the condition almost approached coma, and he died on May 28th, just four weeks after admission. On May 4th he developed left-sided hemichorea which resisted treatment with hyoscine, bromides, and chloral. Arsenic in 10-minim doses was given as were 20 grains of trional at night Improvement rapidly followed and all the symptoms of chorea disappeared on May 13th. The second complication, parotitis, first made its appearance on May 11th. At first it gave rise to little trouble, but on May 16th there was some elevation of temperature and the parotid gland became painful and tender. The fever continued until the patient's death, but it never reached a higher point than 101·6° F. The cause of the parotitis was quite obscure, and though a similar condition had been described in a variety of diseases and injuries of the abdominal organs so far its occurrence in the course of diabetes had not been recorded.—Dr. Smith, Mr. H. G. Croly, and Dr. A. R. Parsons discussed the paper.—Dr. W. R. Dawson read a paper on Glycosuria and Insanity (a Clinical Study). Cases of glycosuria associated with insanity were of two classes—those in which the insanity was secondary and those in which the glycosuria was secondary, the first being rare. He had had one case of the first class under his care, that of a woman who had suffered for many years from polyuria and recurrent melancholia, with general delicacy, the melancholia being of the type described as characteristic of diabetic insanity. She had been admitted for a severe attack, and sugar being present in the urine she was put on diabetic diet. The sugar and the mental symptoms disappeared and she was discharged recovered in about two months. The diet had since been persisted in and she had remained unusually well for about a year. Other cases were then briefly described which probably belonged to the second class.—A discussion followed. Dr. Smith, Mr. R. Leeper, and Dr. Hayes took part and Dr. Dawson replied.—Mr. J. Burgess read notes of an uncommon case of Sudden Death. He said: The case which I bring forward is one of sudden death from what I take to be a combination of circumstances which are uncommon. The specimen before you was taken from the body of a poorly nourished man, aged 35 years, a labourer out of employment. From the evidence at the inquest I learned that he did not complain of being unwell until the fatal seizure came on. I presume that whilst seeking for employment he was noticed by some people to fall suddenly with his shoulder resting against a wall and then to drop to the ground. The people did what they could to revive him, but when the ambulance arrived he was evidently dead and they took him to the morgue instead of to one of the hospitals. The body was, I remarked before, not well nourished, but it was not emaciated; both lungs were emphysematous with a large amount of muco-pus in the bronchial system, but nowhere were cicatrices exhibited nor was there consolidation. The pericardium was distended, on opening which somewhat over a pint of fluid blood and clots exuded. Both ventricles, especially the surfaces of the right ventricle, were covered by recent lymph, which at the time could be easily detected, and presented a fluffy appearance. Before removing the heart I searched assiduously for the source of the hæmorrhage but without result, nor could I find it afterwards. On opening the heart the valves were found to be in no way affected, the entire ante-wall of the right ventricle was principally composed of fat, and there was almost a total absence of muscular fibre; this was very striking on comparing it with the left ventricle, which was fairly normal. Both coronary arteries were permeable. In the right ventricle was a clot which formed at the time of death. Both auricles presented nothing abnormal. The aorta showed considerable evidence of atheroma. Although I have not been able to demonstrate the source of the hæmorrhage I think that the cause of death is obvious. During an attack of acute pericarditis, associated with a previously diseased heart, a bleeding occurred sufficient although small in amount to cause by its presence fatal paralysis. I find on consulting the literature on the subject that hæmo-pericardium is produced by two sets of causes, the most common being the rupture of the left ventricle of an aneurysm or of some vessel into its sac. The second is that in which during the course of pericarditis of cancerous or tuberculous origin a bloody serum is exuded into the sac, and a similar effusion occurs also in some cases of scurvy and purpura. In my case there was no trace of malignant disease or of tuberculosis, but it owes its interest as one of acute pericarditis with the very uncommon complication of a true hæmorrhage, probably from capillary vessels, which, although comparatively small, was sufficient on account of the diseased condition of the myocardium to cause sudden death.—Dr. Finny did not agree with Mr. Burgess's opinion that the change in the ventricle was due to fat. He suggested a new growth of some description as being more probable.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—A meeting of this society was held on Dec. 18th, 1901, Dr. J. G. Douglas Kerr (Bath), the President, being in the chair.—Dr. S. D. Clippingdale read a paper on the Clay and Gravel Soils of London and the Relative Advantages of Dwelling upon them. The paper was illustrated by a geological map of London and by diagrams of sections drawn through the Thames basin, showing that the soil nearest the river bed was invariably gravel, while the districts farther away were clay. Tables were also shown giving the height, elevation, soil, density of population, and death-rate of every sanitary area of London. These statistics, Dr. Clippingdale contended, proved that living on clay was not so injurious to health as was commonly supposed, and that as all the hills around London were of clay they resembled a clay table basin which, if turned upside down, became immediately drained of water poured upon it, whereas the greater mortality was clearly shown by the tables to be connected with the low-lying and level districts where the soil was generally gravel. Density of population and the class and occupation of the inhabitants were also acknowledged by Dr. Clippingdale as important factors in determining the death-rate, but these did not, in his opinion, fully account for the marked difference between the mortality upon clay hills and that upon gravel levels. The omission from the Registrar-General's returns of statistics with regard to rheumatism was regretted, as this disease was well known to be influenced by soil. In conclusion, Dr. Clippingdale pointed out that the important thing was to live upon a hill; if a hill could be found of gravel all the better, but there were no hills of gravel in or near London, and the statistics which he had brought forward proved, he contended, that the healthiest places near London were those on the clay hills surrounding it.—Dr. J. Groves (Carisbrooke) said that he concluded that Dr. Clippingdale did not intend that the conclusions drawn from the circumstances of London should be applied outside it. The experiences of a wider district in which various formations were at the surface would scarcely support such conclusions. In rheumatoid affections it was well known that the conditions ameliorated when the subjects of them removed from a clay soil to a gravel or other porous soil. His experience of London taught him that the overcrowded conditions which obtained in certain districts were responsible for high mortality rather than the nature of the soil, and the wonder was that the mortality was not greater.—Dr. A. P. Luff congratulated Dr. Clippingdale on the courage which he had shown in coming forward as a champion of clay soil, but he ventured to differ from the deductions which had been drawn from the figures given in the paper.—Dr. Harry Campbell drew attention to the fact that a well-drained gravel soil might be in some respects unhealthy—that anæmia was especially common in the neighbourhood of Aldershot. In comparing the healthiness of the gravel and clay districts of London it must not be forgotten how extraordinarily well drained London was as a whole, and the fact that wide areas were rendered impermeable to rain by being covered with houses and pavements. The low mortality of the clay eminences might be partly accounted for by the fact that they were sought after by the more wealthy residents who could command the best sanitary conditions. He did not, however, doubt that on the whole gravel was more healthy than clay.—Dr. R. Fortescue Fox held that a clear case had been made out for the salubrity of clay soils if well situated and well-drained.—Dr. W. Ewart was able to agree with almost all the views which had been expressed. Their apparent divergence was explained away by the fact that the generally accepted statement as to climate would not be applied to London which was exceptional, not only as a town, but also as a geographical and as a geological district. Its own clay area, besides being artificially protected by impermeable layers, was admirably drained by its water courses and by its sewers and was everywhere on the slope, and, moreover, was limited north and south by elevated ridges of a different formation. Clay regions had a damp and cold atmosphere because they usually consisted of extensive plateaux without natural drainage On the other hand, the London gravel, instead of being a highly aerated soil conducive to warmth and dryness of air, was in its lower strata soaking in water and therefore less healthy than it was generally supposed to be.—Dr. E. Solly (Harrogate) said that the healthiness of a soil could be discussed under two heads—the physical effects, i.e., coldness, humidity, &c., and the zymotic effects due to contamination with sewage. Further statistics were needed, but as regarded the latter point he would far sooner live in a house on a clay soil in a town, because sewage leakage tended to follow the course of the sewers instead of permeating the soil.—The experiences of Mr. G. H. Thompson (Buxton) coincided with those of Dr. Luff (excluding London), that chronic rheumatic diseases were more prevalent on clay soil than they were on other soils, and patients had frequently told him that they had derived benefit by removing from clay to non-clay districts. Intercurrent diseases might account for the non-appearance of chronic rheumatic diseases as a cause of death in the returns of the Registrar-General.—Other speakers followed and the discussion was closed by a few remarks from the President.

GLASGOW SOUTHERN MEDICAL SOCIETY.—A meeting of this society was held on Dec. 19th, 1901, Dr. John Stewart, the President, being in the chair.—The meeting, which was a special one, was called for the express purpose of considering what action, if any, should be taken regarding the relation of the General Medical Council to the medical profession In introducing the discussion the President said . The medical profession in this part of the country has been brought more closely into contact with the General Medical Council during the last 12 months than at any period of recorded time. The idea we fondly cherished of the General Medical Council that it was a body having the interests of the medical practitioners at heart anxious to listen to grievances has but proved a pleasant dream from which we have had a rude awakening. You are aware that the medical practitioners of Glasgow and the west of Scotland had occasion to approach the General Medical Council, and sent to London a deputation in support of a memorial. At the same time and on the same subject the Glasgow Southern Medical Society forwarded to the Council a petition signed by the office-bearers. It is now a matter of history that the memorial was not accepted; the deputation was not received, while the petition from our society was not even acknowledged. We are therefore forced to the conclusion that the General Medical Council as presently constituted is not in sympathy with our work as general practitioners. Further, our attention has been particularly drawn to the manner in which the General Medical Council discharges its judicial functions. The only general power it possesses is in connexion with a charge of infamous conduct in a professional respect, and in this capacity many have come to regard the Council with absolute distrust. We have seen it in the exercise of its functions frame an indictment the terms of which betrayed either complete ignorance of the law or a deliberate ignoring of the law. We have known it issue an indictment which made a grave charge of illegal conduct against the accused—viz., that of employing another to break the law—and we have seen it sustain the charge on facts which to the unbiased mind did not bear out the indictment, much less substantiate a charge of infamous conduct. We note that though in support of the charge of infamous conduct the Council furnishes particulars in an indictment to which it gives publicity, yet in considering the charge it ignores particulars and makes a test by facts which have little or no relation to the terms of the indictment. We believe, therefore, that the General Medical Council is not an impartial judge and that in questions which ought to be decided by legal methods it is influenced by sentiment and prejudice. Need we wonder, then, that many accused parties, though conscious of their innocence, should feel that for their own safety it is better to appear before the tribunal with "bated breath and whispering humbleness" and express regret. It is our duty, however, to protest strongly against the action of the Council in so humiliating men of staunch integrity and of holding up the profession in this part of the country to public ridicule and scorn. It is unanimously held that the General Medical Council is not a legislative body—that it has no power to make or alter laws; but a moment's consideration will show that the unrestricted power it possesses, of which it takes the fullest advantage, of defining what is infamous conduct makes it a very powerful legislative body indeed It has only to say, Do this or the Council will adjudge you guilty of infamous conduct; or Don't do that, or by the power committed to the Council under such and such sections of the Medical Acts the Council will erase your name from the Medical Register. Surely no body of men should possess such absolute power, certainly not any body whose judicial fair-mindedness is open to doubt. From these considerations, from the unsympathetic attitude of the Council to the medical profession, from the prejudiced administration of its judicial functions, from its arrogant assumption of legislative powers, from its apparent laxity in regard to its administrative duties and from other considerations—from sins of omission and from sins of commission—the medical profession has ceased to repose that confidence in the General Medical Council which as the governing body of medical education and registration it ought to command. Reform is needed and we believe that in the first place reformation should be in the direction of (1) a great increase in the number of direct representatives, and (2) a complete withdrawal of the penal powers of the Council, or at least a more restricted definition of the same. The present time, the President believed, was opportune to petition Parliament. It would not be difficult, he thought, to show that the profession ought to be more liberally represented on the Council, and many believed that it should be asked that the erasure from the Medical Register should be relegated to the courts of law. The President then invited discussion on the subject in which many took part, and at the close the following proposition was moved and adopted, viz. :—

> That the Council of the Glasgow Southern Medical Society be empowered to take steps to draw up a memorial for presentation to the Members of Parliament and to Parliament itself seeking support for an increase in the direct representation to, and restriction of the penal powers of, the General Medical Council, and that other medical societies be invited to cooperate.

Sheffield Medico-Chirurgical Society.—A meeting of this society was held on Dec. 19th, 1901, Dr. C. H. Willey, the President, being in the chair.—The following specimens were exhibited (*a*, microscopical; *b*, macroscopical):—Mr. R. Favell: (1) A series of Uterine Fibromyomata (*b*); (2) Diseases of Fallopian Tubes (*b*); and (3) a Parovarian Cyst (*b*).—Dr. T. H. Morton: (1) Blood Cysts from the Uterus (*b*); (2) Tubal Ectopic Gestation (*b*); (3) an Intestine Strangulated by a Band (*b*); and (4) an Intestine Strangulated by a Loop (*b*).—Mr. R. J. Pye-Smith: A Pylorus Excised for Malignant Disease (*a* and *b*).—Mr. E. J. Scorah: (1) Sarcoma of the Small Intestine (*a*); (2) Carcinoma of the Small Intestine (*a*); and (3) Cirrhotic Kidneys (*b*).—Mr. S. Snell: (1) Encapsuled Sarcoma of the Orbit (*a* and *b*); (2) Epithelioma of the Cornea (*b*); (3) Tubercle of the Iris (*a*); (4) Endothelioma of the Orbit (*a*); (5) Choroidal Sarcoma recurring in the Orbit—(i.) a section of the eyeball, (ii.) a growth from the orbit, (iii.) the bony walls of the orbit exfoliated after the application of chloride of zinc, and (iv.) microscopical sections of tumours; and (6) a collection (about 70) of Mounted Sections of Eyes.—Dr. G. Wilkinson: Hydatid of the Lower End of the Femur (*b*).—Dr. A. J. Hall: (1) Typhoid Ulcers (*b*); (2) Mucous Casts of the Intestine (*b*); (3) Brain—thrombotic softening (*b*); (4) Aortic Aneurysm (*b*); (5) Fatty Degeneration of the Heart (*a*); (6) Acute Yellow Atrophy of the Liver (*a*); (7) Fatty Degeneration of the Kidney (*a*); and (8) Amyloid Degeneration of the Heart (*a*).—Specimens illustrating various features of Tuberculosis were exhibited by Dr. J. Robertson, Dr C. M. Hector, and Dr. Hall, including Cultures of Bacillus Tuberculosis, Streptothrix, and Actinomyces; microscopical specimens of Tuberculosis of the Udder of the Cow, of the Lung of the Horse, of the Glands of the Guinea-pig, and of various Human Organs; Lupus Nodules, Urine, &c.; specimens illustrating Tuberculosis in Animals; and a large collection of specimens illustrating Tuberculosis of different Organs, both Human and Animal.

Nottingham Medico-Chirurgical Society.—A meeting of this society was held on Dec. 18th, 1901, Mr. E C. Kingdon, the President, being in the chair.—Dr. H. Handford read notes on a case of Right Hemiplegia from Thrombosis of the Cerebral Veins occurring in a young woman, aged 25 years, some three weeks after removal of double pyosalpinx; death occurred three days after first onset. At the necropsy a firm old grey adherent clot was found in the superior longitudinal sinus and hard black clots were found in the left cerebral veins. There were no clots in the arteries, hæmorrhage in the substance of the brain, or excess of fluid in the subarachnoid space. The facts of the walls of the superior longitudinal sinus being so fixed that alteration of its calibre did not occur as in other veins, that the veins took an ascending course, and that the blood-current in them was exceedingly slow all favoured the formation of clot in that position, and when in addition the cerebral veins were involved the condition was usually fatal.—The President, Dr. W. B. Ransom, and Dr. A. W. C. Peskett discussed the subject, and Dr. Handford replied.—Dr. A. Fulton read a short paper on the Treatment of Epidemic Diarrhœa in Infants. He advocated clearing out the contents of the alimentary tract, withholding all food for a time, then giving small feeds of white of egg beat up with an equal amount of water till convalescence. Minute doses of tincture of opium and acetate of lead were useful in certain cases, and as preventive treatment the sterilisation of milk during an epidemic.—Dr. W. B. Ransom read a paper entitled, "Should Milk be Boiled?" first pointing out how easily milk became a vehicle of disease; even when coming from a healthy cow it was frequently much contaminated by pollution from the milker's hands, by excreta from the byre in which the cow was milked, and by dust of all kinds which settled on the surface of exposed milk, which must occur during its transit and when left for hours in some possibly insanitary place before its final consumption. It had also been frequently shown that many zymotic diseases were traceable to the use of unboiled milk, that 10 minutes' boiling would destroy hurtful bacilli, that the nutritional value of boiled milk was equal to that of raw milk, and that its rate of digestion was practically the same. Dr. Ransom further advocated the municipal distribution of sterilised milk during epidemic diarrhœa.—The papers of Dr. Fulton and Dr. Ransom were discussed together, as running on similar lines, by the President, Dr. Handford, Dr. W. Hunter, Dr. Peskett, and Mr. R. G Hogarth.—Dr. Fulton and Dr. Ransom replied.

Windsor and District Medical Society.—The third meeting of the session of this society was held on Dec. 18th, 1901, Surgeon-General H. Cayley (retired) being in the chair.—Mr. J. W. Gooch showed a skiagram of a case of Injury to the Elbow-joint, occurring in a lad, aged 16 years. The internal condyle was seen to be broken off.—Dr. E. B. Hulbert showed (1) a specimen of Cancer of the Summit of the Bladder adherent to the Anterior Abdominal Wall from a man, aged 70 years (there were secondary deposits in the liver); and (2) a specimen of Extensive Cancer of the Ileo-cæcal Valve from a man, aged 78 years.—Captain F. S. Brereton, R.A.M.C., showed (1) a patient with a Large Swelling over the Manubrium Sterni which had improved greatly under anti-syphilitic treatment (there was a similar swelling on the tibia); and (2) a case of Morbus Cordis occurring in a young soldier. The disease was considered to be aortic.—Captain J. H. Power, R.A.M.C., showed a patient with Stiffness of the Arm and Shoulder-joint following an injury. There was some wasting of the muscles and there was a suspicion that the brachial plexus had been injured.—Mr. H. G. Plimmer delivered an address entitled "The Present State of the Cancer Question." The lecture commenced with a brief but concise history of the growth of the parasitic theory of cancer from the discussion at the Academy of Medicine at Lyons in 1773 to the recent work of Ruffer, Sanfelice, and others. The similarity of the conditions under which cancer occurred with those appertaining to various infective diseases was pointed out. Further, after a detailed description of the bodies so often found included within the cancer cells and a reference to the frequency with which they were found, the results obtained by cultivation of the organism and its introduction into the bodies of living animals were described. Besides the actual preparations which were shown under the microscope, lantern slides were thrown upon the screen, showing, first, the typical structure of carcinoma, and, secondly, the actual cell inclusions. Slides showing the organism obtained by cultivation were also shown, and, finally, endothelial growths from the lungs of a guinea-pig caused by the introduction of the organism into the animal's body. A single section of a cornea similarly treated exhibiting true epithelial proliferation was also shown.—Surgeon-General Cayley having proposed a vote of thanks to Mr. Plimmer for his very interesting and instructive address, it was seconded by Dr. G. H. Sealy, and being put to the meeting was carried unanimously.

# Reviews and Notices of Books.

*Atlas and Epitome of Special Pathologic Histology.* By Docent Dr HERMANN DÜRCK, Assistant in the Pathological Institute, Prosector to the Municipal Hospital, Munich. Vol. II. Authorised Translation from the German. Edited by LUDVIG HEKTOEN, M.D., Professor of Pathology, Rush Medical College, Chicago London and Philadelphia: W. B. Saunders and Co 1901. Crown 8vo. Pp. 198 With 122 Coloured Illustrations. Price 13s

THIS volume completes Dr. Dürck's Atlas of Special Pathologic Histology, the first volume of which we reviewed two years ago.[1] The work forms one of a series of medical hand atlases which are in course of publication on an international coöperative system. Arrangements have been made to publish these books in no fewer than 13 languages and by dividing the heavy cost of production among a number of publishers it has been possible to issue them at a comparatively low price. The success of the venture would seem to be assured, for the American publisher anticipates a sale of over 100,000 copies of the 14 volumes which have already appeared.

This volume contains 122 plates which illustrate in colours the morbid histology of diseases affecting the liver, pancreas, urinary organs, central nervous system, skeletal muscles, skin, bones, joints, and the male and female sexual organs A consideration of the diseases of the central nervous system and of those of the organs of special sense have been omitted as they are discussed in other atlases, while the subject of genuine neoplasms is reserved for a volume on General Pathological Histology. The illustrations, beautifully executed lithographs, maintain on the whole a high standard of excellence. The author tells us that in portraying the various morbid processes he has avoided the use of combination pictures—i.e, those compounded of several microscopic views—and that each plate represents as far as possible what may actually be seen under the microscope It is open to argument whether for beginners, for whom this book is intended, this is the best course to pursue. The description in the text is based on the appearance of several specimens and therefore often indicates more than can really be seen in the illustrations, and particularly is this apt to be the case here where the latter represent mainly examinations under a low power of the microscope The text, which is a condensed epitome of histology, has, we think, lost some of its value in the process of compression, for it makes stiff reading for anyone who is not familiar with the subject As a matter of fact, this atlas will appeal chiefly to those who wish to have by them a well-illustrated work with which to refresh their recollections of the histological changes produced by various diseases To such we can recommend it highly.

Diseases of the liver and kidneys have been studied in some detail, more than half of the book being devoted to these two chapters. The illustrations of amyloid liver exaggerate the indefiniteness characteristic of the affection unnecessarily, and the one on diffuse hypertrophic cirrhosis is not very instructive, otherwise the student will find the plates in this section excellent To the brain and spinal cord 22 plates have been allotted, to diseases of the skin 10, of the pancreas two, of the bones four, and of the joints two. The male sexual organs have six illustrations, while the uterus, ovaries, and tubes have the same number. These, we think, might have been omitted, as affections of the female sexual organs are treated of in a special atlas and the attention which they receive here is too slight to be of much profit to the reader.

While we cannot go so far as the American publisher and say that the book offers "a ready and satisfactory substitute for clinical observation," we have no doubt that those who are unable to continue their pathological studies practically will find this atlas extremely useful

*Die Malaria; Studien eines Zoologen. (Malaria; Studies by a Zoologist.)* Von BATTISTA GRASSI. Second and enlarged edition. Jena: Gustav Fischer. 1902. 4to, pp 250, with eight Plates and 15 Figures in the Text. Price 20 marks

GREAT advances have been made of recent years in our knowledge of malaria and Professor Grassi has played no small part in them The importance of the subject is made clear by the fact mentioned by the author in his preface that malaria prevails in two-thirds of Italy and that several millions of its inhabitants suffer yearly from it.

This book gives a most interesting account of the relationship of the malarial parasite to the mosquito (anopheles), but unfortunately it is marred by a keen discussion on the priority question. This becomes more regrettable when on p 35 an attempt is apparently made to minimise the researches of one of the pioneer workers in the subject. No further observation will be made here on this priority question as it turns the attention of the reader from the main object of Professor Grassi's excellent work.

After an historical survey of the malarial parasite in Chapter I. the author proceeds to give in Chapter II. an account of blood-sucking insects. He identifies with precision the various forms of anopheles which carry the malarial infections Many interesting questions are here discussed which have an important bearing on malaria, such as the habits of the anopheles and the distances to which they travel. In Chapter III. Professor Grassi describes the modes of catching and cultivating mosquitoes Chapter IV. is given up to anatomical considerations concerning anopheles, their eggs and larvæ, and anopheles claviger, pseudo-pictus, and superpictus receive a short description. The mode of life of these insects is discussed in Chapter V. In Chapter VI Professor Grassi gives an account of the experiments by which he arrived at the conclusion that malaria is transmitted by anopheles (and especially in Italy by anopheles claviger) and not by culex and other insects. He maintains that the parasite found in birds has nothing to do with the malarial parasite of man, and he quotes from the various authorities who uphold the same view The development of the malarial parasite in the body of the anopheles, including the arrival of the sporozoits in the salivary glands, is traced out in Chapter VII The author deals in a very suggestive manner in Chapter VIII with the objections which have been raised against the relationship existing between the anopheles and the malarial infection He says that during many months of diligent search he has never discovered a single case of malaria in which anopheles bites could be absolutely excluded and he thinks that no other view of the transmission of malaria is tenable In Chapter IX, on Prophylaxis, Professor Grassi advocates the compulsory treatment of the malarial patient because this patient is a danger not only to himself but also to the rest of the community It is most important to recognise that malarial suspects should be made to include not only those who have recently had malaria but also those who have had the disease during the past two years, and even those who have resided in a malarious district during a similar period though they think that they have never had malaria This proposal may seem to many to be a very drastic one, but the eradication of the disease is what the author would aim at. The prophylactic treatment by quinine, &c., should begin in January and be continued until the end of June. Avoidance of the bites of anopheles must be carried out by means of curtains, nets, and gloves The author repeats that it is the duty of the

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[1] THE LANCET, Dec. 30th 1899, p 1817.

State to make both prophylactic and actual treatment as far as possible compulsory. Under the heading of "Destruction of the Anopheles" Professor Grassi points out that anopheles claviger winters in houses, and that every female destroyed during this time is worth thousands killed during the malarial months. Destruction of the larvæ in the water has been attempted by means of chemical substances and sometimes with success. The author thinks, however, that this is a more difficult matter than it appears to be. He maintains that by means of suitable treatment of the individual and by protecting him against the bites of anopheles more will be done towards eradicating the disease than can be effected by sanitary measures connected with the soil ("Boden assanierungen"), although these latter must not be neglected. In Chapter X. Professor Grassi relates an experiment in prophylaxis carried out in 1900 on the very malarious plain of Cappacio; 10 houses were included in the experiment, and of 112 persons concerned in it only five cases of malaria were noted and these only lasted a short time. In an appendix the author speaks of esanopheles, a remedy containing quinine, arsenic, and iron, as a valuable agent in the prophylactic and actual treatment of the disease. The plates appended form a valuable addition to the work.

This book by Professor Grassi is an important contribution to the subject of malaria and it presents certain advantages in having been written by a distinguished zoologist.

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*A Manual of Determinative Bacteriology.* By F. D. CHESTER, Bacteriologist of the Delaware College, Agricultural Experiment Station, and Director of the Laboratory of the State Board of Health of Delaware. London: Macmillan and Co. 1901. Pp. 401. Price 10*s.* 6*d.*

IT is very difficult quite justly to appreciate the value of this book. Of necessity such a work cannot be final, nor can it be more than partially successful, and that not from any failure on the part of the author, but because our knowledge of most micro-organisms is so incomplete or misleading that it is often impossible even to recognise a microbe from its description, still less to classify it. All bacteriologists must, however, be grateful to Mr. Chester for placing at their disposal the immense amount of information which this book contains in an easily accessible form and for the great labour involved in its production. The author takes a perfectly clear view of the value of the material with which he has had to deal, and, as he says, "the conclusion is permanent that probably nine-tenths of the forms of bacteria at present described might as well be forgotten or given a respectful burial." Most bacteriologists would echo this sentiment. In his modest preface the author claims only that he has made the best of such material as was available and trusts that the tables will serve for identification if not for classification. For this reason he chooses the term "determinative" rather than "systematic" to describe the manual.

One great merit of this book is that it has a perfectly definite aim and that the whole work is subsidiary to the central idea. It is further an honest attempt to systematise our knowledge of the micro-organisms already described and is a piece of work which had to be done before further advances in this direction could be made; it clears the jungle of duplicate names and synonyms. But it does more than this, as it lays down definitely the lines on which future descriptions of micro-organisms must be based. It insists on the necessity of cultures on standard media and upon the importance of the bio-chemical reactions of micro-organisms in the determination of species. It systematises the descriptive terminology to be used, so as to avoid the picturesque but hazy language at present employed in describing cultures, and illustrates by diagrammatic woodcuts the types of cultures and colonies to which the suggested terms are applied. The great difficulty in using old descriptions for systematic purposes lies in the fact that the cultures of organisms were not made under standard conditions, so that an organism such as the bacillus zopfii (p. 248) appears in this book as not liquefying gelatin, while Frankland describes it as a liquefying organism. When such a broad difference as this fails—and it fails constantly—it can hardly be expected that smaller differences should be trustworthy. But while recognising that standard media of standard reaction are absolutely necessary for systematic work and willingly acknowledging that advance can only be on these lines, yet it is doubtful whether we shall advance by persuading ourselves that we have attained either a standard medium or a standard reaction. In England each laboratory is still a law unto itself so far as media and reactions are concerned. In America the Laboratory Committee of the American Public Health Association has issued instructions for the manufacture of media and for their titration, but though greater uniformity is thus secured it is far from being absolute. At present it is impossible to discard media containing complex organic compounds of uncertain or readily changed composition and to use only bodies of known composition easily obtained in a pure form. Unfortunately, also, it is not possible to do more than to standardise approximately the reaction of complex organic mixtures like our media. When a standard has been fixed we have to depart from it in order that certain microbes may grow; many earth organisms would not grow, it was found by the author, on media of standard *titre*, and hence all descriptions must be accompained by a statement of the *titre* employed. Again, we meet with the difficulty that the morphological and chemical characters of an organism change by sub-culture on artificial media, and though, as the author says, after a series of sub-cultures the organisms settle down and "establish characters which are reasonably constant," yet the characters which have been lost are just as important, and generally more distinctive, than those which are retained. It is convenient, and perhaps necessary for systematic classification, that we should wait until "reasonably constant characters" are attained, but this waiting will not facilitate recognition of micro-organisms when first isolated. All will agree with the author's dictum that "to publish a description of a bacterium after the study of one or two generations is the height of superficiality." The basis of classification adopted is, as usual, a morphological one, with the sub-groups distinguished, so far as possible, by bio-chemical reactions, but how difficult this grouping is may be seen when we find the bacillus typhosus separated from others of its sub-group by the character of "not producing pyogenic reaction by inoculation into experimental animals." This is not in accord with Sanarelli's results. The bacillus enteritidis (Gaertner) is also said to coagulate milk and to ferment lactose, characters which it is not generally supposed to possess. But though it would be easy to criticise the classification, yet the book contains so much positive good that it would be ungrateful to find fault, especially as the weaknesses are due to the inherent nature of the subject and could not, probably, in the present state of our knowledge be avoided

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*The Hampstead Annual, 1901.* Published yearly by SIDNEY C. MAYLE, High-street, Hampstead. Price 2*s.* 6*d.*

WE have received the copy for the year which has just passed away of this interesting annual, and are glad to read that the literary contents and illustrations keep up to the high level of those which have appeared in previous issues. The place of honour in the "Hampstead Annual" is given to a brief biographical sketch of Sir Walter Besant written by Dr. Squire Sprigge, in which the dead writer's unbounded zeal on behalf of, and generosity to, his fellow-craftsmen are well brought out. The most interesting article is one entitled Londoners and London, by Sir Richard Temple, in which the famous financier and Indian official points out how little the inhabitants of the metropolis know of their inheritance, how blind they are to the beauties and splendours of our great city and its environment. Other well-informed articles include one on Sir Francis Palgrave as a Precursor of Ruskin, by Dr. Richard Garnett, and one on George Romney, for years a denizen of Hampstead, by Miss Beatrice Marshall; while to "The Hampstead Notebook" Sir Samuel Wilks contributes some notes on Keats as a medical student. We should be glad to see other suburban centres, especially those that have a historical past, initiate an annual on the lines of the "Hampstead Annual." We think that such periodicals would tend to some degree to dispel the dense ignorance of the Londoner concerning the London to which Sir Richard Temple calls attention. Such places as Chiswick, Fulham and Hammersmith, Chelsea, Stoke Newington, Canonbury and Highgate, to mention only the first names that occur to us, have a history rich in traditions and full of literary, artistic, and other points of interest which is well worthy of preservation Local celebrities and the local associations of national celebrities are in danger of being forgotten owing to the fact that London, as a whole, is not merely the capital of England, but the capital of the empire, so that such publications as the "Hampstead Annual" serve an admirable purpose, and also provide good reading.

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## LIBRARY TABLE.

*The Guide to South Africa.* Edited by Mr. A. SAMLER BROWN and Mr. G. GORDON BROWN. Ninth (1901–1902) edition. London: Sampson Low, Marston, and Co., Limited Pp. 475 Price 2*s.* 6*d.*—This is the ninth edition of this well-known guide which is now produced annually by the Union-Castle Mail Steamship Company for the use of tourists, sportsmen, invalids, settlers, and all classes, in short, whose business may take them to our enormous possessions in South Africa. The book is clearly written and neatly illustrated with coloured maps, plans, and diagrams, while a full and carefully prepared index and table of contents ensure the reader being able to ascertain what he is looking for with the maximum of speed and minimum of trouble. How many books of reference suffer terribly in their utility by their failure to indicate what may be found within their covers or where to find it? Everyone whose lot it is to work as a journalist has felt the waste of time that such incomplete guides to knowledge cause, and will recognise that when we say that the "Guide to South Africa" has no such drawbacks we are giving it praise that is well earned. The section on South Africa as a Health Resort is not very long and does not enter into much pathological or therapeutical detail. It is sought by means of the diagrams and maps to depict the climatic zones in such a way as to enable those ignorant of South African geography readily to distinguish the places most suitable for certain physical conditions, and medical men who are consulted as to the advisability of a patient proceeding to this or that locality should find the information of service, as considerable pains appear to have been taken to make it trustworthy. But we are glad to note that in more than one place explicit caution is given against the shipping of serious invalids indiscriminately to Cape Town or Durban. Certainly South Africa, to speak generally, is not at the present time an ideal country for a sick man; while no particular patient should proceed there without medical advice as to the propriety of his doing so, and some accurate knowledge of the conditions of life that he may expect on arrival.

*Medical Monograph Series, No. 5: Menstruation and its Disorders* By A. E GILES, M D., F.R.C.S. Eng., M.R C.P. Lond. London: Baillière, Tindall, and Cox. 1901. Pp 100 Price 2*s.* 6*d* net.—In this number of the Medical Monograph Series Dr. A. E. Giles has written an excellent account of menstruation and its disorders. The book is divided into two parts, the first treating of the Physiology of Menstruation and the second of its Disorders. The views published by Walter Heape upon the changes in the uterus and the relationship of "heat" or "œstrus" to menstruation are followed by the author and clearly explained. This theory of the exact meaning of menstruation in the human subject is the most satisfactory and convincing that has yet appeared and we quite agree with Dr. Giles in thinking that it probably represents the true relationship of this process. A good many of Dr Giles's own observations are included in the book, such as the instructive table on page 58—a table to show the relation between the age of puberty and sterility. The conclusions arrived at are that if menstruation begins between the seventeenth and eighteenth year the woman is very likely to have children; if it begins between 18 and 19 years of age the degree of relative infertility increases; and if at or after 20 years of age the rate of sterility is high. The author does not mention steaming the uterus under the treatment of uterine fibrosis, a condition for which we think it especially indicated The book is pleasantly written, contains a good deal of information upon an important condition, and is worth reading.

*The Human Figure in Motion: an Electro-photographic Investigation of Consecutive Phases of Muscular Actions.* By EADWEARD MUYBRIDGE Commenced 1872, completed 1885. London: Chapman and Hall, Limited. 1901. Pp. 280. Price 20*s.* net.—The veteran Mr. Muybridge, who was the pioneer in the photography of rapidly moving objects, has produced a most interesting book. In all there are 384 separate figures, both of men and of women, walking, running, jumping, dancing, and performing various motions. Everyone will remember Mr. Muybridge's instantaneous photographs of running horses and the extraordinary and ungainly positions into which these animals got for fractions of a second The human being, perhaps from only using two limbs for purposes of locomotion, does not look so awkward as does the horse, but the photographs show very well how different is the real motion from the apparent motion. Take the figures of athletes running, for instance (pp. 35 and 37), and note how, in reality, during a great part of the cycle the feet are both off the ground at once. Besides men, there are figures of women and children and the whole work will be found of great use, not only to artists, but to all who wish to study movement in the human subject. Although the figures are in general reduced in size from those published in the eleven-volume edition, yet they are in most cases perfectly clear and the selection is on the whole, we think, a good one We rather wish that the series entitled, "Getting out of Bed," had been retained, for it shows admirably how silly are the common phrases, "He sprang out of bed," or "He jumped out of bed" These two acts are impossible.

*Wonders in Monsterland.* By E. D. CUMING. Illustrations by J A SHEPHERD London: George Allen. 1901 Pp. 258 Price 6*s* —"Wonders in Monsterland" is a brave attempt to make children understand paleontology or, at any rate, to make them acquainted with some of the more obvious phenomena of the science. The book is profusely illustrated by Mr. J. A. Shepherd, with whose illustrations in the *Strand Magazine* in particular many of our readers may be familiar. The illustrations are capital, but we can hardly give quite such unqualified praise to the letter-press The fun is rather forced and the punning names are not very happy. Yet there is no doubt that any children reading the book would be familiarised with the appearance of the dinosaurus, the megatherium, the odontopteryx, &c. We can imagine that the reading of the book aloud to children, with an accompaniment of explanation, would form a good introduction to a visit to the Natural History Museum, South Kensington; but we doubt whether the book is one that children would be likely to read for themselves or to get very much interested in unless they could see the bones, fossils, or other presentments of the monsters whose doings are detailed.

*"Ugly": a Hospital Dog. Recitations and Readings.* By GEORGE H. R. DABBS, M.D. Aberd. London: Charles William Deacon and Co. 1901. Pp. 200. Price 1*s*.—Dr. Dabbs has written an unpretentious little book which is divided into two portions. The first is a collection of hospital stories supposed to be related by a bull-dog. They deal with incidents connected with hospital life, and there is no reason why most of them should not have happened, but the non-professional reader will not, we hope, think that every hospital is such a home of romance as "Ugly" makes out. However, the stories make good reading, and no doubt the "Recitations and Readings" will come in usefully at the holiday party. We may add that any profits accruing from the sale of the work will be devoted to King's College Hospital.

*An Idler's Calendar.* By G. L. APPERSON. London: George Allen. 1901. Pp. 213. Price 3*s.* 6*d.*—Mr. Apperson's book is well named. He is indeed an idler, one who knows and appreciates at their proper value the delights of idleness. Real idleness, we may remark, consists not in doing nothing but in having nothing to do. Mr. Apperson's pleasant little essays conduct us through a lotus land of folk-lore and books, country smells and sights, like to the inimitable Thalysia of Theocritus and for a hard-worked practitioner we can cordially recommend Mr. Apperson's pages. We in London, at any rate, are forgetting how to be idle, and a great part of present-day illness is due to the fact that most of us never rest.

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## JOURNALS AND MAGAZINES.

*The Journal of Experimental Medicine.* Edited by WILLIAM H. WELCH, M.D. Baltimore, U.S.A.: N. Murray. Vol. VI., No. 1, issued Nov. 29th, 1901.—The November number of the *Journal of Experimental Medicine* contains a series of interesting articles. The first of these is Dr. Theobald Smith's note on the Production of Sarcosporidiosis in the Mouse by Feeding with Infected Muscular Tissue, from which we gather that sarcocystis muris containing ripe mobile sporozoites is infective to grey and white mice, and that the muscle fibres of these animals are invaded by the parasites, which are readily recognisable after the forty-fifth day, the parasite at this stage as a rule being many times larger than the sporozoite which it presumably represents. He also states that "within two and a half to three months the parasite has reached the final stage in which it consists of a chambered cyst filled with sporozoites mobile at the temperature of the body and capable of infecting other mice." A study of Chronic Hyperplastic Tuberculosis of the Intestine, with report of a case, is contributed by Dr. August Jerome Lartigan, who concludes that the treatment of the condition is obviously surgical, extirpation of the diseased tissue promising good results in a fair proportion of cases, whilst, as he points out, Nové-Josserand reports a recovery following simple laparotomy. Dr. W. G. MacCallum describes a case of multiple myeloma in which the new growths appeared to extend from the bone-marrow and show very gradual transitions into it. The cells of this tumour differ from the bone-marrow cells only in so far that they lack the specific granules of the myelocytes; they also differ considerably from plasma cells in essential particulars. They appear to be directly related to the myelocytes and are probably derived from the large non-granular forerunners of these cells. They undergo degeneration, they contain cell-inclusions, and red blood corpuscles are numerous in parts of the tumour. Dr. MacCallum also contributes with Mr. S. S. Buckley a description of an epizootic in horses known as "acute epizootic leuco-encephalitis," a condition found among horses in Maryland, resulting in the death of a great many animals after a very brief illness. It is a kind of cerebro-spinal meningitis, in which, however, the investigators were able to find no organism which they were justified in looking upon as being the etiological factor in this disease. Dr. William Sydney Thayer has an interesting article on the occurrence of strongyloides intestinalis in the United States. This parasite was described by Normand in 1876 and carefully studied by Bavay in the same year as anguillula stercoralis. It was first discovered in Cochin China and is evidently found in the United States associated with a special form of diarrhœa, and in Maryland and Virginia it is probably more frequent than has been supposed. In temperate climates the development of the sexual free-living generation is apparently unlike that found in warmer climates, as here the direct transformation of the rhabditiform embryos into filariform larvæ predominates. Dr. Thayer considers that more systematic examination of the fæces, both in public clinics and in private practice, is much to be desired. An excellent bibliography is appended to this article.

*The Veterinary Journal.* Edited by Principal W. OWEN WILLIAMS, F.R.C.V.S., F.R.S. Edin. London: Baillière, Tindall, and Cox. December, 1901.—On opening the December number of the *Veterinary Journal* and reading the first two or three pages it is evident that veterinary politicians may be as lively as their medical brethren. The editorial article is refreshing in its outspokenness and patriotism—both professional and national. It is announced that the Carnegie Trust for the universities of Scotland will pay the fees of veterinary students who have the following qualifications: (1) They must be over 16 years of age; (2) they must be of Scottish birth or extraction, or must have given two years' attendance after the age of 14 at a school or institution under inspection of the Scotch Education Department; and (3) they must be qualified by preliminary examinations under the ordinances of the Scottish Universities Commission and the regulations of the Joint Board of Examiners to attend the classes for which payment of fees has been claimed. Dr. D. C. Chalmers Watson in an article on Cerebral Thrombosis in the Horse: a Clinical Study, pleads for a thorough investigation and a careful record of acute and chronic diseases in the horse and other animals. He thinks that material additions might thus be made to our knowledge of similar diseases in the human subject. A note on Veterinary Education in Holland as compared with similar education in this country is of some interest and shows that our veterinary students at any rate are not overdone with scientific work as compared with their colleagues in Holland. Mr. Henry Taylor of the New Veterinary College, Edinburgh, records Supernumerary Digits in the two fore-limbs of a Clydesdale foal. Professor Sheridan Delépine's article on the Communicability of Human Tuberculosis to Cattle, and Professor E. M. Crookshank's Introductory Address to the Royal Veterinary College are here concluded. Mr. C. Cummins Cherry, G.M.V.C., contributes a series of Reminiscences of the South African Campaign. There is also reprinted from the United States Department of Agriculture's Sixteenth Annual Report of the Bureau of Animal Industry for the year 1899, "The Nature, Cause, and Economic Importance of Ovine Caseous Lymphadenitis." This, as the editor points out, appears to be what is known to Scottish sheep-farmers as "cruels," a condition somewhat common amongst well-bred sheep. An abstract of the report on an experimental investigation of the methods of inoculation against rinderpest from the Bacteriological Laboratory, Muktesar, India, is interesting in so far that it gives a very careful *résumé* of the advantages and disadvantages connected with each method of inoculating against rinderpest that has, up to the present, been recommended. From this report it may be gathered that all those methods of protection in which the actual disease is produced in a modified form are of greater value than are those in which no disease is set up, the immunity in the former cases invariably being more lasting than in the latter. An account of the Vaccine Institute at Aldershot and of Uhlenhuth's biological test as an aid in the inspection of meat are both papers that will interest the general reader. A note on Colonel George Fleming, F.R.C.V.S., and the veterinary profession is continued in this number.

*The Quarterly Review.*—The issue for October, 1901, contains a long and scholarly article upon the Plague. This somewhat mysterious malady, the origin of which is lost in obscurity, has for ages exerted an influence over humanity greater than that of any other disease. Its fatality, its rapid spread, and the distressing circumstances attending infection with, or death from, it have combined to make it a most dreaded complaint. The reviewer states that the first actual records show that a fatal disease producing pestilential buboes prevailed in Egypt, Libya, and Syria in about the third century B.C. Another terrible epidemic prevailed in the reign of Justinian, and Bede records a great pestilence as prevailing in the seventh century A.D. which may or may not have been true plague. In the fourteenth century plague appeared in an unmistakeable form in a series of epidemics, now known as "The Black Death." In these islands the epidemics appeared in 1348–1349, in 1361, and in 1368. Sicily was infected before 1347 and practically no part of Europe escaped in one or other of the epidemics. During the three following centuries plague was never absent from some part of Europe, but from 1647 to 1664 London was virtually free from plague. In the spring of 1665, however, the Great Plague of London began. Western Europe was practically free during the eighteenth century with the exception of the Marseilles outbreak in 1720, but the disease continued from time to time in Eastern Europe. Constantinople was not free until 1841. By the middle of the nineteenth century plague was believed to be no longer a source of danger to Europe, although certain authorities had their doubts, and subsequent events proved that they were right. In 1879 an epidemic of plague appeared in Vethanka, a little village on the Volga, the disease having travelled up the Caspian from Resht to Astrakhan. Since then plague has become *pandemic*, for after 1894 the disease has appeared in nearly every part of the world, Glasgow, Cardiff, and London being infected in these islands. After giving a short *résumé* of the various outbreaks of plague which have occurred during recent years the reviewer passes to consider the questions of treatment and preventive measures. The former is extremely unsatisfactory. Yersin and Lustig have respectively prepared a serum, but the curative results are very inconsistent, although the sera confer a certain degree of immunity. Haffkine's serum, however, is noted as conferring an immunity which, although not perfect, greatly lessens the chance of a patient catching the plague, while if he should have it the attack is but a slight one. As to prevention, the system of quarantine is no longer in use, but its place has been taken by the modern system authorised by the International Sanitary Conferences of Venice, 1892, and of Dresden, 1893, which relies upon medical inspection of both ships and persons coming from an infected port. As a rule this system works well, although infection slipped through at Glasgow. The reviewer lays stress on the point that reliance is to be placed upon maintaining such conditions of national health that the germ may be extinguished as soon as it enters. Destructive epidemics of plague do not occur except in the midst of filth, overcrowding, and poverty. In India, however, in the words of the Indian Plague Commissioners, 1899—words gravely endorsed by the reviewer—"the fact must be faced that there are no means of stamping out the present epidemic of plague in India; that even with the best measures most rigidly applied a certain amount of danger subsists, and all that can be done is to lessen the danger as much as possible." As a contribution to the knowledge of a matter of unending interest the article deserves the attention of sanitarians and medical men.

# Analytical Records

FROM

# THE LANCET LABORATORY.

### (1) LIQUID PETROLATUM; (2) SOLUTION IRON PEPTONATE AND MANGANESE WITH ARSENIC; (3) TERPIN HYDRATE AND HEROIN TABLETS, AND (4) FUNCTIONAL TONIC TABLETS.

(*PARKE, DAVIS, AND CO., 111, QUEEN VICTORIA-STREET, LONDON, E.C.*)

LIQUID petrolatum is a perfectly clear, colourless oil, with neutral reaction and taste. According to our examination its specific gravity is 0·863, while it shows signs of boiling at 200° C., the boiling being brisk when the temperature reaches 250° C. The oil is of admirable purity and well adapted for administration. It is an excellent emollient for inflammatory conditions of the throat, for which purpose it is best inhaled in the form of a fine spray produced by a specially designed atomiser. The solution of iron peptonate and manganese with arsenic is a clear dark-brown fluid with sweet vanilla-like taste. It contains 0·6 per cent. of iron and 0·1 per cent. of manganese, with one-fiftieth of a grain of arsenic in each fluid drachm. The solution has no disagreeable effects on the digestive functions. It is, of course, a powerful tonic preparation, presenting its ingredients in an easily assimilable form. The following formula is an obviously useful one: terpin hydrate, two grains; and heroin, one-fiftieth of a grain, in chocolate-coated tablets. Chocolate-coated tablets are also prepared in accordance with the following prescription: powdered ipecacuanha, one-tenth of a grain; powdered black pepper, one grain; aloin, one-sixteenth of a grain; extract of nux vomica, one-quarter of a grain; and extract of gentian, one grain. This is a very good formula exercising a beneficial action on the functions of the digestive tract.

### PETANELLE FOOT POWDER

(PATÉ BURKE AND CO., 6, WOOL EXCHANGE, BASINGHALL-STREET, LONDON, E.C.)

Petanelle consists of peat fibre, soft and yielding to the touch, which possesses absorbent and deodorising properties. It affords an excellent vehicle for the absorption of liquid antiseptics. In the case of the petanelle foot powder the fibre has been moistened with formaldehyde solution. It gives off the peculiarly irritating smell of formaldehyde. This combination is said to have been very useful to soldiers, pedestrians, athletes, and others for keeping the feet in a healthy condition. It is of service in bromidrosis.

### OLD TAWNY PORT.

(JOEL DAVIS, 61, MARK LANE, LONDON, E.C.)

This port presents the characteristics of a wine that has been stored and matured in wood for many years. It is of a brown sherry colour and has the excellent bouquet and taste of matured port made from the famous grapes of the Douro district. It is very smooth and mellow on the palate and fruity. Analysis gave the following results: alcohol—by weight 18·23 per cent., by volume 22·36 per cent., equal to proof spirit 39·13 per cent.; extractives, 6·02 per cent.; sugar, 4·40 per cent.; mineral matter, 0·22 per cent.; volatile acidity reckoned as acetic acid, 0·072 per cent.; and fixed acidity reckoned as tartaric acid, 0·225 per cent. The wine is evidently an old genuine port matured in wood. It is therefore wholesome and, as the above analysis shows, is free from saccharine excess.

### ZOECO.

(Zoeco, Limited, Moorgate-court, London, E.C.)

This is a preparation of cocoa with the proteids of milk and sugar. It has the appearance of cocoa paste. It is very sweet to the taste and it is flavoured strongly but agreeably with cocoa. It is said that the proteids used have never been coagulated. It may be presumed, therefore, that concentrated milk has been employed. The following analysis which we have made is in favour of this deduction: moisture, 27·30 per cent. ; mineral matter, 3·08 per cent. ; sugar, 52·61 per cent. ; fat, 6·33 per cent. ; and proteids, 10·68 per cent. The preparation is no doubt a useful food and is of a pleasant character. Exception, however, might be taken to its use in some cases on account of the very large proportion of sugar which is present.

### ST. BONIFACE SPRING WATER.

(Agents: Ingram and Royle, East Paul's Wharf, 26, Upper Thames-street, London, E.C.)

According to our analysis St. Boniface water is saline, lithiated, and alkaline. It is derived from the St. Boniface spring, Bad Salz-Schlirf, near Frankfort-on-the-Maine, and has some reputation as affording relief in gouty affections. Our analysis showed it to contain 15·99 grammes of mineral salts per litre, of which 12·51 grammes were common salt, the balance being made up of chloride of magnesium, sulphate of calcium, and carbonate of calcium. It has a degree of alkalinity equal to nearly one gramme per litre of carbonate of soda. The amount of lithium salt is small, not more than one and a half grains per pint. The water contains rather less than its own volume of free carbonic acid gas. The presence of salines and alkaline salts with distinct traces of lithia would place it amongst the waters which have been known to relieve gouty and rheumatic conditions, although mere chemical composition would not always account for that effect, many waters said to be useful in gouty conditions containing nothing but a few grains of lime salts.

### (1) PEPTONE CORNELIS; and (2) PASTILLES COCAINE BRUNEAU.

(C. Richter and Co., 90, Great Russell-street, London, W.C.)

Peptone cornelis consists of small sponge-like fragments possessing a slight beef-like saline taste which is quite free from bitterness. The preparation is hygroscopic and is preserved in bottles the stoppers of which contain quick lime as a desiccant. It dissolves in water, giving a slightly opalescent solution and depositing phosphatic flakes. On analysis the following results were obtained: moisture, 3·05 per cent. ; mineral matter, 8·41 per cent. ; and peptone, 88·54 per cent. The mineral matter consisted of phosphates, a notable amount of iron, and some common salt. The preparation is of course a powerful nutritive and it has the advantage of being free from that unpleasant bitter taste characteristic of commercial peptone. The peptone was free from albumose, as was shown by the fact that its solution gave no precipitate with saturated solution of sulphate of zinc. The cocaine pastilles are designed for sedative purposes in the treatment of the throat and glands. Each contains two milligrammes of cocaine hydrochlorate and 0·05 gramme of borax, with one drop of tincture of aconite.

### VARIOUS SOAPS.

(Edward Cook and Co., East London Soap Works, Bow, London, E.)

With the exception of the "cambath" skin soap, which contains camphor, not one of these soaps submitted for examination gave any indication of the presence of alkali in excess, and this exception, after all, is only apparent, since "cambath" soap contains a comparatively large proportion of moisture, so that an alkaline reaction would be shown as the result of hydrolysis. Amongst the soaps received were "buttermilk" soap, "wild violets" soap, "tourists' shaving" soap, and "creamy shaving"-stick. The soaps one and all were free from irritants and furnished evidence of being made from materials of desirable purity. The "cambath" skin soap is very agreeable in the bath.

### KATHREINER'S PATENT MALT COFFEE.

(Agent: P. F. Voelter, 9, Blenheim-place, Leeds.)

It is difficult to tell as regards appearance the difference between the infusion of this malt coffee and that of ordinary coffee. Nor is its aromatic flavour much less pleasing. It really makes an excellent black coffee with strong stimulating properties and empyreumatic smell. It must be confessed, however, that it lacks a something which in our experience only true coffee can supply. It yields a rich, black liquor containing all the phosphates of the barley, and the refreshing effect of phosphates is well known. Of course, there is no alkaloid present. This malt coffee is evidently prepared with the greatest care, being very uniformly roasted. We made careful examination for arsenic, since, as is well known, that poison may be derived from the fuel used in the malting process. No response, however, was given to the most delicate test. We regard this as the best coffee substitute that we have so far examined.

### FIBROUS BEEF-TEA.

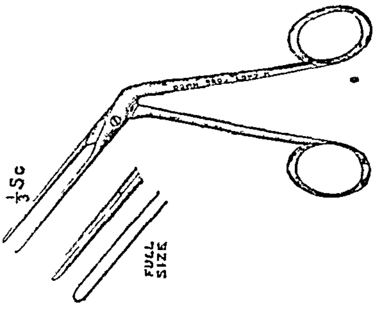
(Brand and Co., Limited, Mayfair Works, South Lambeth-road, Vauxhall, London, S.W.)

On opening the tin there proved to be a jelly inside containing a definite proportion of sediment in which under the microscope muscular fibre was detected as well as muscle albumin. This beef-tea, therefore, is something more than a stimulant—it has a decided nutrient value also. It has a pleasant, beef-like flavour. The preparation has been designed for hospital use, and tins containing 3 lb. costing 2*s.* 6*d.* are said to be sufficient to make 10 pints of beef-tea. In this form the beef-tea is certainly useful and convenient for hospital and invalid purposes in general.

## New Inventions.

### NEW PATTERN OF NASAL AND AURAL WOOL-CARRYING FORCEPS.

Most of the wool-carrying forceps for nasal and aural work are made to open horizontally, require a certain amount of pressure to close, and have enlarged and serrated ends. All these disadvantages are absent in the pattern here shown, the blades of which are smooth and slightly tapering (these when closed can be used as a probe), open vertically, and require no pressure to hold the wool securely; when used the wool can be easily dropped off, there being no irregularities for the fibres to cling to. If the wool is twisted round the blades it can easily be pulled off by means of a dental wool casket. They are very convenient for packing cavities. These forceps are made either with or without a take-off joint. They were made for me by Messrs. Down Bros., St. Thomas's-street, London.



A. Stanley Green, M.B., B.S. Lond.
Lincoln.

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University of Cambridge.—The following were admitted to the degree of Doctor of Medicine on Dec. 12th: Evan Laming Evans, M.A., M.B., B.C., Trinity College, and James Graham Forbes, B.A., M.B., B.C., D.P.H., Christ's College.

# THE LANCET.

*LONDON SATURDAY, JANUARY 4 1902*

## The King's Sanatorium.

THE new year opens auspiciously for medicine The most important medical event of the year 1901 was the British Congress on Tuberculosis, and one of the things definitely decided by that Congress was the value of the part played by sanatoriums in the treatment of tuberculosis We take particular pleasure in announcing a remarkable endorsement of this view HIS MAJESTY THE KING has graciously consented to direct that a large sum of money, placed at his disposal for charitable or utilitarian purposes, shall be devoted to the erection in England of a sanatorium for tuberculous patients In allocating the fund entrusted to his discretion to such a purpose HIS MAJESTY is giving another example of the practical sympathy which he has with the needs of the suffering poor Not since EDWARD VI, himself a victim to tuberculosis, made himself responsible for the charitable foundations of Bridewell, Greyfriars, and St Thomas's Hospital, has any ruler of England shown such a deep and practical desire to benefit the necessitous sick as that manifested by the founder of the Prince of Wales's (now King Edward's) Hospital Fund for London As PRINCE of WALES the KING was well known to all his subjects as a warm hearted man—one whose dignity never prevented him from doing a kindness and one whose lofty position never blinded him to the troubles and trials of his subjects His succession to his inheritance has enormously increased his responsibilities, but it is clear that it has in no way blunted his sympathy with the most unfortunate section those who own his rule—the victims of disease

The KING has been guided in the matter by an Advisory ommittee, consisting of SIR WILLIAM BROADBENT, Bart, .C V O, SIR RICHARD DOUGLAS POWELL, Bart K C V O, r FRANCIS LAKING K C V O, SIR FELIX SEMON, Sir ERMANN WEBER, and Dr C THEODORE WILLIAMS, d the first step towards erecting the new sanatorium one that is calculated to insure useful results HIS AJESTY has been pleased to approve that the sum of £800 ill be awarded in prizes for the best essays upon sana riums for the victims of tuberculosis The essays, with l necessary constructive plans, are to be sent in to one of e honorary secretaries of the Advisory Committee by pril 15th 1902 the following conditions having to be served —

1 Medical men of all nationalities may compete The papers may be either the work of a medical man or the joint production of a medical man and an architect
2 The sanatorium is intended for 100 tuberculous patients—50 males and 50 females
3 Of the total number of beds 88 will be assigned to the more necessitous classes whilst 12 will be reserved for the well-to-do
4 The accommodation for all patients is to be comfortable a separate room being provided for each Superior arrangements to be made for the more wealthy patients
5 It may be taken for granted that the sanatorium will be erected on an elevated and sloping site with a sunny exposure and well sheltered from cold winds It will have a farm at a convenient distance and be surrounded by extensive grounds well wooded, and affording ample space for exercises of various kinds The soil will be dry and permeable and the water-supply abundant
6 The sanatorium must be fitted with the latest sanitary arrangements and equipped with all requirements for scientific research Provision should also be made for the recreation of the patients
7 Economy in construction will be an important consideration but it must not interfere with the reasonable comfort of the patients or the efficiency of the institution
8 The essays must be in English and type written
9 The essays must not bear the name or names of their authors but should have a motto and each essay should be accompanied by a sealed envelope bearing the motto on the outside and containing the full name and address of the author or authors inside
10 All essays and plans must be sent postage paid on or before the 15th April 1902 to one of the secretaries to the Advisory Committee
11 Three money prizes of £500 £200 and £100 respectively will be awarded in order of merit on the recommendation of the Advisory Committee for the three best essays provided they come up to the requisite standard of excellence Brevity will be an important consideration and a summary of the main features of the scheme should be appended to the paper Unsuccessful papers will be returned to the authors

The secretaries to the Advisory Committee are Dr P HORTON SMITH 15, Upper Brook street, London, W, and Dr J BROADBENT, 35, Seymour street, London, W

The eminently practical nature of these conditions will be obvious to our readers Just enough is told to the competing essayists to prevent them from going off the line while information that might hamper them is withheld from them They are not told, it will be observed, anything more of the actual site than that the sanatorium will be erected on an elevated, well sheltered spot with a sunny exposure, nor are they informed how much money is to be placed at the disposal of the architects, the sum being merely described as a large one That economy in construction will be an important consideration is not to prevent the sanatorium from being fitted with everything necessary to render the patients absolutely comfortable, while provision in the plans is to be made for the latest sanitary arrangements and for all the requirements of scientific research work The erection of a model sanatorium upon a design approved by so practical a body of physicians as the Advisory Committee should be an incalculable benefit to the community as well as to the patients It will give a stimulus to a movement already started, but not running as strongly as could be desired, for providing suitable sanatoriums for all tuberculous subjects to serve the needs of different districts of the country "If preventable why not prevented?" asked the KING 10 years ago, referring to the prophylaxis of certain common diseases in his inaugural address as President of the International Congress of Hygiene and Demography, and the manner in which he has decided to expend the charitable fund of which he has accepted trusteeship shows how he considers that his epigrammatic question should be answered as far as tuberculosis is concerned Tuberculosis must be prevented and no surer or wiser way of fighting this fierce and insidious foe to our national health could be devised than the foundation of a model sanatorium Such an institution will furnish county and municipal authorities all over the kingdom with an example to follow The circumstances of its erection will bring to their attention the advisability of attempting to provide similar assistance for the local needs of those in their sanitary charge; the model building will give them an opportunity of seeing what they should attempt actually to construct. To all medical men the KING'S decision to use a fund placed at his disposal "for charitable or utilitarian purposes" in erecting a model sanatorium for tuberculous patients will give particular pleasure. There is hardly a public institution in our country that cannot claim to exist to some extent "for charitable or utilitarian purposes." So that the choice left to HIS MAJESTY in the allocation of the money was immense. And he has been pleased to honour medicine by devoting the money to the foundation of a beneficent medical institution. In the name of the sick poor and in the name of the medical profession we thank him heartily, blending with our thanks a sincere hope that his coronation year may bring him many blessings.

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# The Consultant and the General Practitioner.

THE relationship of the general practitioner to the consulting surgeon or physician and *vice versâ* is very delicate. The subject is one which has frequently been discussed in our columns, the circumstances in which it appears on the *tapis* being both numerous and various. For THE LANCET is often asked by a correspondent for an opinion upon some particular case in which these questions of professional politeness and rectitude between medical men have arisen. Just as with the British Constitution, on the whole the most admirable socio-legal system existing, so with the medical profession the fact that natural indefinite growth has predominated above any formal declaration of doctrines and laws gives rise from time to time to questions for which no direct answer can be found in definite printed law, but the rights of which must be determined by adherence to those general principles on the understanding of which the medical profession has grown and substantiated itself.

At the very outset of discussing the mutual behaviour of the consultant and the general practitioner we may be confronted by the objection of one side that there is no such thing as a consultant. We can imagine him to say: "I am a surgeon pure and simple. Every surgical case of any kind is fish that comes to my net, but I attempt no other kind of work. Medical and gynæcological cases I refer to other people." Being prepared to do any surgical work that comes to his hand, whether the patient comes of his own initiative or because he has been recommended by a medical man, what is he to do in the former case? In the latter, when the patient brings a verbal or a written communication from a professional brother his course of conduct is, of course, plain enough. Common politeness alone would put him on the right path apart from any thought of professional etiquette—which, by-the-bye, is in many directions only a particular application of common politeness. He sees the patient and gives his opinion or not as seems fit in the particular circumstances, and in any case writes to the general practitioner about the case. So far matters are plain enough, and no difficulty can be easily imagined with regard to patient, practitioner, or consultant. Suppose, however, the first case, that in which a patient consults a surgeon or physician on his own initiative. Such an instance is the occasion of a letter which we publish in our correspondence columns from Mr. F. MONTAGUE MILLER. We do not think, judging from the bare facts, that our correspondent has grave cause for complaint against the particular consultant who saw his patient. To begin with, Is it the duty of the consultant to ask any questions as to how the patient comes to see him? We think it is. Many patients, either through ignorance or wilfully, will visit the consultant unknown to the practitioner. This can only become plain to the former if he habitually asks his patients, "Who is your usual medical attendant?" or some such question from which he can ascertain the position. Obviously if one member of the medical profession assumes a position in which he expects his opinion to be sought by other members of his profession it will be his duty as much as his interest to see that they are never the losers at his hands. Such a position naturally befalls hospital physicians and surgeons who gain an exceptionally wide experience in particular branches of work. Whether they accept the term "consultant" or not, their opinion and advice are likely to be sought by the general practitioner, and they should conduct their practice accordingly. Difficulty arises when, the question being put as we have suggested, the patient replies: "I do not want my usual medical adviser to know anything of this visit or its results." Such a case not uncommonly occurs. What is now the consulting surgeon's or physician's proper course? It must vary according to circumstances. Generally speaking, the right thing for him to do is to explain to the layman the propriety and the enormous advantage of admitting the general practitioner to a knowledge of what has been done. More particularly if an operation is advised will the consultant desire to have the presence of the general practitioner and his collaboration, for the after-treatment may be left mainly in his hands. Suppose, however, as occasionally happens, the patient says, "No; I am determined that Dr. —— shall have nothing to do with this matter." Some would say that the consultant must then refuse the case. This would be an easy solution of the difficulty, but unfortunately every case cannot be determined in this manner. The consulting surgeon or physician has a duty to the public as well as to his fellows. A member of the public has chosen to ask him, and him only, for his help. He is, we think, bound to give it unless in doing so he is absolutely breaking faith with his profession by constituting himself a sort of judge of, or even spy upon, a professional colleague. In short, no hard and fast line can be drawn. The consultant must use his discretion, but the general practitioner must not under the provocation of an apparent slight be too ready to look upon his brother medical man as greedy.

The lot of the young consulting physician or surgeon is not one of easy affluence. Hard work and small remuneration are his fare at the hospital. The rewards of "coaching" are in much the same proportion, and these, with perhaps some occasional fees for literary work, must be in many cases for years the main sources of income for the man without private means till time and experience bring practice. In the case of a young surgeon there is often opportunity for assisting a senior by paying a visit for him after operation or perhaps performing some of his less grave operations in his stead, and to this extent the young surgeon is better off than the young physician. Moreover, the value of a physician's opinion grows with his age, but that of a surgeon's dexterity does not to the same extent. He cannot dispense with experience, but when the diagnosis is certain a light burden of years may be to his advantage. Consequently a young surgeon may be sought after, but rarely a young physician. If the general practitioner recognised that the consultant was often engaged in every whit as keen a struggle for existence as himself he would not be so quick to find fault with him. But, on the other hand, it must be pointed out that on several occasions, when the relations of the general practitioner to the consultant have been submitted to our consideration, we have found the consultant to have been heedless of the fact that the patients in question were at the time the patients of another medical man. This is altogether wrong.

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# Small-pox and Vaccination.

THE Hunterian Society may be congratulated on the success of the meeting on Nov. 13th, 1901, the proceedings of which we have already published in THE LANCET.[1] The subjects under discussion were Small-pox and Vaccination. Dr. J. MACCOMBIE's paper on the Differential Diagnosis of Small-pox will be found of great value to medical practitioners in London at the present time. We have referred several times to certain points which Dr. MACCOMBIE lays stress upon, such as the modifications in the eruption of small-pox brought about by previous vaccination; also to the fact that, owing to the decrease of small-pox in recent years due to the general manner in which vaccination has been taken advantage of by the better-educated and more reasonable section of the community, many practitioners have had but very slight experience in the diagnosis of the disease. Dr. MACCOMBIE, however, draws attention to other symptoms upon which he bases a diagnosis of small-pox. He mentions the pre-eruptive stage in which difficulties often occur in connexion with prodromal rashes which may simulate those of scarlet fever and measles. He considers that circumscribed punctate prodromal eruptions showing on the groins, the sides of the trunk or the lumbar regions, or on the flexures of the arms and legs, or morbilliform or patchy non-punctate erythemata affecting usually the extensor surface of the arms, the hands, the legs, or the feet, if the initial symptoms of small-pox be present, are often sufficient warranty for suspecting the onset of small-pox and for taking measures accordingly. It is also important to remember that small-pox prodromal rashes are extremely rare in persons under 10 years of age, whilst the majority of cases of scarlet fever and measles occur under that age. In discussing the nature of the specific eruption Dr. MACCOMBIE maintains that the diagnostic points between chicken-pox and small-pox (in the differential diagnosis of which mistakes are frequently made) are the following: (1) the distribution of the eruption; (2) the shape of the vesicles; (3) the rate of growth of the vesicles; and (4) the unilocular character of the vesicles of chicken-pox compared with the multilocular nature of the vesicles of small pox. Dr. MACCOMBIE in concluding his paper draws attention to another point of great importance, namely: In what way can the present prevalence of small-pox be best utilised for the purposes of medical education? We thoroughly agree with him that it is desirable that the Metropolitan Asylums Board should recognise its responsibility and its duty in this matter and we trust that it will speedily utilise to the fullest extent the small-pox material at its disposal at the wharf and at the hospital ships for the clinical demonstration of that disease to students and practitioners.

Dr. MACCOMBIE likewise read a communication upon Vaccination in which he brought forward statistics clearly proving the immunity of recently vaccinated individuals from small-pox. He maintained that in his experience the severity of an attack of small-pox in vaccinated subjects bears, as a rule, a distinct relationship to the quality of the vaccination scars. This is a point upon which sufficient emphasis has not been laid. The case-mortality per cent. derived from a study of 11,724 cases of small-pox in vaccinated subjects shows very clearly that four or more good marks confer a much more certain protection than does one indifferent mark, the percentage of deaths varying from 2·7 per cent. in the former class to 16·7 per cent. in the latter. In all his large experience Dr. MACCOMBIE has never seen a case of small-pox in a person who had been efficiently vaccinated—meaning by this term a person who showed one-third of a square inch or more of well-foveated primary vaccination surface and who showed also marks of revaccination. This is evidence that cannot be successfully controverted by platform faddists who have probably never seen a single case of small-pox. Dr. MAJOR GREENWOOD read a paper upon Vaccination, regarding the subject principally from the point of view of the enforcement of its performance. We agree with him in his statement that boards of guardians ought to have nothing to do with the administration of vaccination laws. If the enforcement of these laws is to be entrusted to any local authority it should be to the borough council, to the health department of which it naturally belongs, and we thoroughly endorse the proposal that it would be better to place the enforcement of vaccination under the control of some central authority not likely to be influenced by local prejudice. Dr. W. ARTHUR BOND also submitted a communication upon Vaccination, in which he showed that in London during the past 10 years (1891 to 1900) of the vaccinated of all ages the percentage of deaths of those attacked was 3·1, of the unvaccinated it was 18·8. In the discussion which followed the papers we have named several speakers took part and some useful information was elicited.

The meeting of the Hunterian Society was an opportune one, as the present outbreak of small-pox shows no sign of decrease. It is perfectly useless to argue with that class of the community who pose as anti-vaccinationists; they are entirely deaf to the voice of reason. The statistics, however, brought forward at this meeting were very convincing and deserve wide circulation. We would take this opportunity of protesting against the manner in which the small-pox returns are published in the daily press. We do not refer to the number of admissions, but to the statement as regards the number of deaths. A certain number of patients are stated to have died during the week; of these some are returned as vaccinated and the others as non-vaccinated, the number in the former class being nearly always greater than in the latter. This mode of expression is very misleading and calculated to do an immense amount of harm to the cause of vaccination. It surely would not give much extra trouble if the number of patients who showed vaccination marks were divided into classes—those who had been recently vaccinated and those who had not been vaccinated within 10 years. The return of the number of deaths would then be of some real use as demonstrating the efficiency of revaccination, although naturally information of greater value would be secured if an elaborate classification could be given, stating the ages of the patients who had died, the time which had elapsed since they had been vaccinated, and the character of the marks. Doubtless such statistics will be forthcoming in the future, but it would be better to refrain from any classification than to continue the method which is now adopted.

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[1] THE LANCET, Dec. 28th, 1901, pp. 1795 and 1797.

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# The Reorganisation of the Army Medical Services.

In the interval which has elapsed since the publication of the report of the committee appointed by the Secretary of State for War to consider the reorganisation of the Army Medical Services, the subject has been discussed from every point of view, and with a result which must have been disappointing to the War Office authorities. The report has, on the whole, been severely and adversely criticised, and we can only hope that the objections which have been urged will be very carefully and impartially considered before any new warrant for the Army Medical Services is drawn up finally. It is surely time that, in the interest of all concerned, these services should be placed upon a satisfactory footing and that an end should, if possible, be put to a contention which has been going on for so many years. We have had the assurance of Mr. Brodrick's desire that the British army should have the best medical service in the world, and we have likewise had the assurance of some eminent civil members of the committee of experts that the War Office inquiry was deliberately undertaken in this spirit. It need scarcely be said that no one cares to identify himself with failure, but such will, it is to be feared, nevertheless prove to be the case if the proposals of Mr. Brodrick's Committee be adopted as they stand at present. As we pointed out at the time the committee was constituted, the initial mistake was made of not having an army medical officer of high rank, ability, and experience appointed to serve upon it.

The present seems an opportune time for calmly and dispassionately reviewing the situation as it now stands That the aim, object, and intention of the scheme outlined in the committee's report are good we do not question, and that it contains many excellent points we freely admit, some of which especially benefit the officers of the Royal Army Medical Corps, while others are in the interest of the whole army. There is a plain recognition of the principle of selection for promotion as opposed to the dead-level one of seniority; increased opportunities are held out for professional study and for rewarding scientific or professional attainments; the establishment of a medical staff college in London is a proposal which has many obvious advantages; increased rates of pay for medical officers generally are recommended, together with the institution of specialist and hospital charge pay; brevet promotion is to be given for distinguished service; the temporary attachment of a medical officer to a regiment and more fixed tenure of appointments in future and less foreign service all should make for good; increased facilities are granted for retiring with a bonus at different periods of service; and the rate of pay of the Director-General, as head of the Army Medical Service, is to be raised in order to make it more commensurate with, and worthy of, his position and responsibilities. The step which has since been taken to give him a seat on the Council and Army Board is so manifestly right as to need no argument in its support. On the other hand, without criticising in detail the new scheme of army medical reform as foreshadowed and outlined in the committee's report, we may consider some of its blots and shortcomings. There is the uncertainty, to put it mildly, about a medical officer's right to retire, as at present, on £1 a day after 20 years' service. Although we do not believe, as we have already said, that there is really any intention of revoking an existing privilege without offering any compensatory advantage in lieu thereof, still the matter should be made quite clear as far as it affects medical officers now serving. To render a medical officer liable to be retired compulsorily after serving 18 years with a gratuity of £2500 is so clearly to make his position financially worse instead of better than it is now under existing regulations that we need not stop to argue about it. The terms, too, relating to the examination and optional or compulsory retirement of medical officers after having served six years in the rank of captain require to be made clearer than they are at present. A large number of medical officers serve with British troops in India, and the report of the committee leaves us somewhat in doubt as to what will be their exact position and pay in that country; but we assume that this is owing to the fact that the Indian Government has first of all to be consulted and its assent to any scheme obtained.

As to the *chevaux de frise* of examinations proposed to be placed in the path of the army medical officer during his career in the service, such a course could not fail to be distasteful and unpopular. There are those who regard a system of examinations as a very inadequate test at the best, and in the case in question as unnecessary. If it be urged that it is the usual, and indeed only available, test, then we have to say that the committee do not seem happy in their repeated application of it. As regards the Advisory Board we confess that we have grave misgivings from a business point of view as to the workability of so large and mixed a board charged with so many functions. Take, for example, army sanitation in all its branches, including the consideration of plans for barracks and hospitals, and questions of sanitary engineering. We see no objection—on the contrary, it is most sensible—to have such a board to advise on all questions affecting the education and training of medical officers, and the application of systems of hygiene to army life and practice, and so forth; but the less such a board has to do with all matters properly coming within the province of the military officials the better. Assuming that it was for many reasons deemed necessary to keep the medical service and its headquarters always in close touch with the civil profession and the medical schools, this could have been accomplished by the selection of two or three civilians of acknowledged reputation and standing in the medical profession (with power, whenever necessary, to consult any eminent specialist in any branch of medical science they liked) to act as members of the Advisory Board.

It is possible that Mr. BRODRICK, while acting in the spirit and adhering to the lines and principles which he had doubtless laid down in his own mind for his guidance, might have saved himself and the committee over which he presided from several rocks and shoals if he had studied the articles that appeared in our columns and had adopted some of the points embodied in the scheme which we outlined.[1] Let us take the subject of examinations by way of illustration. The candidate's professional qualifications, the posts and offices that he has held, and the character which he brings with him from his hospital and medical school should be a sufficient guarantee of professional fitness for the army. It will be seen that we proposed, for reasons which we assigned, to abolish the present entrance competitive examination as unnecessary and in substitution thereof to institute an examination, say, after about 10 years' service. This examination was to be of two kinds. First it was to be a pass examination by which an officer could show that he had kept himself reasonably acquainted with the progress of surgery, medicine, and hygiene—the tests to be made as practical and pertinent to army service and army hospital requirements as possible. Second, there was to be a voluntary honours examination in subjects to be selected by the candidates themselves, the range of subjects embracing surgery in all its branches, medicine, epidemiology, bacteriology, and hygiene. In the case where a man selects his own subjects it may fairly be assumed that he has given time and attention to the special study of them and he would expect the examination test to be a severe one. A separate list should be kept of the honours men and their names should be marked with an asterisk in the Army List. With this information, with the officers' records of service, and with the reports received from time to time about them, the head of the medical service should have no difficulty in selecting the best and most suitable men to fill different posts.

In the series of articles to which we are referring we may add that the following subjects were considered:—leave for special study at home or on the continent of Europe, the provision of an army medical school in London, the practical training of medical officers at military manœuvres, the increase of the army nursing establishment and the better training of hospital orderlies, the greater utilisation of civil hospitals, the introduction of an army dispensary system, the formation of an army sanitary corps for field service, the question of field medical transport, and the provision in time of peace of a large and duly registered medical reserve to be drawn from the civil element of hospitals in this country and the colonies on the outbreak of war. The whole question of providing a first class medical staff for an army is in reality a much more comprehensive and difficult one than is commonly supposed. We are aware, of course, that the report of the War Office committee in its present shape is necessarily incomplete and only supplies the loose framework of a scheme. It cannot have been intended as final and a number of subjects have been purposely left untouched by it—such as, for example, the points raised by Professor A. OGSTON. All these have still to be considered before any complete system of reconstruction can be formulated. But the aim and spirit of the committee's report are good and it contains many excellent points. Indeed, that it is capable of being so remodelled and modified as to fulfil its purpose we think possible. It rests with Mr. BRODRICK to effect this.

# Annotations.

"Ne quid nimis."

## IS THE COAL-SUPPLY OF ENGLAND SERIOUSLY DIMINISHING.

THE possibility of England being one day without coal affects the interests of every Englishman, for if England's coal-supply can be shown to be within even a measurable distance of coming to an end one of the prime factors profoundly concerning her supremacy and prosperity is threatened with removal. Yet that there is reason for some anxiety on this point is evident from the fact of a Royal Commission having been just appointed to inquire into the extent and available resources of the coal-fields of the United Kingdom and the rate of exhaustion which may be anticipated. We are glad to note that this Commission exhibits a very strong composition, experts in every branch of the question, technical, economic, and scientific, being adequately represented. All previous speculation, based chiefly on geological considerations, can no longer be counted as safe to rely upon because the rate of exhaustion has considerably exceeded the broadest calculations. The output in 30 years has more than doubled and if the views of some be correct as to the extent of the fields the coal at present in sight will have been exhausted long before the lapse of the present century. There can be little doubt that there is abundant room for improvement in regard to utilising the real value of coal as fuel. An immense waste of coal occurs through defective means of burning it. Our London fogs are proof of this and if further evidence is needed we have only to inspect the sea-shore, which in places contiguous to shipping traffic will be found strewn with small pieces of unburnt coal besides cinders still possessing value as fuel. It has been said that there must exist beneath the Atlantic and in a straight line between New York and Liverpool a huge bank of coal cinders and ash, pitched overboard by the liners, sufficient to form a bank for railway purposes. The question of how far coal can be more economically burnt, that is, how better its value as fuel can be realised, should prove to be one of the most interesting subjects for the consideration of the Commission. Meanwhile, is it possible that some new source of energy and power will be found? We know what great natural forces exist around us, but our power to utilise them is at present *nil*. The tides, the winds, the sun, all represent forces of enormous magnitude; but how can they be turned to practical account? There is little doubt that some day this will be accomplished, and it is probable that the agency will be electricity. Energy at present is derived with extreme extravagance. Steam represents but a tithe of the available force of the coal producing it and electricity still less. If coal could be translated directly into electricity without the intermediate stages of burning, raising water to boiling-point, converting it into steam, using the steam in an engine, and attaching an engine to a dynamo, an ideal way of realising its value as fuel would be attained. If, however, the coal-supply should fail, to what new source of energy and force shall we turn? It is difficult to supply the answer except by assuming that new or economical and practicable means will be discovered by which the great natural forces may be utilised. The proceedings of the Royal Commission on Coal will be followed with the greatest interest.

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[1] THE LANCET, April 27th, 1901, p. 1224.

## THE CHEMISTRY OF THE NEW POSTAGE-STAMPS.

THE nature of the colouring matter used for distinguishing the values of postage-stamps is, as we have pointed out before, a matter of some importance, for, however dangerous the dirty practice of licking stamps may be proved to be the convenience of possessing a moist tongue for the purpose cannot be resisted by most people. That the habit has its dangers is no hypothesis. Blood-poisoning has without the slightest doubt been traced to licking an infected postage-stamp, and the chances of a postage-stamp becoming infectious are obviously abundant. We may at least expect the postal authorities to avoid as far as possible the use of doubtful colouring materials on stamps and we have reason for believing that considerable care is exercised to secure this desirable result. This year it was decided to revert to red as the distinguishing colour of the penny stamp, and all the new stamps bear the portrait of His Majesty the King. In the particular instance of the new penny stamp the colour, as we find by experiment, is admirably adapted for the purpose. We have been able to recognise it as one of the innocuous aniline reds, which is peculiarly resistant to atmospheric action or the action of moisture. Indeed, strong acids disturb it but little. We could find no injurious matters present, no irritant or metallic poison. The new halfpenny stamp, we find, is coloured with similar innocent materials to those which we found on a previous occasion.[1] The adhesive material is dextrin or British gum in all instances. From a chemical standpoint, therefore, the postage-stamps are not likely to prove poisonous, although in giving this opinion it is well to reiterate that infection from septic matter must always remain a strong possibility (when it is considered how postage-stamps are handled and how they are left lying about, frequently under an undesirable environment), so long as the habit of licking them is persisted in.

## THE SITUATION AT THE MACCLESFIELD INFIRMARY.

A SPECIAL meeting of the governors of the Macclesfield Infirmary was held on Dec 23rd, 1901, to consider a motion to be proposed by one of the governors, Mr. W. R. Brown. The gist of this motion was that the governors were regretfully compelled to give notice to Miss Clarke to terminate her engagement as junior house surgeon within four weeks from that date and that she should be offered a year's salary as a solatium. Mr. Brown, in introducing the motion, said that the governors might feel some surprise thereat, but he felt that there was no course left but to concede the terms of the honorary medical staff. He denied that they were fighting the question of women *versus* men as doctors. The governors, he said, had done nothing but what was within their right, but the medical men took offence because the governors had ignored their views. Now the governors had to retreat, because of their helplessness in face of the impregnable unity of the medical profession. Mr. Brown admitted that the medical men had not said all that they might have said in justification of their action; nor had they left the institution in the lurch, but had maintained the traditions of their profession in attending to the sick and poor in the infirmary. The proposed motion was seconded by Alderman Pickford. A governor suggested as an alternative policy that a lady, Miss Ross, be invited to accept the post of consulting physician at the infirmary. The mayor, who was presiding over the meeting, then read a letter containing a suggestion that a lady doctor should be kept on for duty amongst the women and children Other governors spoke against the proposed motion, which when put resulted in 3 voting for it and 6 against, while 2 remained neutral. Mr. Brown's attempt to deal with the position therefore failed. But on Monday, Dec. 30th, another special meeting of the governors was called by the mayor, at which he was able to announce that Miss Clarke had resigned her position, placing herself unconditionally in the hands of the governors. The resignation was accepted and the mayor proposed that a year's salary should be paid to Miss Clarke as solatium, but there being some doubt as to the legality of such a proceeding the governors agreed to subscribe amongst themselves the sum of £100 as a testimonial for her. As a result of Miss Clarke's action the medical staff will withdraw their resignations. Mr. Brown is to be complimented upon his practical attempt to bring about a solution of the difficulty. He worked, not in the interests of the honorary medical staff, but in the interests of the infirmary, and this is exactly what he should have done, being a governor, while it is exactly what a majority of the governors would not do. There seems but little doubt that Mr. Brown's action has resulted in precipitating a settlement by causing the junior house surgeon to reconsider her decision not to resign which, if maintained, would have been most unfortunate. We sympathise deeply with Miss Clarke. She was placed in an entirely impossible position by the governors, who, in their desire to run counter to the medical staff, took up an attitude which they could not maintain.

## A FRENCH APPRECIATION OF MISS FLORENCE NIGHTINGALE.

THE writers of the first French work which has hitherto been published about nurses[1] have done full justice to the pioneer of the great nursing movement which within contemporary memory has from small beginnings assumed such gigantic proportions. It is to Miss Florence Nightingale, they say at page 135 of their book, that the whole world is indebted for the introduction of sick-nursing as a profession for educated women, her authority dating from the remarkable work which she accomplished in the British Crimean ambulances. Born at Florence in 1820, Florence Nightingale was delicately nurtured and she received a careful education. But early in life the unhappy lot of the sick impressed itself so vividly upon her mind that the attractions of society at once and for ever lost all their charm She forsook the polite world and determined to see for herself if it were not possible to alleviate suffering by the exercise of intelligent care. When no more than 25 years of age she undertook a journey to the continent in order to study the nursing systems prevailing in the best known institutions for the relief of disease. Amongst others she visited the Filles de la Charité de Saint-Vincent de Paul at Paris and the Deaconesses at Kaiserwerth, and even acted as an assistant in each of these establishments. The devotion of the Sisters and the perfect order that reigned under their auspices excited her admiration but did not entirely satisfy her. Technical knowledge was urgently required in addition, and also freedom from the monastic trammels so hostile to scientific progress For nine years Florence Nightingale gave herself up wholly to the exhaustive study of her subject, which she systematically divided under three heads—the needs of the sick, the qualities and requirements of sick attendants, and the essentials of hospital construction It is no wonder, therefore, that she should have proved herself capable of completely transforming the British ambulances in the Crimea and of thereby reducing the mortality from 60 to 2 21 per cent A member of the French Academy[2] once ventured to say that it was owing to the advice of the chief medical officer of the French troops that the success of Florence Nightingale was due, but this statement is utterly and entirely unjustifiable From the first it was demonstrable that the young English "lady in chief" could reorganise and manage hospitals after so improved a fashion that the renovated establishments became in reality refuges for the sick and wounded, and were no longer deserving of condemnation such as that which was pronounced by Dr Uytterhœven who, on hearing of the death of 67,000 French soldiers while under treatment, felt constrained to exclaim "These hospitals are but ante chambers to the cemetery" But, great and glorious though it was, the work of Florence Nightingale in the Crimea is surpassed by her achievements in her own country, where she completely revolutionised the hospitals and infirmaries, opened up the nursing profession for ladies of gentle birth, and established schools for nurses The fact that in the United Kingdom at the present time there are no less than 505 of these schools will serve to show the magnitude of the results which have attended on the labours of Florence Nightingale The authors of "Les Gardes Malades"—of whom one, it may be mentioned, is a medical woman—have paid due homage to the eminent lady whose "Notes on Hospitals" are still most valuable to the architect, the engineer, and the medical officer, but they make no mention of the statesman who gave effect to her recommendations and threw himself heart and soul into the work of sanitary reform The name of Sidney Herbert, first Baron Herbert of Lea, should never be omitted when the history of sanitation is discussed

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[1] THE LANCET, May 5th, 1900, p. 299.

[1] Les Gardes-Malades. Paris: Vigot Frères, 1901.

## URÆMIA AS A CAUSE OF ACUTE DELIRIUM

URÆMIA has long been known to be a condition capable of producing slight cerebral disturbances such as temporary attacks of giddiness or momentary loss of speech or of consciousness In the *Archives de Neurologie* for December Professor A Cullere of Lyons refers to the recent view expounded by Dr Carrier at the Congress of French Alienists and Neurologists held at Limoges in August, when he presented a remarkable report on insanity of uræmic origin, showing that acute mental disorder may be the outcome of uræmic poisoning Professor Cullere has recently had under observation two cases which appeared to confirm the above view and to throw light on this important question Case 1 —The patient was a woman, aged 55 years, who was subject to hallucinations and delusions, under the influence of which she persistently refused food so that she had to be fed by the œsophageal tube She was slightly febrile when she came under the care of Professor Cullere in April, 1897, and was suffering from a profuse and fœtid diarrhœa Her condition was so serious that saline transfusion *(serum de Cheron)* was employed Slight improvement resulted and her ideas, which hitherto were confused, gradually began to become clear In May there was a recrudescence of symptoms with fever, delirium, and diarrhœa as before She passed into a low typhoid condition, a bed sore developed over the sacrum, and she died in a state of coma The necropsy revealed the following conditions The lungs were normal, the heart was slightly fatty, the kidneys were small as the result of atrophy, the cortical substance being congested, granular, and contracted, and weighing not more than 80 grammes There was no macroscopic lesion of the cerebral hemispheres, but an unusual abundance of cerebro spinal fluid was present in the skull Professor Cullere considers that the attacks of acute delirium in this case were associated with the chronic nephritis which was in progress and that they were therefore of uræmic origin The diarrhœa also, in combination with the other symptoms, probably indicated a uræmic condition of the system Case 2 —The patient was a man aged 41 years, with a family history of melancholia and suicidal propensities in both the maternal and paternal branches He was of temperate habits He became insane, the mental disorder taking the form of maniacal excitement, incoherence of speech, and religious utterances He then passed into a condition of apathy with mutism and refused to take food He was thin, pale, and haggard, with very fœtid breath and obstinate constipation The pulse was soft and slow, the beats being 50 per minute or less For several weeks his attitude and manner were those of katatonia, marked by contortions, grimaces, and persistent poses indicative of fear and repugnance Four months later this state was succeeded by a melancholic phase with suicidal impulses His insanity lasted 16 months, at the end of which time he began to improve and finally recovered Nine years afterwards, in June, 1897, he had a fresh attack and was admitted under treatment with melancholia agitans and violent impulses to homicide and suicide He refused food, became feverish and passed into a state of prostration with restless muttering delirium, algidity, and coma ending in death Anuria and frequent vomiting marked the later stages The symptoms all pointed to uræmia Professor Cullere believes that the katatonic symptoms with attitudes of ecstasy and catalepsy were due to toxæmia—a view supported by Kraepelin and other modern observers Venesection and saline transfusion would thus seem to be indicated in grave cases

## SUPPLEMENT TO THE ANNUAL REPORT OF THE CHIEF INSPECTOR OF FACTORIES AND WORKSHOPS FOR THE YEAR 1900.

IN the annual report of the Factory Department of the Home Office for 1900 which was noticed in our columns some months ago[1] it was announced that a supplement dealing with the fourth and fifth annual returns of persons employed in factories in the United Kingdom would be issued at a later date We have recently received a copy of this supplement, in which Dr B A Whitelegge points out that under Section 34 of the Act of 1895 the occupier of every factory and workshop was required to make each year a return of the persons employed, and three such series of returns for the United Kingdom have already been tabulated and published It has been found, however, that the heavy and continuous labour of collecting and compiling an annual census of this magnitude not only fails to yield any results of commensurate value, but stands in the way of more practical application of the mass of material thus accumulated every year Accordingly the statutory requirement has now been modified by the Factory and Workshop Act of 1901, and in future the return will be called for at intervals not exceeding three years In dealing with the fourth and fifth annual returns of employment in 1898 and 1899 it was decided to combine them and to narrow the field and to increase the detail in directions which will be helpful in administration of the Acts. A distinction is drawn for the first time between those employés who are under and those who are over 14 years of age. It thus appears that while in textile factories the former are far outnumbered by the "half-timers" under 14 years of age, in non-textile factories the balance inclines so far in the other direction that, taking both classes of factories together, more than half of the persons under 14 years of age are employed full time. The total number of returns and also the total number of persons employed in 1898-99 were greater than in any of the preceding years. The advance was relatively greatest in Scotland and least in Ireland, while in absolute increase England and Wales head the list. As regards textile industries as a whole, the present return compared with that for 1897 shows a decrease in the numbers employed in each of the three main divisions of the United Kingdom. In non-textile factories there was an increase in each of the age- and sex-groups except female "half-timers." This increase refers mostly to gas factories, electricity-generating stations, sawmills, tanneries, quarries, glass factories, and foundries. In regard, however, to the industries in which the galvanising and finishing of metals are concerned the better separation of departments in recent occupiers' returns has to be taken into account. There was a decrease only under the heads of flax-scutching, rubber, leather, ivory, bone, shell, and jet.

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[2] Maxime du Camp: La Croix Rouge de France

[1] THE LANCET, Sept 28th (p 868), Oct 12th (p 993), and Oct 26th

## DANGEROUS CIRCULARS.

IN commenting upon the methods adopted by certain people in selling shoddy jewellery *Truth* recently referred to the practice of leaving handbills from door to door, the advertiser calling for them after a certain lapse of time. That this is not an isolated instance of a reprehensible method of advertising we have proof in the fact that a few weeks ago we found in a letter-box a ragshop circular half of which was soaked in grease and the other half covered with dirty finger marks. It was subsequently called for. We have also in our possession the circular of a marine stores dealer, a term which the wording of the circular shows to be synonymous with "ragshop keeper," bearing the words, "Please show this to the Master or Mistress and return it only to ——— when he calls." We do not state positively that disease has been spread by this practice, but at a time when small-pox and other diseases of an infectious nature are prevalent no stone should be left unturned in seeking to eliminate every possible cause of infection. Such handbills should be burnt as soon as they are found, and the man when he returns should be told that this has been done. Medical men might do a great deal by warning their patients against the danger of returning these handbills, especially when there is illness in a house, and if the measure which we have suggested be adopted it will generally be found to be effective.

## MEDICAL PRACTITIONERS AND THE SALE OF POISONS.

A LETTER which appears in another column from a correspondent signing himself "Vulneratus" sounds, we think, an unnecessary alarm. The recently passed regulation of the General Medical Council refers, so far as we understand it, to "doctors' shops" into which any member of the public can go and buy two pennyworth of laudanum or other scheduled poison. "Vulneratus," however, seems to think that it applies to medicines prescribed by medical men. The law for the sale of poisons is laid down in Section 17 of the Pharmacy Act of 1868, but in the Pharmacy Amendment Act of 1869 it is laid down in Section 3 that "nothing contained in Section 17 of the said recited Act shall apply to any medicine supplied by a legally qualified medical practitioner to his patient or dispensed by any person registered under the said Act, provided such medicine be distinctly labeled with the name and address of the seller and the ingredients thereof be entered, with the name of the person to whom it is sold or delivered, in a book to be kept by the seller for that purpose." Therefore, to our minds "Vulneratus," or any other qualified medical man, is at perfect liberty to sell or to deliver medicines to his patients containing scheduled poisons, provided that he labels the bottles, or pots, or packages with his name and address. But the Act, we take it, forbids a medical man or anyone else not registered under the Pharmacy Act to keep a shop and to supply scheduled poisons to anyone who asks for them other than on presentation of a prescription duly signed by a qualified medical man. It will be seen from the report of the meeting of the Glasgow Southern Medical Society which appears at p. 29, that the society is angry with the General Medical Council But according to the Pharmacy Acts the Council appears to have been legally right in its resolution.

## TRAUMATOL IN THE TREATMENT OF SUPPURATIVE PROCTITIS.

IN the *Gazette des Hôpitaux* of Nov. 14th, 1901, M. Suzor calls attention to the value of traumatol in the treatment of suppurative proctitis. He has used this drug for several years in the dressing of wounds; it is less odorous than iodoform and also appears to have the advantage of superiority in drying up purulent secretion and hastening cicatrisation. He reports two cases in which iodoform failed and traumatol brought about rapid cure. In one a woman, aged 36 years, who was addicted to morphia, suffered from obstinate constipation which had caused rectal irritation and for more than a year profuse suppuration. Treatment consisted in various antiseptic douches followed by iodoform suppositories. Only diminution in the suppuration resulted. Traumatol powder, about a gramme, was insufflated twice a day after administering a large enema. The result was remarkable: complete recovery ensued in eight days. In the second case a man, aged 35 years, had suppurative proctitis with anal fistula The proctitis persisted after the operation for, and relief of, the fistula. Traumatol suppositories were used, but the result was imperfect. After eight days insufflations of traumatol powder were used and the suppuration disappeared in six days.

## THE MOTOR AND THE MICROBE.

WE ordinarily count amongst micro-organisms friends as well as foes, and the former are probably in the majority. After all, we know but a few microbes which are specifically disease-producing, while we know of an enormous number which are concerned in the great economic processes of nature, working apparently in the interests of nature's higher creatures. Though a very microscopic entity the microbe possesses enormous powers consistent with its property of growing and multiplying itself infinitely. The scavenging of the world is thus the effectual work of countless microbes. The idea of microbes, however, as a source of motive power appears at first sight preposterous, but a little reflection will show that indirectly even for this purpose micro-organisms may be very intimately concerned. It is well known that if it were not for its powerful action as a drug and poison alcohol would be a cheap commodity. Sugars and starches grow in immense abundance in almost all the civilised countries in the world, and it is but a short step to convert these into alcohol by fermentation, a process due to the agency of micro-organisms. All cereals would thus serve and the roots containing sugar, such as the maple, and even fruit such as the grape, in a time of plenty might easily be a cheap source of spirit. Alcohol possesses excellent calorific value, it burns with a hot flame, it is easily vapourised, and it yields, as a rule, no deleterious products of partial combustion as does oil or coal. It is thus well adapted as a fuel for the motor-car and already motor-cars are being *run with alcohol and with very encouraging* results. The drawback to its use is, of course, its expense, but some effort to reduce this has been made with success by getting a concession from the Excise (at any rate, in France) to withdraw the high duty, which is done if it can be shown that the spirit has been rendered undrinkable. Such alcohol is known as "denatured" spirit, the addition of some highly nauseous compound making it absolutely unfit to drink whilst not interfering with its properties for the purposes of a fuel Similarly denatured alcohol is being employed in lamps for the production of an incandescent light by the heating of the Welsbach mantle in the spirit flame. It is, therefore, not chimerical entirely to suggest that the day may come when we may not only owe our increased facilities of locomotion to the much abused microbe, but some of our effectual means of artificial illumination also

## EXAMINATION OF THE BLOOD IN APPENDICITIS.

EXAMINATION of the blood does not appear to be clinically utilised in this country in cases of appendicitis The *American Journal of the Medical Sciences* for November, 1901, contains an important paper on the subject by Dr. J. C. Da Costa, jun., based on the examination of 118 cases treated by operation in the German Hospital, Philadelphia. Of these 38, or 32·2 per cent, were unattended by suppuration, while in the remaining cases this condition was present with or without further inflammatory changes. In practically every case of appendicitis the hæmoglobin in the blood is diminished; the average loss is about 30 per cent. In about 10 per cent of the cases the loss reaches *50 per cent., and in 2 5 per cent. 60 per cent. or more* The diminution in the erythrocytes is, save in exceptional cases, inconspicuous The average loss in 38 catarrhal cases was 16·2 per cent. and in 80 suppurative cases 11·9 per cent. The degree of anæmia gives no help in diagnosing catarrhal appendicitis from suppurative The hæmoglobin value of the corpuscles in the majority of cases is slightly subnormal —about 0·7 or 0 8 per cent. of the normal. The fluctuations in the leucocytes are the most important features in the examination of the blood. In the catarrhal and interstitial forms of appendicitis without abscess formation the number of leucocytes usually does not exceed normal (10,000 per cubic millimetre) and is occasionally subnormal, but sometimes counts of 12,000, 15,000, or more may be made. But in cases of abscess, gangrene, or general peritonitis well-marked leucocytosis is usually present. The majority of appendicular abscesses raise the count to from 15,000 to 20,000 or more per cubic millimetre. The average was 17,450—nearly double that of the catarrhal cases. But if the abscess is so effectually walled off that little or no toxic absorption takes place such an increase may not occur. On the other hand, in profound sepsis, when the patient is so poisoned that reaction is prevented, leucocytosis may be absent and even leucopenia may occur. But such a condition is rare; in only two out of Dr. Da Costa's 12 fatal cases was well-defined leucocytosis absent In these the counts gave 6000 and 11,200 respectively. In the other 10 the numbers ranged from 14,200 to 58,500, and averaged 19,400. The degree of leucocytosis as determined by a single examination cannot be relied upon in prognosis. If, however, by repeated examinations a progressive increase in the number of leucocytes is detected it may be concluded that the collection of pus has become more extensive or that general peritonitis has been excited. Such an accident was heralded in three cases by an increase varying from 6600 to 14,000 cells to the cubic millimetre in excess of the number previously counted Perforation is usually accompanied by an abrupt rise in the number of leucocytes, but in debilitated subjects this may be absent or even a sudden decrease may occur. In the few cases of leucocytosis in which differential counts were made the increase *was found to be chiefly due to absolute and relative increase* of the polynuclear neutrophiles, the lymphocytes, large mononuclear forms, and the eosinophiles being relatively diminished. Dr. Da Costa concludes that leucocyte counts between 10,000 and 15,000 or 17,000 cannot be depended upon in diagnosing the form of appendicitis since they may be found in catarrhal cases, but that counts of 20,000 or more almost invariably indicate the presence of pus, gangrene, or general peritonitis. Making a "conservative estimate" he finds that in one out of four cases of appendicular abscess the diagnosis is justified by the leucocyte count. In cases of operation complete emptying of the abscess is followed within a few days by a decline to normal of the number of leucocytes, if recovery is uneventful, persistence of leucocytosis after the third or fourth day following operation, may usually be attributed to undrained pockets containing pus or to general peritonitis, or to both. Hence the value of a daily leucocyte count after operation As a means of diagnosing appendicitis from the conditions most closely resembling it—ovarian abscess, pyosalpinx, ectopic pregnancy, perinephritic abscess, hepatic abscess, and malignant disease of the cæcum; examination of the blood is useless, for all the conditions just named give rise to similar blood changes But if the diagnosis lie between appendicitis and typhoid fever the former is suggested by the presence of leucocytosis, which occurs in the latter only when perforation takes place [1] Leucocytosis also excludes such non-inflammatory conditions as simple enteralgia, lead colic, ovarian neuralgia, ovarian cyst, and moveable kidney

## THE LONDON LICENTIATES' AND MEMBERS' SOCIETY.

THE constitution and aims of the London Licentiates' and Members' Society have already been described in THE LANCET (Nov. 23rd, p 1425), and we have considered the chances of successful effort on its part The society is at any rate determined not to fail for want of trying, and we hope that the next step will be fruitful. This is to be a petition to the Royal College of Physicians of London and the Royal College of Surgeons of England, begging them either to approach the governing body of the new University of London, or some other British University, with a view to obtain for the Licentiates and Members the privilege to offer themselves as candidates for the final examination for a degree in medicine, or, on the other hand, begging the English Royal Colleges to take some other independent step to remove the disabilities under which their petitioners labour. At present this petition has been drawn up by the committee of the society and is to be presented to a general meeting on Jan. 22nd The committee base the petition upon these grounds · that—

> Your petitioners find that in the practice of their profession, through inability to style and call themselves "Dr." they do labour under a very great disadvantage in comparison with the graduates of the universities of Scotland Ireland, and the provinces of England and also in comparison with the licentiates of certain of the examining bodies, and whereas your petitioners feel that they have gone through a course of professional study which is as prolonged and thorough as that laid down for the above graduates and licentiates and have passed examinations which are equal in severity and strictness to those through which the above graduates and licentiates have passed; and whereas your petitioners feel that it is to the interest of the whole medical profession that the Royal College of Physicians of London, and the Royal College of Surgeons of England should continue to attract students to the metropolitan schools; and whereas your petitioners think that the Royal Colleges can only continue to attract students to the London schools by removing the above-mentioned disabilities—

therefore they put forward this petition Without going at length into the whole question of the claim to a university degree of Licentiates and Members belonging to no university, a question in the present instance with strong

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[1] THE LANCET, May 18th, 1901, p 1417

*pros* and *cons*, no one can fail to recognise that there is strength in the argument that the number of students in the London schools is affected by the fact that no medical prefix is obtained by passing the ordeal of the Conjoint Board. If the London Licentiates' and Members' Society can *prove* that the diminishing number of medical students at the metropolitan schools is really due, or largely due, to the fact that the title "Dr." is not obtainable through the portals by which the vast majority of London students enter the profession, then we think that the society will have a very powerful lever with which to stir the rooted convictions of the Royal Colleges. In the meantime we cannot help doubting whether the members of the society do not underrate the value of their own diplomas in the public eye

## THE DISTRIBUTION OF PLAGUE.

A TELEGRAM from the Governor of the Cape of Good Hope received at the Colonial Office on Dec. 24th, 1901, states that for the week ending Dec. 21st the cases of plague in the Cape Peninsula numbered 0. The cases at Port Elizabeth numbered 2, both in natives. The cases at Mossel Bay and at all other places numbered 0. The area of infection remains unchanged. The cases of plague in persons under naval and military control numbered 1, that of a native in the remount camp at Port Elizabeth. As regards the Mauritius, a telegram from the Governor received at the Colonial Office on Dec. 27th, 1901, states that for the week ending Dec. 26th there were 38 cases of bubonic plague, of which 23 proved fatal.

## CORTICAL LOCALISATION IN THE ANTHROPOID APES.

ALMOST all the experimental evidence with regard to the localisation of the cortical centres has been obtained from observations on the monkey and lower animals, and except for the work of Beevor and Horsley upon the orang-outang no observations have been made upon the anthropoid apes. Sherrington and Grünbaum, however, as the result of some more extensive work on the same subject, have recently in part confirmed and in part modified our previous knowledge. The chief points on which these two sets of observers differ are that Sherrington and Grünbaum found that all the excitable cortex lay in front of the Rolandic fissure and no movement could be produced by stimulation of the area immediately behind that fissure, whereas Beevor and Horsley had shown that excitable centres for the elevation of the upper lip, for contraction of the opposite and upper half of the orbicularis, and for the thumb and index fingers existed in that region. Beevor and Horsley had also pointed out that small areas of inexcitable cortex existed between the excitable centres. This observation Sherrington and Grunbaum failed to confirm, and they could find no such areas in the region of the excitable cortex. They also were able to map out a centre for movements of the trunk between the arm and leg area, and, further, to localise centres for the perineal movements in proximity to the toe centre. Sherrington and Grunbaum failed to confirm the observation of Beevor and Horsley with regard to the centre for turning the head and eyes to the opposite side situated below the genu at the junction of the middle and lower thirds of the fissure of Rolando, but they fully confirmed the observation with regard to the centre for the same movement of the eyes situated far forward in the frontal region and separated from the excitable cortex by an inexcitable area. Another point in this research is suggested by the fact that in 1892 Hughlings Jackson published a "Neurological Fragment" in which he suggested on hypothetical grounds that in man the erector spinæ muscle is supplied, through the intermediation of Türck's column, by the homolateral cerebral hemisphere. The hypothesis received support from certain cases of hemiplegia in which he had observed some very slight weakness of that muscle on the side of the cerebral lesion, but it was pointed out that great difficulties attended a correct estimate of the power of that muscle. The recent work of Sherrington and Grunbaum has brought this question again into relief. Their discovery of a well-marked ventral pyramidal tract in the anthropoid apes, considered in association with their erect posture is of peculiar interest in view of the fact that in all the lower monkeys and other vertebrates such a tract is entirely absent or extremely ill-defined. Sherrington and Grünbaum, by excising the hand area in a chimpanzee, produced a temporary palsy, not only of the hand, but of the shoulder of the opposite side, and on examining the spinal cord degeneration was found in Türck's column as far as the upper lumbar region. This result is sufficiently striking when we remember the close apposition of the upper arm area to the newly discovered trunk area and the probable overlapping of all the different areas in the excitable cortex. It is unfortunate that the difficulties attending the examination of the muscles of the back are not diminished by substituting the anthropoid ape for a human hemiplegic.

## OUR LAX DEATH REGISTRATION LAWS.

AN inquest held by Mr. John Troutbeck on Dec. 30th, 1901, touching the circumstances attending the death of Patience Glossop Harris, trading as Auguste et Cie, theatrical costumiers, throws once more into strong relief the slovenly way in which deaths are registered in this country. As in all probability further action will be taken as regards certainly one person concerned, and probably as regards two, we can do but little more than mention the facts which came out in evidence. These are as follows. Miss Harris was much addicted to alcohol; she used to drink brandy heavily, together with a man named Price. This man was supported by the deceased and was also a beneficiary under her will to the extent of an annuity of £104, besides some legacies, jewels, furniture, and other bequests. Miss Harris died on Dec. 26th and was attended up to the day of her death by an unqualified practitioner named William Stanley, of 1, Portsmouth-street, Lincoln's Inn-fields, W.C. He said that he had attended Miss Harris for seven or eight years; he declined to say whether he was paid for his services, and although he stated that he had recommended Miss Harris to call in another medical attendant he declined to say whom he suggested should be called in He gave a certificate of death from cirrhosis of the liver and exhaustion. Dr. G. A. Hamerton, divisional police surgeon at Bow-street, gave evidence of what he found at the post-mortem examination. There were all the signs of chronic alcoholism and death had resulted from cerebral hæmorrhage. Edward Cox, registrar of births and deaths for the Strand district, said that he had received Stanley's certificate. He had known Stanley for many years and considered that the certificate was perfectly in order according to the Registrar-General's regulations. The jury returned a verdict in accordance with the medical evidence of Dr. Hamerton and added a rider to the effect that the attention of the Registrar-General should be called to the lax way in which the certificates of unqualified medical men were accepted as exemplified in this case. The coroner, in his summing up, pointed out how such cases afforded openings for crime and we cordially agree with him. Here is the case of a woman making a will, under which the chief beneficiary is a man who drinks with her. She is attended by an ignorant, unqualified person, who gives a certificate which is only part of the truth, which certificate is accepted, and, we are afraid, lawfully accepted, by the registrar.—It is notorious that our system of death registration is disgraceful. Even when a medical man gives a certificate he is not required to certify the *fact* of death When no qualified medical practitioner has attended, an unqualified practitioner, or someone present at the death, or the occupier of the house, or if the occupier be deceased some other inmate may give information, and such information is too often accepted, though the registrar can, if he likes, refuse a certificate for burial.

## MUNICIPAL BACTERIOLOGISTS.

THE town of Cambridge has within the last three months suffered from no less than three mild epidemics of diphtheria The municipality was greatly helped in dealing with this epidemic by Dr. Louis Cobbett of the University Pathological Laboratory, who acted as consulting pathologist At a special meeting of the Cambridge Borough Council held on Dec. 19th the Public Health Committee submitted a report stating that as in future the services of Dr. Cobbett would not be available they recommended that Dr. Graham Smith should be appointed bacteriologist to the council for two years at a minimum salary of £100 per annum with an allowance of £20 per annum for a servant and for any reasonable out-of-pocket expenses The chairman of the Public Health Committee, Alderman T. Hyde Hills, M R C S Eng., moved the adoption of the report and after some opposition, an amendment being lost by 13 votes to 21, the report was adopted. We warmly congratulate the municipal authorities of Cambridge upon the very sensible step which they have taken. They are among the earliest, although not the very first, to appoint a municipal bacteriologist, for the pioneer in this movement was, we believe, the city of Liverpool which some little time ago appointed Dr. Rubert Boyce as city bacteriologist In no disease perhaps so much as in diphtheria is early diagnosis necessary to minimise the spread of infection, and it is fitting that a municipality so intimately bound up with a great seat of learning as is the town of Cambridge should have decided to profit by the latest researches of science as this appointment shadows forth.

## THE DISSEMINATION OF INFECTIOUS DISEASE.

IN another column we publish a letter under the above heading which, so far as we can say from the facts before us, reveals a course of action by no means creditable to the hospital in question We may say that we have no knowledge to which of the metropolitan hospitals our correspondent refers, but to recapitulate the alleged facts they are as follows A woman brought her sick child to the hospital where the diagnosis was made of scarlet fever. The hospital ambulance thereupon took the mother and child to their home which consisted of one room inhabited by three other children, the room being in a house with many other occupants. The medical officer of health was communicated with and in 24 hours or so the patient was removed. If these facts be correctly stated we cannot think that the hospital authorities took the wisest course. Every hospital should have an isolation waiting-room—and, as a matter of fact, the procedure at many, if not all, of the metropolitan hospitals is to detain an infectious case, to communicate with the Metropolitan Asylums Board, to keep the patient in the isolation-room while waiting, and in about an hour the Asylums Board ambulance arrives and removes the patient. We cannot think why some such sort of programme was not carried out in the case mentioned by our correspondent. Even if the hospital in question possessed no isolation-room it would have done but little harm for the patient to wait in the courtyard or somewhere on the premises, but to send the child back to its home—a home with every facility for the spread of disease—was futile. The hospital ambulance would have been far better employed in taking the child to the fever hospital.

## COUNTY MEDICAL OFFICERS IN SCOTLAND AND THE GOVERNMENT GRANT.

A LETTER has been sent by the Local Government Board of Scotland to county councils in that division of the kingdom with reference to the conditions under which a county council will in future be entitled to obtain a share of the £15,000 contributed under the Local Taxation (Customs and Excise) Act, 1890, towards the cost of medical officers and sanitary inspectors. The new conditions come into immediate effect and are—(1) where the county council shall appoint a medical officer with permission to engage in *general* private practice no share of the grant will be allowed; and (2) in any future case of a county medical officer being permitted to engage in *consulting* practice no share of the grant will be allowed unless the Secretary for Scotland is satisfied that the circumstances are exceptional and justify the relaxation of the general rule.

## THE NEW DIRECTOR-GENERAL OF THE ARMY MEDICAL SERVICE.

IT is needless to say that at the present time the direction of the Army Medical Service requires the presence of a judicious, tactful, and strong man at the helm. From all we know of Surgeon-General W. Taylor's antecedents and of the opinion which is generally entertained in regard to him we think that the Army Medical Service is to be congratulated on his being selected for the post. That Surgeon-General Taylor is undertaking an arduous task and entering upon his appointment at a critical time in the history of the department goes without saying. Despite the difficulties which will have to be encountered in inaugurating and administering a new order of things the position is nevertheless not without some compensatory advantages which did not fall to the lot of his predecessor in office. We can only trust that any new occupant of the post may be able to turn these to account. The institution of an Advisory Board will keep the Director-General in close touch with the medical schools and profession and will enable him to gauge their feeling and opinion and on occasion to add the weight of them to that of his own. With a seat on the War Office Council, under the presidency of the Secretary of State for War, and on the Army Board, presided over by the Commander-in-Chief, he will, at any rate, have the assurance that subjects affecting his department are not discussed and decided upon in his absence. We heartily wish Surgeon-General Taylor a successful career on entering upon his new duties in the direction of the Army Medical Department

## KISSING THE BOOK.

WE have over and over again in these columns pointed out the dangers of the uncleanly habit of kissing the book of the Gospels when taking an oath Over and over again, too, have we pointed out that by Section 5 of the Oaths Act of 1888 if any witness desires to swear with uplifted hand in the form and manner in which an oath is usually administered in Scotland he shall be permitted to do so, and the oath shall be administered to him in such form and manner without further question Many persons are ignorant of this relieving clause, nay, even county-court judges have refused to allow witnesses to be sworn in this manner.[1] His Honour Judge Emden[2] and Mr. Justice Byrne have both called attention to the clause, and the former judge has caused notices to its effect to be posted in conspicuous places in his court. The Attorney-General stated in Parliament that such a notice was posted in every court,[3] if so, we cannot say that they are conspicuous. We do not believe that there is any legal compulsion for a witness to kiss the book at all, and we think it is simply a custom which has grown up no one knows how. The old form of oath was to lay the hand upon the book and to say, "So help me God and these Holy Evangels." This form might well be restored, or if such an appeal were to give offence to Scotsmen, why should not the form and manner in which an oath is usually administered in Scotland be made the form also usually administered in England? The Government might well bring in a Bill to this effect when Parliament meets. But in the meantime every witness, and more especially every medical witness, should exercise his undoubted right and demand to be sworn in the Scotch fashion.

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[1] THE LANCET, July 17th, 1897, p. 155

[2] THE LANCET, Jan 18th, 1896, p 190.

### FEES FOR INSURANCE EXAMINATIONS.

IN our issue of Dec. 14th, 1901, p. 1710, we published a letter from a correspondent protesting against the amount of work to be done in, and the lowness of the fees paid for, medical examinations for insurance in the Century Insurance Company, Limited. Our correspondent made certain definite statements, all of which, with one exception, Mr. Henry Brown, the manager of the Century Insurance Company, Limited, directly traverses in a letter which appeared in our issue of Dec. 21st, 1901, p. 1776. The one exception is the fee, which is allowed to be 10*s.* 6*d.* Mr. Brown refers to the fact that candidates for admission to sickness benefit societies are frequently examined for less than 10*s.* 6*d.*, and that a fee of one guinea, "of course, would be impossible." We do not see any impossibility about it. Examination of a patient for life insurance is, or should be, a very responsible matter for the patient, for the examining physician, and for the company. On an average a properly conducted examination takes at least 20 minutes and may take a great deal longer. Mr. Brown and others like him seem to think that a medical man's time is of no value to him and that we should be thankful for the smallest crumbs from the tables of the wealthy. The Century Insurance Company, Limited, is, we take it, in no way a philanthropic body but a purely commercial one. Then it must pay for good work.

### SMALL-POX IN LONDON.

THE number of cases of small-pox in London shows no diminution. On Saturday, Dec. 28th, 1901, there were 40 fresh cases notified and removed; on Sunday, Dec. 29th, there were 30 fresh cases; on Monday, Dec. 30th, there were 40 fresh cases; on Tuesday, Dec. 31st, there were 42 fresh cases; and on Wednesday, Jan. 1st, 1902, there were 39 fresh cases.

THE London (Royal Free Hospital) School of Medicine for Women offers in May a Stuart Mill Scholarship of the value of £30 a year for four years. The holder of the scholarship is required to take her entire medical course at the above school and to enter into a legal agreement to practise in India under the Countess of Dufferin's fund on the completion of her course of study. Applications should be in the hands of the secretary of the school, 8, Hunter-street, W.C., by Feb. 1st.

THE Harben Lectures of the Royal Institute of Public Health will be given in King's College, London, on Jan. 13th, 14th, and 15th, at 5 P.M., by Professor Max Gruber, who has taken as his subject "The Antibodies of the Blood." Professor Gruber, who is Professor of Hygiene in the University of Vienna, will lecture in English, and all interested are invited to attend.

As we have previously announced the Prince of Wales's Hospital Fund for London will in future bear the title of King Edward's Hospital Fund for London. The work of the Fund having greatly increased and the working staff in consequence being greater, permanent offices have been taken at 81, Cheapside, London, E.C.

## Pharmacological Notes.

### THE VALUE OF THE LIQUORICE LOZENGE BASIS.

SIR JAMES SAWYER[1] has recently advocated a more liberal use of medicated lozenges in many affections of the mouth and fauces, as well as in some other morbid conditions. He also calls attention to a basis which he has found useful in his own practice—viz., the pasta glycyrrhizæ alba, or *pâte de réglisse blanche.* It is prepared like the well-known pasta althææ or *pâte de guimauve* of the French Codex, with the difference that liquorice root replaces marsh-mallow root. According to Beasley's "Pocket Formulary" the liquorice paste is prepared by dissolving gum acacia and sugar in an infusion of liquorice root, evaporating to the thickness of honey, then adding white of egg and orange-flower water, and finally continuing the evaporation until the paste is so firm as not to adhere to the hands. This paste is recommended as the basis of such lozenges as the physician may wish to prescribe in particular cases, as the active drugs may be readily combined with it by the dispenser. For example, if borax is prescribed as a local sub-astringent, detergent or antiseptic, it may be mixed with the liquorice paste in the proportion of two grains of borax to 10 grains of paste, forming a lozenge which is to be slowly sucked. When freshly made the lozenge dissolves slowly and well in the mouth and is tough enough to be in part a masticatory. This is a distinct advantage, since lozenges are generally intended to exert a local influence.

### LIQUORICE AND MARSH-MALLOW COMPARED.

The excellent suggestion of Sir James Sawyer referred to in the preceding paragraph raises the question of the therapeutic value and chemical composition of the two drugs, liquorice and marsh-mallow. The former contains an acid principle, to which the names "glycyrrhizin" and "glycyrrhizic acid" have been given, in varying proportions up to about 6 per cent.; it has a sweet taste. Liquorice root also contains a sugar and the substance asparagin. It has been used to cover the taste of nauseous medicines and is a well-known demulcent. According to Sir T. Lauder Brunton, it is particularly useful as a stimulating expectorant and when there is violent cough due to irritation of the pharynx and upper part of the respiratory passages. The same authority states that marsh-mallow root is a useful demulcent in sore-throat, coughs, or intestinal irritation. It is probable, however, that of the two drugs the marsh-mallow root is more valuable as a demulcent on account of the large percentage of mucilage that it contains, amounting to about one-fourth of its weight. It resembles liquorice in containing asparagin, and it is said[2] that the proneness of marsh-mallow root to become rancid if kept long is due to the decomposition of asparagin and the consequent formation of butyric acid. The absence from marsh-mallow root of a principle analogous to the glycyrrhizin of liquorice root is noteworthy, and on this account the marsh-mallow root is likely to be more generally tolerated in a lozenge basis, since the characteristic taste of liquorice is not universally tolerated.

### THE VARIABLE CAPACITIES OF DOMESTIC SPOONS.

It has long been recognised that the reputed capacity of spoons in domestic use cannot be depended on for medicinal use when accurate dosage is required. In this connexion C. B. Lowe[3] points out that teaspoons may vary in capacity from 75 to 130 minims Inasmuch as the teaspoon is supposed to hold 60 minims this variation is considerable and might lead to serious consequences Of the dessert-spoons examined two contained three fluid drachms and a third nearly four fluid drachms In like manner tablespoons varied in capacity from four to six fluid drachms Dessert-spoons should, of course, hold two fluid drachms and table spoons four fluid drachms Hence these domestic spoons are totally untrustworthy for medicinal use Since in actual practice few persons fill spoons perfectly full with medicinal liquids, but only approximately so, it follows that by the use of the average teaspoon (containing 107 minims) the patient would get about 50 per cent more than the theoretical quantity The average dessert- and table-spoon would give about 25 per cent more As the teaspoon is the measure by which potent liquid medicines are frequently administered this huge increase in capacity deserves attention Thus, to take an example, a physician might think that he was giving the one-sixteenth part of a grain of strychnine, whereas by the average teaspoon the patient would get $\frac{8}{72}$, or nearly one-tenth, of a grain. Or four minims of diluted hydrocyanic acid might be prescribed as a dose, but the patient would get six minims The conclusion to be drawn is self-evident—viz, that domestic spoons vary so much in capacity that it is never safe to prescribe solutions of powerful drugs to be measured by them, as a result of this the use of properly graduated glass medicine tumblers which can be obtained accurately marked should be insisted upon

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[3] THE LANCET, July 17th, 1897, p. 175.

[1] Brit. Med. Jour., Nov. 30th, 1901.

[2] Pharmacographia, p. 94.

[3] American Journal of Pharmacy, vol. lxxiii., p. 593.

# KING EDWARD'S HOSPITAL FUND FOR LONDON

A MEETING of the Prince of Wales's Hospital Fund for London (now King Edward's Hospital Fund for London) was held at York House, St. James's Palace, the PRINCE OF WALES being in the chair

*The financial report presented by* Mr J W CRAGGS was as follows —

*Financial Statement up to Dec 16th, 1901*

| | £ | *s* | *d* |
|---|---|---|---|
| Annual subscriptions | 25 655 | 12 | 5 |
| *Donations and undefined contributions* | 8 340 | 2 | 5 |
| Legacies | 5 000 | 0 | 0 |
| Annual grant from the trustees of the London Parochial Charities (for the Maintenance of Convalescent Hospitals) | 1 000 | 0 | 0 |
| Contribution from the League of Mercy | 7 000 | 0 | 0 |
| Income from investments | 5 743 | 7 | 10 |
| Sums given by donors to be invested as capital | 29 | 14 | 0 |
| Subscriptions paid in advance for 1902 | 7 | 13 | 0 |
| Special grant 1900 returned by the Middlesex Hospital | 250 | 0 | 0 |
| Making the total receipts | 53 026 | 9 | 11 |
| *Deduct the expenditure to date* | 1 530 | 1 | 6 |
| Leaves a net amount up to the present of | 51 496 | 8 | 5 |
| The balance of funds from last year is | 174 225 | 3 | 7 |
| Making a grand total of | 225,721 | 12 | 0 |

Mr CRAGGS said it should be explained that these figures were wholly exclusive of the sums received for the coronation gift The proposed awards to the hospitals would absorb all the sums collected this year without entrenching on the reserve fund

The Chairman of the Executive Committee, Mr H C SMITH, *presented the report of the committee which stated that* —

Considering the many demands made on the public in consequence of the protraction of the war it is a matter of great gratification to the Executive Committee that the total receipts up to Dec 16th have again shown an increase amounting to about £3000 over those of last year up to Dec 16th The figures therefore show continuous progress Excluding the initial start in the Jubilee year, the receipts are —For 1898 £39 272 for 1899 £48 536 for 1900 £51 549 for 1901 £52 769 (up to Dec 16th) It has been difficult to estimate the total amount available for distribution this year as the accounts for the year are not yet complete and the sum to be received from the League of Mercy was only known on Dec 16th Your committee are pleased to report the increasing success of the League of Mercy who have this year contributed £7000 being an increase of £1000 on last year's contribution £1000 more than last year, and the committee believe that this sum will be obtained without drawing on the reserve No appeals were made during the first part of the year but in the autumn your committee, feeling that the approaching coronation was a suitable occasion on which to make an effort to complete the scheme of the Royal founder and to present to His Majesty the King as a coronation gift the means of freeing the London hospitals recommended the re-appointment of an organising committee for the coronation gift, under the chairmanship of Lord Duncannon That committee is issuing various appeals The reports of the Hospitals Distribution Committee and of the Convalescent Homes Committee are appended The grants recommended to hospitals this year amount to £50 000 making with the £1000 given by the London Parochial Charities to be distributed among convalescent homes £51 000 in all The question of the heavy rating of hospitals is still engaging the attention of your committee Every hospital was visited and reported on by two members of the committee of whom one was an expert The work of the visitors proved most valuable and the thanks of your Royal Highness, as President, have already been conveyed to them The trustees of the Frank James Memorial Home have offered to the Fund the gift of the home at Cowes supplemented by a most generous endowment by Mr Arthur James and Mr William James of £10 000 to be allocated to a London hospital as a convalescent home

The following is the report of the Hospitals Distribution Committee —

The Visiting Committee have visited and reported on 85 hospitals and the Distribution Committee recommend awards to 79 Of the six left out, one is an excellent institution not in need of assistance this year the other five require either reconstruction or rebuilding and the committee hope that they will put themselves in such a position that their claims may be able to be more favourably considered next year The committee recommend this year the reopening of 34 beds now closed for want of funds making a total of 321 beds reopened and maintained by this Fund since its commencement in 1897 In the institutions which have still got closed beds there are many instances where the wards returned as closed are either used for paying patients or for nurses accommodation and some hospitals are so deeply in debt to their tradesmen and bankers that even if they had further help from the Fund it is questionable whether it would be desirable for them to incur more liabilities The committee could have employed another £10 000 this year in the reopening of closed beds had the requisite money been at their disposal The numbers of beds reopened in the different years are as follows 1897, 185, 1898, 57 1899, 45, 1900 0, 1901, 34 total 321

*The following is a list of annual grants and donations for* 1901 with the comments of the Distribution Committee —

Alexandra Hospital for Children £500, Belgrave Hospital, £500, Bolingbroke Hospital £500 British Lying in Hospital £300—£200 for Nurses Home Cancer Hospital £200, Central London Ophthalmic Hospital £100 towards rebuilding, Central London Throat and Ear Hospital £150 towards building fund Charing-cross Hospital £1[illegible]00 towards rebuilding fund Chelsea Hospital for Women, £250, Cheyne Hospital, £100 towards extension fund, City of London Hospital for Diseases of the Chest Victoria park £1500 £100—£1500 annual to support 25 beds reopened by this Fund £100 towards Nurses Home Building Fund City Orthopædic Hospital £250 £50—£250 annual to maintain 20 beds reopened by this Fund, City of London Lying in Hospital £100 Clapham Maternity Hospital £75 towards improving laundry Cottage Hospital Canning Town, £100 Dental Hospital, £100 Dreadnought Hospital £500 £500—£500 annual to meet deficiency £500 for Tropical Diseases Department East End Mothers Home £200—special to make separate labour ward on each floor East London Hospital £750—£250 towards new laundry, Establishment for Gentlewomen £75 Evelina Hospital (an excellent institution) French Hospital £100 towards improving operating theatre General Lying in Hospital £200 German Hospital £150, Gordon Fistula Hospital £50 towards repainting, Great Northern Central Hospital £750 £250—£750 annual to support 15 beds reopened by this fund Grosvenor Hospital for Women and Children £200 Guy's Hospital £5000—£5000 annual to maintain 114 beds reopened Hampstead Hospital £250 Hospital for Consumption £500 Hospital for Diseases of the Throat £100 in reduction of debt Hospital for Epilepsy and Paralysis £250—building fund Hospital for Sick Children £500 £100—£500 annual to maintain 16 beds reopened new out patient department required Hospital for Women Soho-square £2[illegible]0 £400—£250 annual to open six closed beds Hospital of St John and St Elizabeth £200 Italian Hospital £100, King's College Hospital £1000 £[illegible]50—£1000 annual to meet deficiency (advise improving lavatories), London Fever Hospital £600 London Homœopathic Hospital £[illegible]0 London Hospital £5000—£5000 annual to meet expenditure out of capital made necessary by improvements in the wards, London Lock Hospital (Female) £150—£250 towards new beds and tables, London Temperance Hospital £500 with a view to early reconstruction of out patient department London Throat Hospital (unable to recommend a grant this year) Memorial Cottage Hospital Mildmay Park £50, Metropolitan Hospital £500 £1000—£500 annual to open 10 beds Middlesex Hospital £1000—£1000 annual to meet deficiency, Mildmay Mission Hospital £200 Miller Hospital £500 National Hospital for the Paralysed £750 £750 annual to meet deficiency National Orthopædic Hospital £200 New Hospital for Women £200—£200 for painting and [illegible] floors, conditional on work being done North Eastern Hospital for Children, £500 £[illegible]00—£500 annual towards maintenance and £100 for a new diphtheria ward North London Hospital for Consumption £1000 £[illegible]0—£1000 annual to support 15 beds reopened by this Fund; North West London Hospital, £500 (well worthy of support) Paddington Green Hospital for Children £200 Poplar Hospital £100 towards furnishing account Passmore Edwards Hospital for Willesden £50 Queen Charlotte's Hospital £200 Queen's Jubilee Hospital (unable to recommend a grant) Royal Ear Hospital (to be considered next year when plans for rebuilding are definitely settled) Royal Eye Hospital £100 Royal Free Hospital £750 £750 £750 annual to meet deficiency £[illegible] towards improvements (deserving and requires more support from the public) Royal Hospital for Diseases of the Chest City-road £500 Royal Hospital for Women and Children £500, Royal London Ophthalmic Hospital £100 on; deserving more public support), Royal Orthopædic Hospital, £200 towards debt; Royal Westminster Ophthalmic Hospital, £200, Samaritan Free Hospital, £500—£500 annual towards maintenance (draw *attention to need for cutting off sanitary blocks and house* committee being increased); St. George's Hospital, £1000, St. John's Hospital (unable to recommend a grant this year); St. Mark's Hospital, £100; St. Mary's Children's Hospital, Plaistow, £250; St. Mary's Hospital, Paddington, £1000, £200—£1000 annual to meet deficiency; St. Monica's Hospital, £50 towards painting, St. Peter's Hospital for Stone, £50; St. Saviour's Hospital, Osnaburgh-street, £50; St. Thomas's Hospital, £1800—annual grant to maintain 30 beds reopened; Tottenham Hospital, £1000—annual grant to maintain 15 beds reopened by this Fund (call attention to insufficient appliances against fire), University College Hospital, £1000, £400—£1000 annual to support 25 beds reopened by this Fund; Victoria Hospital for Sick Children, £200—£100 towards isolation block; West-end Hospital for Diseases of the Nervous System, £200—£100 towards isolation wards and operating-room, Western Ophthalmic Hospital (requires rebuilding); West Ham Hospital, £300, £600—£300 annual towards maintenance (economically and efficiently worked and in a poor neighbourhood); West London Hospital, £1150; Westminster Hospital, £750, £250—£750 annual towards deficiency.

The report of the Convalescent Homes Committee was read by Mr. FRY in the absence of Mr. W. Latham, K.C., as follows:—

The committee have again followed the course adopted in previous years of making out of the limited sum at their disposal fairly substantial grants to a comparatively small number of institutions, and to *a great extent they have repeated grants to those before approved of* in preference to varying the distribution. The committee recommend the following grants —Alexandra Hospital, Convalescent Home at Painswick, £50, Charing-cross Hospital, Convalescent Home at Limpsfield, Surrey, £50; Chelsea Hospital for Women, Convalescent Home at St. Leonard's-on-Sea, £50; East London Hospital for Children, Convalescent Home at Bognor, £100, Hospital for Consumption, Convalescent Home, £50; King's College Hospital, Convalescent Home at Hemel Hempstead, £100; Mary *Wardell Convalescent Home*, Stanmore, Middlesex, £100; Metropolitan Convalescent Institution, 32, Sackville street, Piccadilly, W., £100; Metropolitan Hospital, Convalescent Home at Cranbrook, £50; Middlesex Hospital, Convalescent Home at Clacton-on-Sea, £100; Mrs. Kitto's Convalescent Home, South Park, Reigate, £50, National Hospital for the Paralysed and Epileptic, Convalescent Home at East Finchley, £50, Paddington Green Children's Hospital, Convalescent Home at Harrow, £50; Queen Charlotte's Lying-in Hospital, Convalescent Home at 20, Victoria road, Kilburn, £50, Victoria Hospital, Convalescent Home at *Broadstairs*, £50

His ROYAL HIGHNESS then moved the adoption of the financial statement and report of the Executive Committee, which, having been seconded by Cardinal VAUGHAN, was carried unanimously.

The DUKE of NORFOLK then moved a vote of thanks and of welcome to His Royal Highness for presiding on the occasion, which the LORD MAYOR seconded.

His ROYAL HIGHNESS, in responding, said: My Lords and Gentlemen,—I thank you very much for your kind vote of thanks. I should like to say that it is both a great honour and a great pleasure to me that the King should have nominated me his successor as President of his Fund for the hospitals of London, which was inaugurated by him and which after Jan 1st will be known as King Edward's Hospital Fund for London. It is unnecessary for me to say that I shall take, and do take, as keen and great an interest in the undertaking as he himself did and still does. I think we can congratulate ourselves on the general satisfactory state of affairs. I believe that this year, up to Dec. 1st, we had £6000 more than at the same date last year, notwithstanding that no appeals were sent out. An appeal has recently been made for the coronation gift alone, the accounts of which are not included in the financial statement now made as they are for this special purpose. I am glad to be able to say that we can distribute an additional £1000 this year to the hospitals of London, making a total of £50,000 altogether to the hospitals, and a further £1000 to the convalescent homes, thus making a grand total of £51,000, which, I believe, is the highest sum distributed since the first year. I am specially gratified at the continued success of the League of Mercy, which has contributed £7000 this year, being £1000 in excess of last year. I wish to congratulate Sir Henry Burdett on this happy state of affairs which I know is very greatly due to him, as well as to Lord Wolverton, Dr. Collins, and Mr. Harrison. Among those whose services have been most useful and valuable I am sure you will all regret with me the loss of my friend Dr. Creighton, the late Bishop of London, and also of Sir William Mac Cormac, that eminent surgeon. They took a very great interest in this Fund and maintained that interest until the time of their deaths. I can only say that their wise counsel and help will be greatly missed by us all. I wish to convey my warmest thanks to the General Council, and also to the Executive Committee, the Organising Committee, the Visiting Committee, the Hospitals Distribution Committee, and the Convalescent Homes Committee, the honorary secretaries, and all others connected with this Fund.

# Looking Back.

FROM

## THE LANCET, *SUNDAY, JAN.* 4, 1824.

*Medical Baths.*—Whether substances can be made to penetrate through the outer skin, this being whole and entire, is still a *sub judice* question in physiology, and until this question be satisfactorily determined, it is not perhaps possible to decide with certainty respecting the alleged virtues of materials, whether applied in a liquid or vaporous form to the surface of the body, for the counteraction of diseased states. To suppose for a moment, that the notion of medicated baths is founded in error, and is a mere expedient of empiricism, will be to excite suspicion in many readers; but every one must be aware, that faith, in different medical processes and articles, often gains for a time a very firm footing upon very slippery ground, and that maladies are not seldom cured by the unassisted influence of the imaginative power. That the bulk of the body or of a limb, is encreased by immersion in hot water or vapour, is a fact to which we have already adverted; but it has also been said, that this encrease of size is possibly attributable to other principles, than that of the actual entrance of the fluid from without, so that this *circumstance in itself would prove nothing; if, by the same* process, the *weight* of the body were increased, we should seem to approach somewhat nearer to certainty on the point in dispute. We shall again, therefore, almost immediately refer to this particular; but first, it may be right to state one or two of the leading arguments that have been adduced in favour of an imbibing power possessed by the surface of the body. That the system may be impregnated in an unequivocal manner, by the application externally of materials, as in the case of mercurial unguent, is a fact sufficiently established; and the mere *laying* some substances on the skin, even without friction, has been supposed in certain cases to give decided proofs of internal effect. It is likewise well known that thirst is often times alleviated by bathing the body in water; a practice to which sailors in long voyages often have recourse, when their supply of fresh water fails them. Dr. Macard, in his *Treatise on Bathing*, assumes this is so satisfactory in proof of absorption by the skin, that he says, "no naturalist will rate the sufferings of Tantalus very highly." The effect by others, however, who disbelieve in cutaneous absorption, has been attributed partly to the grateful sensations produced by immersion, and partly to the sympathetic relations, which the organs concerned in thirst have with the actions of the skin.

⁂ This Essay on Bathing will be concluded in our next number.

### TO CORRESPONDENTS.

Several Correspondents have expressed a wish, that the space now occupied by 'Chess Problems' should be devoted to Medical Subjects We are anxious, as far as possible, to consult the taste of our Subscribers. It must have been observed that we have already discontinued Theatrical Criticism, and other subjects of a Miscellaneous nature, perhaps to the dissatisfaction of some Readers, but we are ready to acquiesce in the above-mentioned suggestion, unless we receive such a number of Communications from other Correspondents, as may induce us to believe that a considerable portion of our Readers wish the articles on Chess to be continued.

# THE IRISH MEDICAL ASSOCIATION AND POOR-LAW REFORM IN IRELAND.

THE following circular letter has been sent to all Irish Members of Parliament:—

Royal College of Surgeons, Dublin,
23rd day of December, 1901.

To ———, M.P. for ———

DEAR SIR,—The sensational death of Dr. Smyth of Burton Port, a member of the Irish Poor-law Medical Service, also of this Association, whose heroic death in the discharge of his duty to the poor of his district has aroused public sympathy, induces the Association once more to direct the attention of Parliamentary representatives of Ireland to the many disadvantages under which the officers of the service have for so many years laboured They hope that the subject of Poor law reform may engage at the earliest possible moment the earnest attention of our legislature

It is beyond all doubt or contention that the Irish Poor-law medical service is insufficiently paid that the pittance, varying between £33 and £80 per annum, still given to medical officers in many unions bears no relationship to the areas of the dispensary districts, nor to the population contained therein, nor to the number of persons entitled to gratuitous attendance

The Association now approaches you, not alone with the view of enlisting your sympathy and interest in the welfare of its members many of whom in the past have rendered up their lives in the same heroic manner as Dr Smyth has done, but with the object of directing your attention to the following facts of great and vital importance to the health and, it may be added, the prosperity of the people of Ireland —

(a) The prevention and control of epidemics in Ireland are duties for the due performance of which the public are almost wholly dependent upon the Poor law medical officer The rate at which this official is paid (in most cases about £5 per annum) for this all important office connected with the public health is wholly inadequate to ensure its efficient discharge and is almost ludicrous when compared with similar salaries paid to English medical officers for less difficult duties of a similar character

(b) The great cost of advanced medical education and its consequent increase in value with little or no prospect of an adequate return is one of the causes of the yearly emigration of the best, ablest, and more healthily ambitious of our young Irish doctors who carry with them to our colonies, or to foreign lands those abilities which might be of such service to their fellow-countrymen at home

This is a serious matter affecting the health and welfare of the public and may become more acute if redress of these grievances is longer withheld

It cannot be expected that able medical men will continue in the future to enter a service where there is no hope of advancement and where no facilities are given for the study of those new subjects in connexion with medical science which are yearly becoming of more and more interest and utility in the alleviation of the sufferings of mankind especially when they are offered as an inducement a less wage than is given to a tradesman or a skilled mechanic

The Irish Medical Association could mention if necessary, many disabilities and hardships under which its members have at all times struggled to discharge their duty to the poor Suffice it to say that no thinking person can approach the subject of Poor law reform in Ireland without being driven to the conclusion that our grievances are real and that their redress must mean an enormous advantage to the sick poor

With these facts before you we venture to solicit your coöperation by either yourself introducing a measure of necessary reform or in furthering legislation to that end

We call upon you to provide for your own poor sick and dying fellow countrymen a physician of the very best skill and ability, not one rendered incompetent by age or bodily infirmity—not one whose declining years are soured and embittered by the thought that he must leave those dependent on him unprovided for when death overtakes him in this service of danger, hardship and distress to which the Poor law medical officer has devoted his life He must at all times be prepared to face disease and death and it is not unreasonable to ask that those who are responsible should insure that he be physically able to meet it as nobly as Dr Smyth has done

The yearly stream of emigration from our shores the yearly increase of our insane population, are subjects that must alarm our social reformers and all interested in the welfare of Ireland The housing of the very poor the sanitary education of the bulk of our people, are also matters which should be dealt with by the Legislature in its responsibilities for the betterment of our country

These weighty matters should, in the opinion of the Irish Medical Association find a place in any measure dealing with the reform of the Poor law system of Ireland

RICHARD R LEEPER F R C S Irel , Honorary Secretary

# ASYLUM REPORTS

*Saint Andrew's Hospital for Mental Diseases, Northampton (Annual Report for 1900)* —The average number of patients resident during the year was 378 and comprised 184 males and 194 females During the year 98 patients were admitted, of whom 41 were males and 57 females Of these three males and 13 females were re admissions The hospital is intended for the reception of insane patients of the middle and upper classes Mr Joseph Bayley, the medical superintendent, states in his report that the female wing of the hospital has been constantly full throughout the year, but that on the male side there has been room in the wards recently altered During the year 50 patients were discharged as recovered, or 13 2 per cent of the average number resident Of the deaths during the year, which amounted to 24 or 6 5 per cent of the average number resident, two were due to cancer, two to mania, two to phthisis, three to melancholia, three to general paralysis, six to senile decay, and the rest to other causes There has been no case of infectious fever and the sanitary condition of the hospital has been satisfactory during the year The seaside house at Deudraeth Castle has been occupied for the greater part of the year "115 patients have gone there "I hope," writes Mr Bayley, "still further to increase the number of patients who will have the benefit of a change to the seaside now that the governors have purchased Bryn y-Neuadd Hall, Llanfairfechan, which is much nearer and more easily reached than Castle Deudraeth was" Every endeavour has been made to get the patients to occupy themselves on the farm and gardens and in the shops, and with satisfactory results The average numbers employed daily comprise 73 males and 57 females The Commissioners in Lunacy state in their report that the highest praise can be given with respect to the state in which they found the institution everywhere, and that the entries in the medical case-books are made *fully* and up to date At a later visit the Commissioners record that the hospital is in excellent order, that the wards on the male side are all that can be desired, and that when the projected improvements of the wards in the female division are effected this division will fully equal the male The Committee of Management state in their report that the payments for patients are 42*s* and 25*s* a week per head respectively, according to the class in which the patients are to be placed They have recently purchased Bryn y Neuadd Hall, a mansion situated in a park of 180 acres, close to the sea, and affording accommodation for at least 40 patients Various improvements have been made with regard to electric lighting and the arrangements for boilers, heating, and stores There has been no change in the staff of officers

# VITAL STATISTICS.

### HEALTH OF ENGLISH TOWNS

IN 33 of the largest English towns 6549 births and 4233 deaths were registered during the week ending Dec 21st, 1901 The annual rate of mortality in these towns, which had declined from 21 3 to 18 5 per 1000 in the four preceding weeks, rose again to 19 3 In London the death-rate was 18 7 per 1000, while it averaged 19 6 in the 32 large provincial towns The lowest death rates in these towns were 14 3 in Portsmouth, 15 1 in Croydon, 15·9 in Halifax, 16 3 in Norwich, and 16 4 in Hull , the highest rates were 22 1 in Liverpool, in Manchester, and in Salford, 22 2 in Gateshead, and 32 6 in Oldham The 4233 deaths in these towns included 441 which were referred to the principal zymotic diseases, against 433, 418, and 414 in the three preceding weeks , of these 441 deaths 138 resulted from measles, 78 from whooping cough, 76 from diphtheria, 49 from diarrhœa, 39 from scarlet fever, 37 from "fever" (principally enteric), and 24 from small pox The lowest death rates from these diseases were recorded in Portsmouth, Bristol, Nottingham, Bradford, Hull, Gateshead, and Newcastle; and the highest rates in Bolton, Salford, Oldham, Blackburn, and Preston The greatest mortality from measles occurred in Plymouth, Norwich, Manchester, Oldham, Blackburn, Preston, and Halifax , from whooping cough in Bolton, Salford, Burnley, and Sunderland , from "fever" in Salford , and from diarrhœa in Burnley The mortality from scarlet fever showed no marked excess in any of the large towns The 76 deaths from diphtheria included 34 in London eight in Liverpool, three in Croydon, three in Cardiff, three in Leicester, three in Manchester, and three in Salford 24 fatal cases of small pox were registered in London, but not one in any other of the 33 large towns There were 538 cases of small pox under treatment in the Metropolitan Asylums hospitals on Saturday, Dec 21st, against 427, 474, and 506 on the three preceding Saturdays , 161 new cases were admitted during the week, against 123, 170 and 134 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 3353 to 3241 at the end of the four preceding weeks, had further declined to 3033 on Saturday, Dec 21st ; 247 new cases were admitted during the week, against 320, 376, and 327 in the three preceding weeks The causes of 53, or 1 3 per cent , of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner All the causes of death were duly certified in West Ham Bristol Leicester, Salford, Leeds, and other smaller towns , the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Blackburn, Sheffield, and Gateshead.

In 33 of the largest English towns 4565 births and 4628 deaths were registered during the week ending Dec. 28th. 1900 The annual rate of mortality in these towns, which had been 18 5 and 19 3 per 1000 in the two preceding weeks, further rose last week to 21·1. In London the death-rate was equal to 20·6 per 1000, while it averaged 21·4 in the 32 large provincial towns. The lowest death-rates in these towns were 14·3 in Derby, 17·2 in Norwich, 17·4 in Halifax, 18·1 in Bradford, and 18·3 in Birkenhead; the highest rates were 23·5 in Birmingham, 24·2 in Salford, 25·2 in Huddersfield, 26·3 in Burnley, and 29·3 in Manchester. The 4628 deaths in these towns last week included 485 which were referred to the principal zymotic diseases, against 418, 414, and 441 in the three preceding weeks; of these 485 deaths 198 resulted from measles, 84 from whooping-cough, 71 from diphtheria, 45 from scarlet fever, 37 from diarrhœa, 27 from small-pox, and 23 from "fever" (principally enteric) The lowest death-rates from these diseases last week were recorded in Plymouth, Portsmouth, Derby, and Bradford; and the highest rates in Norwich, Burnley, Preston, and Leeds. The greatest mortality from measles occurred in Norwich, Manchester, Salford, Oldham, Preston, and Huddersfield; and from whooping-cough in Liverpool, Burnley, and Leeds. The mortality from scarlet fever, from "fever," and from diarrhœa showed no marked excess in any of the 33 towns. The 71 deaths from diphtheria in these towns included 28 in London, seven in Burnley, five in Birmingham, four in Birkenhead, four in Liverpool, and four in Sheffield. 25 fatal cases of small-pox occurred in London and two in West Ham, but not one in any other of the 33 large towns There were 665 small-pox cases under treatment on Saturday last in the Metropolitan Asylums hospitals, against 474, 506, and 538 on the three preceding Saturdays; 225 new cases were admitted during the week, against 170, 134, and 161 in the three preceding weeks The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 3241, 3188, and 3033, at the end of the three preceding weeks, had risen again to 3137 on Saturday, Dec. 28th; 263 new cases were admitted during the weeks, against 377, 331, and 320 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 470, 427, and 393 in the three preceding weeks, rose again to 425 last week, but were 176 below the corrected average weekly number. The causes of 86, or 1·9 per cent., of the deaths in the 33 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Salford, Leeds, and in 11 other smaller towns; the largest proportions of uncertified deaths were registered in Swansea, Birmingham, Liverpool, Blackburn, Preston, Sheffield, and Sunderland.

### HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·5 and 20·7 per 1000 in the two preceding weeks, further rose to 21·5 during the week ending Dec. 21st, 1901, and was 2·2 per 1000 in excess of the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 13·4 in Leith and 17·0 in Paisley to 27·7 in Dundee and 31·5 in Perth. The 684 deaths in these towns included 30 which were referred to measles, 17 to diarrhœa, 10 to whooping-cough, seven to "fever," three to diphtheria, and two to scarlet fever. In all, 69 deaths resulted from these principal zymotic diseases in the week, against 72 and 70 in the two preceding weeks. These 69 deaths were equal to an annual rate of 2·2 per 1000, which was 0·2 above the mean rate from the same diseases in the 33 large English towns. The fatal cases of measles, which had been 23 and 28 in the two preceding weeks, further rose to 30, of which 22 occurred in Glasgow and seven in Dundee. The deaths from diarrhœa, which had declined from 30 to 15 in the four preceding weeks, rose again to 17, and included seven in Glasgow, five in Dundee, two in Aberdeen, and two in Greenock. The fatal cases of whooping-cough, which had been four and nine in the two preceding weeks, further rose to 10, of which seven were registered in Glasgow. The deaths referred to different forms of "fever," which had been nine, 10, and 11 in the three preceding weeks, declined again to seven and included six in Glasgow. The three fatal cases of diphtheria corresponded with the number in the preceding week, and included two in Dundee. The deaths referred to diseases of the respiratory organs in these towns, which had been 186, 180, and 165 in the three preceding weeks, rose again to 188, and were 77 in excess of the number in the corresponding period of last year. The causes of 28, or more than 4 per cent., of the deaths in these eight towns were not certified.

The annual rate of mortality in the eight Scotch towns, which had been 20·5, 20·7, and 21·5 per 1000 in the three preceding weeks, further rose to 22·6 per 1000 during the week ending Dec. 28th, 1901, and showed an excess of 1·5 over the mean-rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 14·1 in Leith and 17·4 in Perth to 24·2 in Dundee and 24·8 in Glasgow. The 720 deaths in these towns included 36 which were referred to measles, 23 to diarrhœa, eight to diphtheria, seven to scarlet fever, seven to whooping-cough, and five to "fever." In all 86 deaths resulted from these principal zymotic diseases last week, against 72, 70, and 69 in the three preceding weeks. These 86 deaths were equal to an annual rate of 2·7 per 1000, which was 0·5 above the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of measles, which had been 23, 28, and 30 in the three preceding weeks, further rose last week to 36, of which 22 occurred in Glasgow, 10 in Dundee, and four in Greenock. The deaths from diarrhœa, which had been 15 and 17 in the two preceding weeks, further increased to 23 last week, and included 15 in Glasgow, four in Dundee, two in Edinburgh, and two in Aberdeen. The fatal cases of diphtheria which had been three in each of the two preceding weeks, increased last week to eight, of which three were registered in Dundee and three in Aberdeen, The deaths from scarlet fever, which had been nine, four, and two in the three preceding weeks, rose again to seven last week, and included four in Glasgow and two in Greenock. The fatal cases of whooping cough, which had been four, nine, and 10 in the three preceding weeks, declined again last week to seven, of which six occurred in Glasgow. The deaths referred to different forms of "fever," which had been 10, 11, and seven in the three preceding weeks, further declined to five last week, and included three in Glasgow. The deaths from diseases of the respiratory organs in these towns, which had been 165 and 188 in the two preceding weeks, declined again last week to 166, but showed an excess of 45 over the number in the corresponding period of last year. The causes of 27, or nearly 4 per cent., of the deaths in these eight towns last week were not certified.

### HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 18·8, 20·2, and 17·9 per 1000 in the three preceding weeks, rose again to 25·9 during the week ending Dec. 21st, 1901. During the previous four weeks the death-rate had averaged 20·7 per 1000, the rates during the same period being 19·3 in London and 19·9 in Edinburgh. The 186 deaths belonging to Dublin registered during the week under notice were 57 in excess of the number in the preceding week, and included 15 which were referred to the principal zymotic diseases, against seven, six, and one in the three preceding weeks; of these, four resulted from whooping-cough, four from "fever," three from diphtheria, two from scarlet fever, and two from diarrhœa. These 15 deaths were equal to an annual rate of 2·1 per 1000, the zymotic death-rates during the same period being 2·1 in London and 0·2 in Edinburgh. The mortality during the week from fever, from whooping-cough, from diphtheria, and from scarlet fever was considerably in excess of that recorded from each of these diseases in any of the three preceding weeks. The deaths from diarrhœa, which had been four, two, and none in the three preceding weeks, rose again to two The 186 deaths in Dublin included 28 of children under one year of age and 42 of persons aged upwards of 60 years; the deaths both of infants and of elderly persons showed a marked excess over the numbers recorded in the preceding week. Eleven inquest cases and 10 deaths from violence were registered, and 63, or more than a third, of the deaths occurred in public institutions. The causes of 10, or more than 5 per cent, of the deaths in Dublin were not certified

The death-rate in Dublin, which had been 17·9 and 25·9 per 1000 in the two preceding weeks, further rose to 26·8 per 1000 during the week ending Dec. 28th, 1901. During the 13 weeks ending on that date the death-rate averaged 21·7 per 1000, the rates during the same period being 18·4 in London and 18·0 in Edinburgh The 193 deaths of persons belonging to Dublin registered during the week under notice showed an excess of seven over the number in the preceding week, and included 10 which were referred to the principal zymotic diseases, against six, one, and 15 in the three preceding weeks; of these five resulted from "fever," three from diarrhœa, and two from diphtheria. These 10 deaths were equal to an annual rate of 1·4 per 1000, the zymotic death-rate during the same period being 2·1 in London and 0 8 in Edinburgh. The mortality both from "fever" and from diarrhœa slightly exceeded that recorded in the preceding week, while the deaths from diphtheria showed a slight decline. The 193 deaths in Dublin last week included 26 of children under one year of age and 63 of persons aged upwards of 60 years; compared with the numbers in the preceding week, the deaths of infants showed a decline of two, while those of elderly persons were 21 in excess Three inquest cases and seven deaths from violence were registered; and 71, or nearly three-eighths, of the deaths occurred in public institutions. The causes of 13, or nearly 7 per cent., of the deaths in Dublin last week were not certified.

# THE SERVICES.

### ROYAL ARMY MEDICAL CORPS.

SURGEON-GENERAL A. F. PRESTON, who has been acting as Director-General of the Army Medical Service, has resumed the post of Principal Medical Officer in Ireland on being relieved at the War Office by Surgeon-General W. Taylor.

Major J. R. Stuart is transferred from the Deesa district to the Bombay district, and Major A. P. H. Griffiths from the Mhow district to the Deesa district and appointed to the medical charge of the Station Hospital, Ahmedabad. Major F. S. Le Quesne, V.C., is appointed for duty with the 3rd Battalion York and Lancaster Regiment.

### VOLUNTEER CORPS.

*Artillery:* 1st Dorsetshire (Southern Division, Royal Garrison Artillery): Surgeon-Captain A. Kinsey-Morgan to be Surgeon-Major. *Rifle:* 1st Volunteer Battalion the Lincolnshire Regiment: Arthur Stanley Green, to be Surgeon-Lieutenant.

### DEATHS IN THE SERVICES.

Henry James Penny, F.R.C.S. Eng., I.M.S. (retired), at his residence at Taunton on Dec 22nd, 1901, in his eighty-sixth year. The deceased belonged to an old Taunton family and qualified M.R.C.S Eng. in 1841; being admitted F.R.C.S. Eng. in 1856. Shortly after qualifying he entered the Indian Medical Service, retiring about 30 years ago with the rank of deputy inspector-general of hospitals. Mr. Penny then returned to Taunton.

### ROYAL NAVAL HOSPITAL, HASLAR.

The session of special instruction at the Royal Naval Hospital, Haslar, terminated on Dec. 21st, 1901, when the following surgeons received appointments to H.M. ships. Prizes were awarded to Surgeon A. T. Gailleton (silver edal and books) and Surgeon T. B Shaw (microscope). rgeons in order of seniority:—

| Name. | Marks | Name. | Marks. |
|---|---|---|---|
| T. B. Shaw ... ... .. | 6014 | G. S Davidge .. ... ... | 5121 |
| A. T. Gailleton ... ... | 5731 | P. T. Nicholls ... ... ... | 4997 |

L. Crosbie (entered under special Admiralty regula-ons).

### SOUTH AFRICAN WAR NOTES.

Civil Surgeon Reid is reported severely wounded and ivil Surgeon Wright slightly wounded at Tweefontein Dec. 25th).

Lieutenant J. S. Twigg, R A M.C., is reported killed on ec. 22nd between Clanwilliam and Calvina. He joined e service in 1900.

Civil Surgeon (attached R.A.M.C.) W. E. Jones is reported riously ill.

### VITAL STATISTICS OF THE INDO-DUTCH ARMY.

The information set forth in the following table is interest- g, but its value is considerably lessened for the purposes of mparison because the system upon which the statistics are arranged is somewhat at variance with that adopted in India and in our tropical colonies.

*Indo-Dutch Army.*

| — | 1898. | | 1899. | |
|---|---|---|---|---|
| | Europeans. | Natives | Europeans. | Natives. |
| Average strength ... ... | 16,318 | 24,963 | 16,389 | 24,137 |
| Remained per 1000 on Jan. 1st... ... . .. | 115 | 66 | 123 | 74 |
| Admitted per 1000 .. | 1,960 | 1,276 | 1,727 | 1,213 |
| Discharged ,, ,, ... | 1,904 | 1,227 | 1,682 | 1,152 |
| Invalided ,, ,, ... | 39 | 25 | 49 | 52 |
| Died ,, ,, ... | 13 | 10 | 10 | 11 |
| Remaining per 1000 on Dec 31st ... ... .. | 119 | 80 | 109 | 72 |

Among the European deaths 36 took place out of hospital in 1898 and 30 in 1899, the causes alleged being as follows: fever, three; beri-beri, one; apoplexy, two; delirium tremens, two; paralysis of the heart, two; enteritis, one; peritonitis, one; hæmorrhage, one; gunshot wound (murder or accident), four; killed in action, four; died from wounds, six; exhaustion, two; drowning, 16; hanging, one; crushing, four; "fear," one; burning, six; suicide, 10; cause unknown, two. Of the deaths in hospital among Europeans, 147 are ascribed to paludism, 13 to typhoid fever, three to cholera, eight to beri-beri, one to tetanus, three to pyæmia, three to syphilis, five to debility, seven to affections of the nervous system, seven to affections of the lungs, four to pulmonary phthisis, four to heart disease, five to palpitation, four to liver affections, 54 to other digestive diseases, five to venereal complaints, two to skin diseases, and 36 to other affections, the total for the biennium being 311.

### SOUTH AFRICAN AFFAIRS.

Although we are not, of course, directly concerned with the progress of any purely military occurrences at the seat of war in South Africa otherwise than as these must affect the medical services by tending to prolong the war, it is impossible to pass over unnoticed the losses sustained by the British force at Tweefontein, owing to De Wet's fierce and determined attack. The recent disaster at Tweefontein closely resembled that which happened at Majuba Hill in 1881; essentially the same plan and tactics were successfully adopted by the Boers with very similar results on both occasions. In addition to the long list of casualties at Tweefontein, which may happily be regarded as an exceptional occurrence, there have been several minor engagements in which the British troops have successfully surprised and attacked laagers and made more or less important captures with relatively small loss to themselves. The latest sick returns are satisfactory on the whole. They show much the same amount and nature and causes of disease as heretofore. The management of the concentration camps has been taken over by Lord Milner and his civil staff. The camps are gradually being broken up with good results as far as the prevalence and amount of sickness are concerned.

### THE INDIAN MEDICAL SERVICE AND THE REPORT OF MR. BRODRICK'S COMMITTEE.

As might be expected much interest and curiosity have arisen as to how the changes foreshadowed in the report of Mr. Brodrick's Committee on the Royal Army Medical Corps will be received and carried out by the Indian Government and what effect the new scheme will have upon the Indian Medical Service Any changes and improvements in the British Medical Service will have to be adapted and made applicable to the Indian Medical Service which, it must be borne in mind, has to meet numerous civil as well as military requirements in that country. It is pretty well known that the subject has been occupying the attention of the officials at Simla and it is believed that the Indian Government has been drawing up some scheme of proposals for submission to the Secretary of State.

### THE POST OF DIRECTOR-GENERAL OF THE INDIAN MEDICAL SERVICE

The recent death of Surgeon-General R. Harvey at Simla causes a vacancy in the appointment of Director-General of the Indian Medical Service, and the Government of India, in addition to other more or less urgent matters of a military medical nature now engaging its attention, will have to select a successor to the late Surgeon-General in that post. The appointment is a very important and responsible one and it is needless to add that the selection of an able and experienced medical officer is required to fill it well. Up to the present time no official announcement has been made as to the name of the officer to be appointed by the Government.

# Correspondence.

"Audi alteram partem."

## FIRST AID FOR PRIMARY HÆMORRHAGE: THE WRONG TEACHING GIVEN TO AMBULANCE CLASSES.

*To the Editors of* THE LANCET.

SIRS,—The practical outcome of notions stated to have been acquired at ambulance classes as regards the first aid for primary hæmorrhage has come under my notice in many cases admitted under my care at the Westminster Hospital. The result has been to increase, in some cases very largely, the amount of bleeding over and above that which would have occurred had no such first aid been applied.

It would appear that instruction is given in such classes which is not informed by the actual requirements of practical surgery. Those who have attended such classes seem to have got the idea fixed in their minds that they must always apply some sort of an improvised tourniquet to the limb above the bleeding point, whilst they have not learned in these classes the necessity of applying pressure directly to the wound. The uninstructed individual, retaining his presence of mind, might apply pressure directly and so in the great majority of cases successfully control the hæmorrhage until the arrival of medical help. Those who have been wrongly instructed as regards this first aid do not understand that by applying an improvised tourniquet above the bleeding point with a degree of tightness short of absolutely controlling all the circulation they directly cause venous obstruction and raise the venous tension so as to approach that in the corresponding arteries. It is thus easy for a large part of the patient's blood to be forced out of a very small wound simply as the result of the application of such a tourniquet.

Instances of entirely unnecessary hæmorrhage caused in this way have been seen by me most frequently in cases of ruptured varicose veins, superficial lacerated wounds, and compound fractures. The most absurd instances are the cases of ruptured varicose veins and varicose ulcers, for the elevation of the limb or the slightest pressure with the finger would have sufficed to stop the bleeding. To quote one. A man struck his leg against the corner of a box, causing a minute puncture, such as might be made by a tenotome, in a varicosity behind the knee. His fellow workmen tied a handkerchief round the thigh sufficiently tight to cause venous obstruction, but did not apply any pressure over the bleeding spot. This was what they said they had been taught to do. By the time the patient reached the hospital he was acutely anæmic. I saw him immediately on admission; he was infused with saline fluid and recovered, but a month later he was still anæmic. There was no further bleeding from the puncture directly the constricting handkerchief was removed.

Quite recently two men were admitted to the hospital with superficial lacerated wounds about the elbow. With other men they had been lifting a large plate of glass which suddenly broke in pieces and cut them. A bandage was at once applied in each case above the wound, from which they continued to bleed severely and were both very anæmic on reaching the hospital. A careful examination under an anæsthetic showed that only the superficial veins about the elbow had been divided. Neither the brachial artery nor its branches had been injured. The effect of the bandages applied above the wounds had been to cause a forced venesection in each case, rendering infusion necessary. The anæmia markedly delayed healing. Similar altogether unnecessary loss of blood has occurred in cases of compound fractures. In the following one I believe the improvised tourniquet to have been the direct cause of the patient's death. A strong young man, aged 20 years, sustained a compound fracture of the lower third of the femur with protrusion of the upper fragment. There was no further injury, as the subsequent post-mortem examination showed; the popliteal artery and vein, also the anastomotic artery, were uninjured. Only the muscles of the lower third of the thigh, including terminal branches of the profunda artery and vein, were lacerated. Immediately after the accident a handkerchief was tied round the thigh above the wound and the man was carried straight to the hospital. I happened to see him as he was brought in. He was then absolutely anæmic; his blood had saturated all the clothes of the lower limb. The half-tight constricting handkerchief was removed, and no blood escaping a pad and firm bandage were applied over the wound. He was then quickly infused with six pints of saline fluid, stimulating rectal enemata, injections, and drinks being also tried, but he died in about an hour. The post-mortem report says that the cadaver was exsanguine. Such a compound fracture without complications in a healthy young man is, of course, quite consistent with recovery.

The application of direct pressure is the proper first aid in all cases. The vast majority of such cases are superficial lesions of veins and small arteries. Supposing the much rarer instance of hæmorrhage from a large artery, the wound must be directly pressed upon or too much blood will be lost whilst a tourniquet is being improvised. First aid has been successfully rendered—e.g., by army medical officers—either by pressure with the bare finger or along with the interposition of a plug, directly upon the cut artery. It must surely tend to confusion if in an elementary ambulance class the teacher enters upon the subject of the circulation and the compression of the main arteries. One hears about ladies being taught to compress the femoral artery of a little boy, but are they told at the same time how difficult this would be to accomplish in an excited and restless adult—a muscular man, or fat woman?

When told to use improvised tourniquets is it explained to the class how tightly a surgeon has to apply an elastic band even on an unconscious patient to control fully the circulation? Supposing a tourniquet to be applied really tightly to a conscious patient, such pain is caused that the patient will wriggle and try to push the band a little lower down the limb, so slackening it. It may be argued that pressure should first be applied to the bleeding point and then an improvised tourniquet made to encircle the limb above. The most probable result, say in the case of deep hæmorrhage from a puncture or bullet-wound, will be to raise venous tension in the limb, and the blood being prevented from escaping by the wound it becomes widely extravasated into the limb and this may lead to gangrene and amputation. In conclusion, therefore, I desire to point out that instruction in first aid for primary hæmorrhage which does not put direct pressure upon the wound forward as the one and only method, to be kept up until medical help comes, fails in its object. Secondly, the instruction as to improvised tourniquets shows a lack of acquaintance with the actual circumstances intended to be met. The result is the production of an unnecessary, often dangerous, amount of hæmorrhage owing to venous obstruction whilst the main artery still continues to carry blood to the limb. In the cases which have fallen under my notice where an improvised tourniquet has been used much more blood has been lost than would have taken place had no such "first aid" been given.

I am, Sirs, yours faithfully,

WALTER G. SPENCER,

Dec. 30th, 1901. Surgeon to the Westminster Hospital.

## THE CONSULTANT AND THE GENERAL PRACTITIONER.

*To the Editors of* THE LANCET.

SIRS,—As a subscriber to THE LANCET for over 30 years will you allow me a small space in your valuable journal for the inclosed, with your opinion upon the same?

A patient of mine under treatment for an attack of laryngeal catarrh came to me on Friday, Nov. 22nd, at which time he was steadily improving; he also seemed perfectly happy about the way he was going on. On the Monday following he called again, bringing for me a letter. He told me that he had consulted a Dr. ——, a specialist. He informed me that he had told Dr. —— that he was under my care; also that he had come to him without my knowledge, or desire, or sanction. With this information Dr. —— saw him. He asked what my treatment had been and then suggested a line of treatment for *me* to carry out, when I had neither desired nor asked, nor sought his help I declined to receive his communication, contending that no consultant ought to see a patient under treatment without first receiving a card of introduction or some kind of communication from the general practitioner who has the case in hand My contention, further, is that such behaviour is not in harmony with the dignity of an honourable profession and would not be tolerated for one moment in her sister profession, the law A "consultant" is no longer a "consultant' but thereby enters the open competitive market with the general practitioner and all trust between two branches of an honourable profession is lost

I am, Sirs, yours faithfully,
F MONTAGUE MILLER

Upper Clapton, N E , Nov 30th 1901

## ENLIGHTENED ST LUCIA

*To the Editors of* THE LANCET

SIRS,—The efforts made by our smart, go ahead but underpaid colonial governments, and their smart, go ahead but underpaid sanitary services, to comprehend a new idea—namely, the fact that several diseases are carried by mosquitoes—have afforded during the last three years an intensely amusing spectacle, quite worthy of the Turkish Empire That progressive island, St Lucia, is a case in point. Malaria accounts for more than a fifth of the admissions, even into the civil hospitals, filariasis is common, and yellow fever is an occasional visitant Had the island belonged to the Americans it would have no doubt, long ago been treated to the anti-mosquito operations which have produced such brilliant results in Havana , but unfortunately it is only a British colony It possesses, however, two young medical men, Mr O Galgey and Dr St George Gray, who are trying to rouse the sleeping ox In the Hospitals Report for 1900[1] they have actually described the existence of anopheles pools in the island and have even suggested that anti mosquito measures "might be applied with beneficial effect to Castries and its environs," while Dr Gray has gone to such lengths as to recommend the use of mosquito nets

We can well understand the horror and amazement of the St Lucians at such revolutionary proposals That great paper, the *Voice of St Lucia*, has at once bravely confronted the medical incendiaries In its issue of Nov 14th it devotes several columns of wit and wisdom to their discomfiture Dr Gray is recommended (as Keats was) "to stick to the scalpel and put away the pen " We are told that there is nothing "more likely to discredit the mosquito theory than the special pleading of such advocates as these " Lastly, in the midst of some of the worst trash I have ever seen printed even in a colonial newspaper, it insinuates that Dr Gray, who has evidently been working hard at his subject from a proper sense of his duties, is prompted by pecuniary motives and *wishes to be paid* for disclosing the locality of the anopheles pools found by him "We are sure a small grant from public funds ' says the *Voice of St Lucia*, "would transfer this valuable information from the doctor's mind to the public domain "

The reports of Dr Gray and Mr Galgey are covered in the same official publication by a letter from Mr O Dennehy, the colonial surgeon Mr Dennehy s remarks are not very intelligible but they scarcely give to his subordinates the support which we should expect from the head of their profession in the colony All he does is to venture upon a few observations of a discursive scientific nature "The mosquito and its parasites are now beyond question proved to be the bane of tropical life," he says, "but the origin of the parasite has yet to be shown " I do not think anyone will in the least understand what this means Again, referring to the prevalence of culex fasciatus in the island, he says "Let us hope there is some mistake or false report here as we have not had a case of yellow fever for several years past '—as if yellow fever should exist wherever culex fasciatus exists that is all over the tropics And this is all , not a hint of any practicable recommendations for removing mosquito borne disease in the island

The questions everyone will ask are—Why were not the anopheles pools located two years ago? Why were not drainage or house protection or other measures adopted long since ! I suppose that there is some paid sanitary authority in the place ! Why, then, does it not do its duty ? If measures against malaria can be carried on in Lagos, Sierra Leone, New York, and Havana, why not in St Lucia ?

The truth is that the Home Government should change its policy in this matter It is useless to expect the local authorities in the majority of our tropical possessions to take any initiative as regards mosquito borne disease Frankly, they evidently do not wish to be put to the trouble The Home Government should send out explicit instructions or should take the example of the Liverpool Tropical School and despatch an expert to each colony for the express purpose of superintending anti malaria measures It is absurd to talk about want of funds If a few Liverpool merchants can afford to despatch a dozen men on such errands, as they have done, surely the British empire can afford to do the same thing It is time that more businesslike measures be adopted in this matter In the meantime I fancy that the efforts of Dr Gray and Mr Galgey will receive more appreciation in this country than they appear to be receiving in Lotos Island I should like to add, however, that we must all fully recognise the great assistance which is being given to this cause by Mr Chamberlain, Dr P Manson, and the governors of the West African colonies

I am, Sirs, yours faithfully,
RONALD ROSS F R C S Eng , D P H Lond , F R S

Liverpool School of Tropical Medicine, Dec 16th 1901

P S —Yellow fever has just broken out in St Lucia It will be interesting to see what measures the local authorities will take against it

## THE GODDESS OF SMALL-POX

*To the Editors of* THE LANCET

SIRS,—In the discussion upon small pox at the Hunterian Society reported in THE LANCET of Dec 28th 1901, it was mentioned that in India there was a goddess called ' Amma, ' or mother I have at this moment in front of me a silver plated copper figure of this very "Amma " goddess of small pox She is about two inches high, a stout, middle aged lady, kneeling in elaborately chased robes, which form a base about three inches in diameter Her face is quite clear and clean cut but the curious point about the idol is that there fits over the face and head a detachable mask and guilded cap representing another face and head prodigiously swollen and deeply pitted with pocks I shall be pleased to show it to anyone interested or to lend it for exhibition to any medical society that will guarantee its safety

I am, Sirs, yours faithfully,
40 Camden square N W , Dec 31st 1901 JOHN F J SYKES

## THE SUPRAPUBIC OPERATION IN ENCYSTED CALCULUS

*To the Editors of* THE LANCET

SIRS —In the Bradshaw Lecture delivered at the Royal College of Surgeons of England on Dec 11th, 1901, and published in THE LANCET of Dec 14th (p 1647) Mr T R. Jessop describes three interesting cases of encysted stone in the bladder in each of which the stone was successfully removed by the suprapubic operation The lecturer informs us that cases of this kind are very uncommon That they are so is amply proved by the fact of his having met with only three in his long and wide experience I happen to have seen a case of this description while practising in Australia a few years ago and as it has not been previously recorded and in respect of the size of the stone is somewhat exceptional, it may not be out of place to mention it in this connexion

The patient was a man, aged 68 years, a gold digger working on an alluvial field near Cowra, N S W , where I was then residing He came to me in October, 1895 complaining of frequency of micturition, great pain and difficulty in passing his urine, and occasional slight hæmorrhage He appears to have had symptoms of stone for six years, for during the first half of that period, so he informed me, he had been sounded for stone by well known surgeons in Melbourne and in Sydney on some half dozen occasions but at that time no stone could be detected He had then returned to the goldfields, where he remained until his sufferings became unendurable During the three years that had elapsed since the last examination the stone had evidently increased greatly in size, for when I saw him the sound came in contact with a stone immediately it entered the bladder and could not easily be passed around and beyond it. With the finger in the rectum a large calculus could be felt directly above the prostate, and its size and shape were roughly ascertained By using the sound in the bladder in conjunction with the examination per rectum the more important information was gained that the stone was firmly fixed in the floor of the bladder, for it could not be rolled over or moved from its position in relation to the prostate by pressure either from the finger behind or from the sound in front.

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[1] St. Lucia Gazette, Castries, Nov 8th, 1901

Under the circumstances it was clear that the only way of removing the stone was by the suprapubic operation, and this the patient had no hesitation in submitting to for his sufferings were undoubtedly very great I performed the operation a few days later at the Cowra District Hospital and removed a calculus weighing a trifle over four and a quarter ounces. The stone (which I still have in my possession) is egg-shaped with flattened anterior and posterior surfaces, and is rather bigger than a duck's egg, measuring eight inches in its largest circumference. It appears to be composed of uric acid with a slight deposit of phosphates. About two-thirds of the length of the stone projected into the cavity of the bladder, but its larger end was tightly held in a sacculus behind the prostate. and it was only after enlarging the incision in the bladder sufficiently to introduce the fingers of both hands that I could disengage the stone, the constricting edges of the sac having formed two deep lateral grooves in the calculus.

The operation was in all other respects carried out in the usual way, and the patient, notwithstanding his age, made a rapid recovery, returning to the diggings five weeks after the operation. When I last heard of him several months later he had had no further trouble. I have been told by practitioners of long Australian experience that cases of stone are exceedingly uncommon in that country. I do not know whether that opinion is confirmed by statistics.

I am, Sirs, yours faithfully,

Ralph C. Bartlett, M.R C.S. Eng., L.R.C.P. Lond.

Romsey, Hants, Dec. 21st, 1901.

## THE BOYCOTT OF CONSUMPTIVES AT MENTONE.

*To the Editors of* The Lancet.

Sirs,—The recent semi-official edict of the hotel proprietors at Mentone, in the Continental Bradshaw, intimating that persons suffering from consumption would not be received as guests, has created some excitement in the Riviera and many consider this virtual boycott of invalids as an unjustifiably harsh measure. This attitude of the leading hotel proprietors of Mentone is no new thing, however, though it has not before been so uncompromisingly expressed. It must be remembered that the character of Mentone as a winter resort has materially changed in the last 20 years or so. The history of Mentone, so far as foreigners are concerned, may be divided into three distinct phases. For many years after the late Dr J H Bennett (the tutelary genius of Mentone) "invented" and made Mentone it was regarded as an invalid resort pure and simple, and in the case of consumptive patients ordered to winter abroad the choice of the faculty was practically limited to Mentone or Madeira. Its great vogue as the Mecca of the consumptive gave the place a distinctly funereal reputation, and it was erroneously supposed that the town was simply a consumptive preserve. Everyone remembers Mark Twain's witticism that but for an occasional funeral there would be no life in the place, while the famous French romancer, M. Guy de Maupassant, had much to do with the perpetuation of the "Cave of Despair" legend when he wrote: "This charming and balmy country is the hospital of society and the flowery cemetery of aristocratic Europe. How truly in every part of the world this lovely and terrible spot must be accursed, this ante-room of death, perfumed and sweet, where so many humble and royal families, burghers or princes, have left someone, some child on whom they concentrated all their hopes and lavished all their love and tenderness." Then came the second stage in Mentone's history, when it became a quiet and retired resort, much frequented by non-invalid visitors who objected to the expense of ultra-fashionable Cannes and the gaiety and bustle of Nice, the metropolis of the Riviera. For many years, too, it was the favourite resort of overworked clergy attracted by the combination of cheap living and lovely scenery.

Of late years a still more marked change has taken place. Mentone has become distinctly fashionable and consequently almost as expensive a residence as Nice or San Remo, though less so than Cannes or Monte Carlo Then its proximity to the latter place has made it popular with many frequenters of the casino who for obvious reasons prefer not to live actually under the shadow of the palace of fortune. There is no doubt something to be said for the hotel proprietors' point of view. The opinion, whether erroneous or not, now gaining ground, that Mentone is more or less a consumptive settlement would be obviously prejudicial to the interests of Mentone in general as a residential winter resort and to the hotel-keepers in particular. As a preliminary measure steps were taken to convince the public that this beauty-spot of the Riviera was not exclusively to be regarded as a Mecca for invalids. Finally, and within recent years, those interested in the hotel enterprise let it be understood that, taking a leaf out of the book of the Pontresina hotel managers (who have for many years tabooed phthisical visitors), no consumptive person would be admitted.

It must be remembered that Mentone is practically one great hotel—there are more hotels in comparison to the population than at any town in the Riviera, except Cannes and Monte Carlo. Hotel-keepers must live, and it is unquestionable that ordinary visitors will not patronise an hotel which is known to take guests suffering from consumption. Thus, to put it bluntly, as there are not enough invalids to go round, the bold alternative of mainly depending upon a consumptive *clientèle* as at Davos is impracticable.—I am, Sirs, yours faithfully,

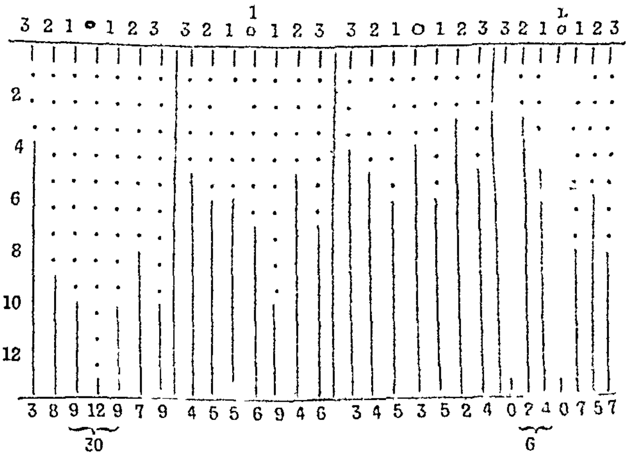
E. A. Reynolds-Ball,

Dec. 19th, 1901. Author of "Mediterranean Winter Resorts."

## WET DAYS.

*To the Editors of* The Lancet.

Sirs,—May I invite your attention to some weather facts which, I think, are not without their medical bearings? In the rough diagram herewith each dot represents a day with 0·4 in. of rainfall or more at Greenwich; and the diagram shows the distribution of such days (in the last 12 years, 1889-1900) in the week about new moon, first quarter, full moon, and last quarter respectively. Please note the following: (1) the preponderance about new moon at once strikes the eye; (2) the third day before last quarter and the day of last quarter were without cases of such rainfall; (3) while the three-day group before last quarter, and that ending with last quarter, had each six cases the three days about new moon had 30 (i.e., five times as many); and (4) it might be shown that the total number of such days in weeks about new moon is greater than in weeks about last quarter in every year of the 12 except two, when the numbers were equal. Whether these facts point to lunar influence or not



it will, I think, be interesting to notice whether the same relation persists in future

I am, Sirs, yours faithfully
ALEX B MACDOWALL, F R Met S
Ilfracombe Dec 20th 1901

## THE LATE R B ANDERSON FUND

*To the Editors of* THE LANCET

SIRS —Permit me to add a word to the appeal of Lord Stamford and Mr Timothy Holmes in reference to the R B Anderson Fund It seems a most melancholy and depressing thought that an appeal renewed at intervals over six months, made by men of the highest standing, backed up by the editors of the great medical journals and on behalf of a man who is one of the martyrs of the profession if ever there was one, should only result in the miserable sum of £80 This is both inadequate for the pressing needs of Mrs Anderson and family and discreditable to the profession

When Mr Anderson was alive, when the memory of the gross injustice perpetrated on him (and through him on the profession) was fresh, we rewarded him for his heroic endeavours to secure justice in the usual way He was looked on as a crank, a misguided enthusiast, a man with a grievance, or even worse, he was regarded with suspicion, and his motives were impugned Ridiculous as it may seem to those who knew him, I have even met people who talked of him as a ' paid agitator ' The last few years of his life were spent in anxiety and poverty I am afraid that sometimes he even had not enough to eat It is a story we as a profession can only recall with shame, but it is not too late to do something for our credit's sake

Especially would I appeal to those who take an interest in medical politics I had the honour of Mr. Anderson's intimate acquaintance and never did I meet a man to whom the honour and interests of the profession were so dear Even his own wrongs were swallowed up in his enthusiasm for the cause When the rights of the profession were assailed in his person he defended them with a courage and tenacity that nothing could shake He faced prison and financial ruin rather than compromise one jot of those rights He hastened his own death by the privations and mental anxiety incurred in fighting a battle which was not his alone but that of the whole profession We may think his conduct quixotic, that he was foolish in neglecting his family and financial interests in order to fight the battle But those of us who in his place would have been less courageous (more prudent, if you will) may at any rate honour his undaunted courage and sympathise with his family, left in very distressed circumstances Every man who reads this could afford a few shillings and I trust for the honour of the profession that the fund will not be closed at anything like its present miserable state I shall personally be glad to receive and forward to the treasurer any subscriptions which may be sent to me

I am Sirs, yours faithfully,
Cotfell House Gateshead, Dec 18th 1901   ALFRED COX

## CANCER AMONG HINDOOS

*To the Editors of* THE LANCET

SIRS,—The letter of Colonel J Maitland, I M S, in THE LANCET of Dec 21st 1901, p 1763 has re stimulated my previous intention, formed at the time that Mr C B Keetley's paper appeared in THE LANCET (Oct 5th, p 939), of refuting the statement contained therein — to wit "Hindoos (*sic*) suffer comparatively little from cancer Dr C N Saldanha, judging from his name hies evidently from the Malabar coast most probably from Mangalore, South Canara, and has had his medical education at the medical institutions of either Bombay or Madras Not having a Medical Register at hand I am unable to assert definitely I have had over three years' experience of surgical work on this coast from the north of South Canara to the south of Malabar (Cochin) and can avouch for the fact that cancer, in its general signification, is common—indeed, very common among the natives in this tract of the Madras Presidency All the various organs and tissues obnoxious to this infection were represented the penis the jaws, throat, cervix uteri breasts &c The most prevalent were cases affecting the lower jaw and the penis Colonel Maitland speaks for the Madras General Hospital, where cases from all over the Madras Presidency come for operation

Thus my local, though limited, and Colonel Maitland's general and considerably more extensive, experiences of the Madras Presidency do not bear out the sweeping generalisation attributed to Mr Keetley's informant Of course, the word "Hindoos" is employed by Mr Keetley in a very loose sense and might have passed muster 50 years ago as of sufficient scientific accuracy; but in this more enlightened twentieth century this now obsolete and vague word should be replaced by one more in accordance with our advance in anthropology Mussulmans are not Hindus yet the former are subject to the same ills as the latter The term "natives of India" would remove the objection It was a pity Mr Keetley did not refer to the annual reports of the medical institutions of India, obtainable at three or four accredited booksellers in London, before accepting the *ipse dixits* of Dr Saldanha

I am, Sirs, yours faithfully,
C DONOVAN B A M D, B Ch R U I,
Captain, I M S
Instow N Devon Dec 22nd 1901

## PERMANGANATE OF POTASSIUM IN THE TREATMENT OF DYSENTERY

*To the Editors of* THE LANCET

SIRS,—In THE LANCET of Dec 21st, 1901 Mr W B Bennett of Liverpool records a most interesting case of diarrhœa in which he finally adopted the treatment of washing out the bowel by a weak solution of permanganate of potassium I have been more than usually interested in this contribution of Mr Bennett, and I think it will be of interest to him and to your readers to know that this form of treatment was successfully adopted in connexion with a mild epidemic of so called asylum dysentery at this institution more than two years ago At the time every conceivable remedy was tried with little or no effect, but no sooner had we adopted irrigation of the bowel by means of permanganate of potassium than our cases began to improve and we had no more deaths From Mr Bennett's reference to his experience of this method of treating dysentery in South Africa it would seem as if it had been employed here prior to his South African experience It is to be regretted that these facts were not put on record earlier, but it is hoped that a short contribution on the subject will see daylight before long The plan adopted here was to wash out the bowel morning and evening, and seldom had this to be repeated after the second day In every case of severe diarrhœa with any tendency to straining we now always employ this method of treatment   I am, Sirs, yours faithfully,
P W MACDONALD, M D Aberd
The Asylum Dorchester Dec 30th, 1901

## THE BRITISH ELECTRO-THERAPEUTICAL SOCIETY

*To the Editors of* THE LANCET

SIRS,—I write to ask those who are interested in this subject to support the movement started by Mr Chisholm Williams for the formation of an Electro therapeutic Society The number of those who make use of electrical methods in medical work is steadily increasing in this country, and a society which will provide a meeting place and an opportunity of exchanging ideas should be a very useful one The list of those who have already sent in their names as supporters of the proposed society is a good one and it includes a majority of the gentlemen who are in charge of the electrical departments of the London hospitals I hope that many others who may be waiting to see how things are going to turn out will be encouraged to send in their names to Mr Chisholm Williams, 20, Bedford square, London W C, before Jan 10th or will attend the meeting to be held on that day for the formal establishment of the society

I am Sirs yours faithfully
Wimpole-street W, Dec 30th 1901   H LEWIS JONES

*To the Editors of* THE LANCET

SIRS,—The first general meeting of the above will be held on Friday Jan 10th, at the rooms of the Medical Society of London, 11, Chandos street Cavendish square London W, at 8.30 P.M., to receive the report of the provisional committee.—I am, Sirs, yours faithfully,

Bedford-square, W.C., Jan. 1st, 1902. CHISHOLM WILLIAMS.

## THE AGE OF VACCINE LYMPH.

*To the Editors of* THE LANCET.

SIRS,—It would serve a very good purpose if THE LANCET called urgent attention to the necessity for a date to be affixed to every tube of vaccine sent out by our recognised purveyors. This would be a very simple proceeding and highly proper. Of course, it requires no large stock of intelligence to see that this would condemn as useless much lymph which now filters through various sources to the too confiding practitioner. As it is, I know of nothing so unsatisfactory to ourselves and the public we serve as the present almost hopeless uncertainty of the age and consequent strength of much of the vaccine stocked and sold by secondary agents. Something ought to be done to put this matter on a fair basis.

I am, Sirs, yours faithfully,

Newington green, N., Dec. 29th, 1901. GEO. J. B. STEVENS.

## NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

*The Plague Epidemic: the Mortality in Bombay and Elsewhere.—Death of Surgeon-General R. Harvey.—The Famine.—Final Report of the Plague Commission.*

THE number of deaths throughout India from plague during the past week is somewhat less, the figures being 7961, as against 8431 during the previous seven days. For the corresponding week last year the deaths were only 2140. The decrease this week is chiefly in the Bombay Presidency, where 5655 deaths occurred, as compared with 5980 in the previous week. Last year there were only 560 deaths. The Punjaub returns 1646 deaths, as against 946 for the previous week and only 14 last year. Bengal returns 168 deaths, but last year, when the disease was raging in the Patna and neighbouring districts, there were 798 deaths. The province of Jummu, across the Punjab border, has become infected, but Kashmir proper is free. The number of deaths from plague in Calcutta remains about the same, but during the month of November there were 93 deaths, as compared with 81 during October. The disease is once more spreading in Bangalore, not only in the city but in the cantonment. In Bombay city there is not much change, 177 deaths being recorded for this week, as against 181 for last week, but the general mortality keeps high. The present death-rate is 52 93 per 1000. For the year 1900–1901 the death-rate of Bombay city was no less than 96 56 per 1000 by the old census and 102·25 per 1000 according to the recent one. This is three times the average death-rate before the era of plague. The infant mortality is enormous. Of 79,350 deaths 13,492 occurred among children of one year of age and under.

The news of the death of Surgeon-General R. Harvey, C B, D.S.O., has been received with deep regret throughout India. He was very popular and his ability was unquestioned. He is reported to have died from peritonitis. In accordance with his special wishes his remains were cremated and the ashes were buried in the grave of his little daughter at Simla. As Surgeon-General L. D. Spencer has previously officiated as Director-General it is probable that he will be appointed to the post left vacant by the death of Surgeon-General Harvey.

During the past few weeks the famine conditions have so far improved that at present there are only about 90,000 persons under relief. The details are: Madras, 2043; Bombay, 47,508; Rajputana, 94; Baroda, 26,283; and the Bombay Native States, 16,400.

The conclusions arrived at by the Plague Commission in its recent and final report have been anticipated by most of the authorities in India for some time. The mild measures now practised are almost entirely in accordance with its recommendations. Medical examination of travellers is still carried out in some places—for some months past at Poona—but its value has apparently been negative. The conflict of opinion between the medical and civilian members of the commission concerning administrative control is natural—the civilian members on behalf of their service being jealous of the loss of power in administration. It is not generally known in England how comparatively subordinate the medical services are in India. That they are so is proved by so many of the plague appointments being held and the reports written by military and civilian officers. The scheme for the sanitary administration of India is one of the best suggestions in the report.

Dec. 6th, 1901.

## THE ORGANISATION OF THE PROFESSION. POPULAR ERRORS IN REGARD TO CLUB PRACTICE.

(BY OUR SPECIAL COMMISSIONER.)

THE *Daily Express* has a large circulation throughout the kingdom. It is published at the popular price of one halfpenny and professes to advocate progress in every direction. Recently it published an article entitled, "Poor Men's Doctors," which bears the impress of sincerity and seems to have been dictated with the object of defending the interests of the many against the selfishness of the few. In this instance the selfish few are the members of the medical profession who, by inference, are accused of having formed a sort of oligarchy or trade union so as to fill their pockets at the expense of the poor. The case is not stated in these plain words, but that is the moral which will evidently be deduced from the description given. It might be thought that the most elementary sense of justice would suggest the advisability of taking into consideration the other side of the question. Nevertheless, there is not a single fact, not a single argument, brought forward in defence of the medical profession. In THE LANCET alone there have been hundreds of columns published on the subject, but evidently the author of the article in the *Daily Express* has not read one of these nor does he seem to have questioned any member of the various medical unions that exist in all parts of the country or to have consulted any of the numerous reports and documents which these medical organisations have issued. The publication of an *ex-parte* statement is not the way to promote the cause of progress. It can but tend to envenom the situation. True progress can only be achieved by hearing all sides and then by striving to harmonise conflicting interests. The statements of the *Daily Express* are important, not merely because they have been published in a paper which has a wide circulation, but because they echo opinions which, however erroneous, are widely held by a large though misinformed section of the public.

The *Daily Express* complains of the decision of the General Medical Council, which it inaccurately entitles the "British Medical Council," in regard to the case of Dr. R Rendall of Great Yarmouth. It qualifies as "ridiculous words" the terms "infamous conduct in the professional sense," but it has nothing whatsoever to say as to the technical point at issue—namely, whether medical men should allow paid agents to canvass for patients on their behalf. The effort, however, to put an end to touting for patients deals, we are told, "with a principle concerning the health and welfare of at least 2,000,000 persons." This is doubtless true, but it affects this great number of people in a manner calculated to protect their best interests by securing for all better and more careful medical attendance. Then follows the statement that the 2,000,000 and more members of medical clubs are "workmen who under ordinary circumstances would be unable to pay for medical attendance and would be forced to apply to the parish or to throw themselves on the bounty of benevolent societies." Fact after fact, case after case, and article after article have been published in these columns and elsewhere to prove that such a statement is absolutely false; but it is not necessary to refer to this great mass of evidence—the falsehood of the statement is clearly demonstrated by the medical clubs and friendly societies themselves, for if this assertion were true they would not so strenuously object to establish a wage-limit.

The position is very simple, the case is very clear. The darkness is caused by the perverse manner in which the real issue is systematically concealed. Medical practitioners have no objection to attending the genuine poor for one penny per week, or for less, or even for nothing. Indeed, if this were merely a financial question it would be a distinct monetary advantage to the medical profession that the poorer classes should subscribe a penny per week. Their medical attendants would then get at least a part of this penny, while in the majority of cases they would get nothing at all if it were not for these weekly payments. But, of course, this advantage disappears at once where the wage-limit is not imposed; for it is the thrifty and well-to-do artisan and the economical tradesman, rather than the very poor, who join notably the friendly societies. Surely the general public should be able to understand the very simple, matter-of-fact, business-like statement made over and over again by medical practitioners Speaking generally, the medical practitioner expects, and is willing to do, a great deal of gratuitous or underpaid work. He would like to devote as much time and attention to the patients who do not pay or only pay inadequately as to those who pay full fees, but if he is to be deprived of those patients who can afford to pay the usual fees, on what is he to live while he attends to those who cannot or do not pay? In trying to do away with this abuse the medical profession is defending the best interests of the poor. By refusing to establish a wage-limit the medical-aid organisations and clubs are robbing the poor of the full and careful attendance which the medical men are willing, even eager, to give them. There are towns where a third and, in some cases, more than half of the population do not pay any medical fees. Nevertheless, the medical practitioner must live; and, as a natural consequence of this abuse, he must make up for the loss of paying patients by an enormous increase of club patients. There are some club medical officers who have 5000 or 6000 persons down on their books; and for one penny per week, and often for much less than a penny, they must attend to those among them who are ill or, as often happens, who only imagine they are ill. What must be the inevitable result of so much underpaid work?

The public, unfortunately, do not realise to what an extent this work is underpaid, and while much sympathy has been lavished on the sweated tailor, sempstress, or docker, but little consideration has been shown towards the sweated club medical officer. Yet in the series of articles on "The Battle of the Clubs" numerous and precise facts were given. These were reprinted in a cheap popular form. They have been before the public for four or five years and have never been contradicted. As an incident in point, when dealing with the Walsall Medical Association[1] it was shown that the medical officer of that amalgamation of friendly societies paid 6115 visits and gave 13,025 consultations to the members during the year 1895. For all this work he was paid a salary of £168. The adult members paid 3*s.* 6*d.* per annum and the juveniles 2*s.*, and out of this the medical officer received but 1*s.* 1*d.* per member. As a result the pay did not on an average amount to 2*d* per visit or consultation. If, however, we add the value of the house, taxes and gas, &c., provided for the residence of the medical officer the average received for advice given at the surgery or at the homes of the patients es not amount to 2½*d.* per consultation. In regard to the se of Dr. Rendall at Great Yarmouth it was stated that e members paid 4*s.* 4*d.* a year and that 10 per cent. of this m was given to the canvasser and that another 10 per cent. as retained to cover the cost of management, so that no rge profit was sweated out of the medical attendant. But is is not the case elsewhere. At Leicester for many ars the medical officers of the Leicester Provident ispensary did not receive more than 1*s.* 9*d.* per annum r member, and at Coventry 1*s.* 10*d.*" This sum, out the 4*s.* 4*d.* which the members pay, is very far from the per cent. which it is said that Dr. Rendall obtained at reat Yarmouth. But in dealing with the Battle of the lubs at Portsmouth[2] I described the financial position of the ost popular club medical officer in the town who received e entire sum which the members subscribe. The following what I then wrote: "He calculates that he is occupied ree hours per day in his own surgery receiving club atients, and some of them are sufficiently well off to ride his surgery on their bicycles Then he has to see about club patients per day in their own homes. Altogether s club patients take up about five hours per day, and r this he receives just upon £1 per day. The disnser he has to keep and the medicine he has to supply cost him about a third of this sum. Five hours per day at £1 equals 4*s.* per hour, and deducting the cost of medicine, &c., we get a net profit of about 2*s.* 8*d.* per hour of professional work. The fee for each consultation, including medicine, amounts in this case to from 4*d.* to 5*d.*. Nevertheless, the members of these clubs imagine that their medical officers are very well paid and rapidly accumulate fortunes. This is especially the case when the medical man keeps a carriage They do not realise that a carriage costs 10*s.* a day, and that even at this price it is often about the cheapest way of getting over the 20 or more miles that have to be travelled in the course of the day in order that he may see all his patients."

Under these circumstances it will readily be understood that the interest of the club medical officer is to get as many subscribers on his list as possible. On the other hand, to make the system pay he must give the patients the cheapest possible medicine, he must treat them roughly, so as to discourage their coming too often, and he must despatch each case with the greatest speed. Such economic conditions must tend to degrade the medical profession. Supposing every club medical officer to be a self-sacrificing saint ready to starve himself for the benefit of others, would it be right even for a saint to toil in such a manner for those who can afford to pay the usual fees? At Leicester it was computed that 75 per cent. of the entire population escaped the necessity of paying medical fees when ill. Three-quarters of the population are in receipt of pure charity or poor relief, or belong to clubs, friendly societies, &c. The minimum fee in private practice has not been fixed in an official manner, but nevertheless it may be set down at 1*s.* 6*d.* per consultation given at the practitioner's surgery and 2*s.* 6*d.* for every visit paid at the patient's house In both cases this includes the medicine which the medical practitioner himself dispenses and supplies. It should be clearly established and acknowledged that any one who pays less than this minimum is in receipt of charity. Will it be maintained that three-quarters of the population of Leicester are worthy subjects for charity? On the other hand, if half or two-thirds of these persons paid at least the minimum fee it will readily be seen that the medical practitioners could then afford to give proper attention and good, even expensive, medicines to the remainder. To attain this end a wage limit must be strictly enforced—and such a measure is urgently needed in the interests of humanity and of science. It is difficult to blame a medical officer who neglects club patients when he knows that all the time he is being defrauded and exploited. At one large town I came across a club medical officer who contrived to see 60 patients in the course of an hour. He posted his wife, watch in hand, outside the surgery door. At the expiration of a minute she knocked at the door to make the patient hurry away. Is this not a degradation of science? Is this rush and hurry in the true interests of humanity? And yet, at 2*d.* or so a consultation, what more can the patients expect? If, however, half of these patients paid 1*s.* 6*d.* a consultation then the average income of the medical officer would have sufficed to enable him to give to the other half equally careful and full attention. Thus the claims of humanity would have been better satisfied; on the other hand, and from the point of view of the advancement of science, the medical officer could carefully study his cases and thus extend his knowledge.

Against such a course there is one argument. It may be urged that many artisans, small tradesmen, shop assistants, &c., can very well pay 2*s.* 6*d.* fees for ordinary illnesses of short duration, but not for more serious cases where constant and prolonged medical attendance is necessary. Undoubtedly this is so, but the hospitals are available for many of these more serious cases and there is no objection to a system of insurance which does not employ and exploit medical practitioners A large section of the population are already insured against sickness and receive a sick allowance. It is only necessary to increase this insurance so that it may provide, not only a sick allowance for the maintenance of the patient, but a further sum so that he may be able to pay at least the minimum medical fee and thus be free to choose the medical attendant whom he may prefer. The law of competition would ensure for the patient the best possible medical attendance, for every practitioner naturally strives to preserve his paying patients. With the club system the position is just the reverse, for it best pays the medical officer to give his patients the least possible attention.

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[1] THE LANCET, April 25th, 1896, p 1163.

THE LANCET, Sept. 21st (p. 757) and 28th (p. 814), 1895.

Again, it must be repeated that club practice institutes economic conditions that tend to the degradation of the profession. Therefore, it can only be tolerated as a charity, and, like many other charities, it will continue to be abused unless a strict wage-limit can be established and maintained.

## MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

### *Oxygen and Hydrogen.*

AT the last meeting of the Manchester Literary and Philosophical Society Professor H. B. Dixon stated that Mr. H. Brereton Baker had succeeded in making a mixture of oxygen and hydrogen so pure that it would not explode when the vessel containing it was raised to a red heat or when a silver wire was melted in it. In one case some water was gradually formed, so that the explosion of the gases would seem to depend on the presence of some impurity other than steam itself.

### *The Owens College Associates.*

At a recent meeting of the Associates of Owens College Mr. William Thorburn, F.R.C.S. Eng., was re-elected a governor of the college. Their annual general meeting was held on Dec. 18th, 1901. That the Associates are not devoid of ambition is shown by the passing of the following resolution:—

> That in the opinion of this meeting steps should now be taken to secure that there should be, as originally proposed by the Owens College, an independent university in Manchester.

A resolution was also passed—

> That in the opinion of the Associates the governors of the college should include women.

### *The late Henry Browne, M.D. Lond., M.R.C.S. Eng.*

By the death of Dr. Henry Browne Manchester has lost one of her oldest physicians He died at his residence in Victoria Park on Dec. 28th, 1901, a few weeks before he had completed his eighty-fourth year. For many years he was one of the physicians to the Manchester Royal Infirmary and prior to this he was a member of the honorary staff of the Chorlton Dispensary. The last appointment he held was that of honorary physician to the Mauldeth Hospital for Incurables, an institution in which he took much interest. Though a man of much culture and wide reading he was not a voluminous writer, but he published a volume many years since, "On the Laws of Health and their Correspondence with Revealed Truth." He also wrote a paper on "Oral, Gastric, and Duodenal Dyspepsia," and one on "Positive Nosology" that appeared in the *British Medical Journal* in 1867. He was a man of deep religious feeling and of unostentatious and refined tastes, and for many years he was well known and respected as a painstaking, conscientious, and well-informed physician, though, as he had for several years retired from the practice of his profession, he belonged rather to the past than to the present generation. As one of the local papers says: "Of a quiet and gentle disposition, Dr. Browne was a worthy example of the old type of family physician, and many of the older generation of Manchester citizens will regard his death as a personal loss." He was always much interested in Biblical literature and, as is probably rare in his profession, was a skilled Hebrew scholar.

### *Macclesfield Infirmary.*

The deadlock at the Macclesfield Infirmary is over. There was a special meeting of the governors on Dec. 23rd, 1901, when it was proposed to give Miss Clarke a month's notice to terminate her engagement, but the motion was lost by six votes to three, two of the governors not voting. One of the speakers, evidently referring to the position taken by the medical staff, said in the course of his speech, "The question was, we conclus[illegible]ing to be governors or were they going to be puppets [illegible]nt and almost hopeless to make such people see that this is authorities struggle for mastery on the part of the staff, but now prac[illegible] those who do not object to the movement in favour of women doctors *per se* feel that the mere fact of sex and the instinct of decency set some limitations to the field that can be occupied by women doctors, that there are certain classes of cases occurring in all general hospitals quite unfit for them to treat. It is not encouraging to see such letters as one that has appeared in the *Manchester Courier*, signed "James P. Rountree, Werneth Vicarage," in which the writer speaks of "the domination and bigotry" of the medical staff, &c. It would seem as if some even of the clergy were smitten with impenetrable blindness. Miss Clarke has, however, relieved the governors from their difficulty by resigning her position. The resignation was accepted and a testimonial fund of £100 will be subscribed by the governors. In response to a letter from Dr. C. Averill with reference to the appointment of Miss Clarke's successor, "it was agreed that the applications should be handed to the honorary medical staff in the ordinary course for them to select three candidates from." It is quite possible to sympathise with Miss Clarke and to congratulate her on her escape from a painful position and at the same time to feel that the thanks of the profession are due to the medical staff for the decided stand that they have maintained.

Dec. 31st, 1901.

## WALES AND WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

### *The Alfred Hughes Memorial.*

THE permanent usefulness of the splendid collection of anatomical dissections and specimens which was presented some years ago to University College, Cardiff, by the late Professor Alfred Hughes is now assured. Mrs. Hughes has, as mentioned last week, added £1000 to the £800 subscribed by Professor Hughes's friends for the endowment of the museum, which is to be called the "Alfred Hughes Anatomical Museum." A memorial medal is also to be awarded in June of each year in the anatomy class of the College.

### *Glamorganshire Asylum.*

An additional block to accommodate 100 female patients is to be erected at a cost of £5000 in connexion with the Glamorganshire County Asylum at Bridgend. At present patients are received from all parts of the county, including Cardiff and Swansea, an arrangement which will cease in March, 1904, when it is anticipated that the new asylum about to be erected by the Cardiff Corporation will be completed.

### *River Pollution*

The Glamorgan County Council has appointed an inspector at a salary of £90 per annum to assist the medical officer of health (Dr. William Williams). His principal duties will be to take samples of water and to collect evidence as to the pollution of streams and rivers. Hitherto the council has not been conspicuously successful in dealing with river pollution within the county.

### *Aberystwith Workhouse.*

Mr. G. R. E. Bonsall, the medical officer of the Aberystwith workhouse, reported to the board of guardians on Dec. 1st, 1901, upon the absence of proper receiving wards and upon the defective ventilation in the sick wards and dormitories and stated that an improvement in the condition of the house would tend to prolong the lives of the inmates The board has, therefore, decided to erect a new workhouse and to sell the existing buildings which are situated about a mile from the town.

### *Navvies' Huts as Common Lodging-houses.*

The lack of a precise definition of a common lodging-house has frequently led to the withdrawal from supervision of many buildings which for all practical purposes are identical with those lodging houses which are registered and regularly inspected. The men employed in the works connected with the restoring of the Thames and Severn canal are housed in huts erected within the area of the Cirencester Rural District Council and the medical officer of health (Dr. Francis Bond) is of opinion that these huts should be registered as common lodging-houses subject to by-laws and to the common lodging-house sections of the Public Health Act, 1875. The district council, however, refuses to accept this view and has merely asked the contractors to give an undertaking that the huts shall be pulled down upon the completion of the works and that the inspector of nuisances shall have power to visit them at any time. The Cirencester District Council can hardly realise what this neglect of a statutory obligation may mean. It is now generally recognised that one of the most common methods of spread of infectious diseases, and especially of small-pox, is through the wanderings of navvies and of other persons who tramp from one town to another, so that if there is one particular class whose surroundings should be carefully looked after it is surely such as these very men who in the Cirencester district are to be allowed to perpetrate—from a public health point of view—any mischief they choose.

### *Winsley Sanatorium for Consumptives.*

The Bath City Council recently determined, if it were legal, to make a grant to the proposed Sanatorium for phthisical patients at Winsley, near Bath. The Sanitary Committee has taken counsel's opinion upon the subject, and at their meeting held on Dec. 23rd, 1901, it was reported that Mr. Macmorran, K.C., had stated that the proposed agreement could be entered into under Section 131 of the Public Health Act, 1875.

Dec. 30th, 1901.

## SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

### *University of Glasgow.*

THE annual statistical report of the Glasgow University, prepared in accordance with the requirements of the Universities Act and embracing the period from Oct. 1st, 1900, to Sept. 30th, 1901, has just been issued. The total number of matriculated students during the academic year was 2038, of whom 350 were women. Among the new foundations acknowledgment is made of the institution of the Joseph Coats scholarship in memory of the late professor of pathology, also of a grant of £200 from the Bellahouston Trustees for the purchase of apparatus in connexion with the chair of materia medica. It is further intimated that, subject to certain life-rents a residue estate amounting to some £10,000 has been bequeathed to the University for the endowment of a chair in a subject to be determined by the trustees under the will. The report enumerates books added to the library during the year which have reached a total of 2642 volumes. It also gives the salaries of the various professors. In the medical faculty these range from £1645 paid to the professor of anatomy to £215 which is the remuneration received by the professor of clinical surgery.—At a recent University Club dinner Professor John Cleland, in replying to one of the toasts, made an energetic speech, in which he justified the scientific teaching of anatomy, and urged that the subject taught on these lines was not only a mental discipline suitable for inclusion within a university curriculum but that it was the necessary basis for practical medicine and surgery. If anatomy was to be presented on purely utilitarian lines it might be left to the Colleges of Physicians and Surgeons, but studied in a broader light it became an instrument of mental culture and pursued for its own sake it brought a reward in the shape of increased insight and breadth of view. It was the duty of a university, he urged, to teach everything and to maintain the highest standard both in aim and method. Speaking of embryology, Professor Cleland said that the experimental study of this subject was a standing refutation of materialism, and that anatomy was the true foundation of natural theology. Even monstrosities, properly regarded, were manifestations of the beauties of nature, and he hoped that it would soon be the custom for every family to have its own anatomical museum.—It is announced that Professor J. G. McKendrick, who is at present at his residence in Stonehaven, is suffering from an attack of erysipelas which will prevent him for a time from returning to his academic duties.

### *Proposed Small-pox Hospital in Glasgow.*

The Glasgow Corporation have approved of the proposal to erect two pavilions for small-pox patients on the Letham Hill site. In the meantime the opposition to the scheme by the Lanarkshire County Council continues, and the question will require the attention of the Local Government Board of Scotland. The opposition of the council is based upon the proximity of the proposed hospital to inhabited houses and to the fact that the site is close to a large reservoir from which water is supplied to a considerable residential district.

### *Anderson's College Medical School, Glasgow.*

The fifty-fourth annual dinner of the students of this school was held on Dec. 20th, 1901, under the presidency of Professor R. S. Thomson. The attendance was a large one, and included, in addition to the teaching staff, representatives of the University and the other extra-mural schools. In the course of the evening it was stated that there had been a considerable increase in the first-year students and that the college generally was in a flourishing condition.

### *Local Scientific Societies, Glasgow.*

At a recent meeting of the Microscopical Society of Glasgow the President, Dr. Rankin, gave a demonstration of the processes of preparing objects and tissues for examination with the microscope. He also described the several methods of using staining agents and showed a Cambridge rocking microtome with improvements devised by himself. The demonstration was greatly appreciated, and Dr. Rankin was awarded a hearty vote of thanks.—The following have been elected to the honorary membership of the Glasgow Natural History Society: Professor Cleland, F.R.S., Dr. Samuel Chisholm, Professor J. W. H. Trail, F.R.S. (Aberdeen), and Mrs. David Robertson.

### *Western Infirmary, Glasgow.*

The usual Christmas entertainment for nurses and patients was held in this infirmary on Dec. 26th, 1901. A large number of gifts were distributed in the various wards, and addresses were delivered by the Lord Provost and Councillor J. H. Dickson, chairman of the directors. It was stated that every bed in the hospital was occupied and that no fewer than 300 patients were awaiting admission.

Dec. 31st, 1901.

## IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

### *National Association for the Prevention of Tuberculosis: Dublin Branch.*

AT the last meeting of the Executive Committee held at the Royal College of Physicians of Ireland, Sir John W. Moore being in the chair, special attention was given to the statements in reference to tuberculosis contained in the report of the Registrar-General for Ireland for 1900. From these it appeared that among diseases tuberculosis stood highest as a cause of mortality and claimed 12,848 victims during the year. 10,076 deaths were due to pulmonary tuberculosis, 1026 to tabes mesenterica, and 997 to other forms. The total deaths from tuberculosis represented a rate of 2·88 per 1000, being 0·03 per 1000 in excess of the previous year. The rate from pulmonary tuberculosis was 2·26 per 1000 living. The phthisical death-rates in the four provinces were: Leinster, 2·50; Munster, 2·32; Ulster, 2·24; and Connaught, 1·62 per 1000. The increase of tuberculosis in Ireland was shown by the following returns:—

| | Rate per 1000 of estimated population. |
|---|---|
| Average for 10 years, 1871-80 .. . | 2·6 |
| Average for 10 years 1881-90 .. . | 2·7 |
| Average for 9 years, 1891-99 ... ... | 2·8 |
| Average for 29 years, 1871-99 .. .. | 2·7 |
| Average for 1900 . ... .. ... | 2·9 |

The above figures showed that the mortality from tuberculosis in Ireland was not decreasing, as had been stated, but was gradually increasing. The want of any accommodation, practically speaking, for cases of advanced consumption other than the workhouse infirmaries accounted for the following results in the unions. In the North Dublin Union the death-rate from tuberculosis during the year 1900 was 5·7 per 1000; in the South Dublin Union it was 5·5; in Belfast, 4·4; in Londonderry, 2·9; in Waterford, 3·6; and in Limerick, 3·4.

### *The Royal College of Surgeons and the Royal College of Physicians, Dublin.*

At the present time negotiations are proceeding in a semi-private way in reference to the question of extending the examinations of the Royal College of Surgeons in Ireland and of the Royal College of Physicians of Ireland. For a long time it has been felt to be anything but creditable to Ireland that so many medical practitioners, chiefly educated in that country, take their medical qualifications elsewhere, and these for all practical purposes may be regarded as Irishmen. In his evidence at the recent Royal Commission on University Education in Ireland Dr. W. A. McKeown, basing his statistics on the Medical Directory for 1900, showed that there were 477 medical practitioners in Ireland (the total number in that country is 2575) who had taken their qualifications outside that country, and of these the great majority—370—were diplomates of the Scotch Licensing Bodies. The attractiveness of these Scotch diplomas is twofold—they are cheap and they are easier than most other portals by which students enter the medical profession. The fact is that candidates who fail at the Royal University of Ireland or who never aim at its high degrees, and those who cannot afford the expense at Trinity College, Dublin, wander from all parts of Ireland to Scotland in search of the triple qualification, and an Irish medical teacher constantly finds that the weak members of his class leave finally for "the land o' cakes" to get medically qualified. It is with an idea of stopping this exodus that a move is now being made by the Irish Colleges (of Physicians and Surgeons) to get some of the provincial schools to join with them in providing an Irish portal for those medical students to enter the profession. If this new scheme is to be successful two things are absolutely necessary. There will have to be final examinations in the provinces as well as in Dublin, conducted either simultaneously or alternately, and in each subject of the examinations there will have to be a provincial examiner for every one from Dublin. In no other way will there be any chance of success for this new venture. Many thoughtful members of the medical profession deplore the fact that, apart from all the colleges and universities, there is not in the British Empire, as there is in Germany, a State examination which every student should be compelled to pass before being allowed to enter on practice.

### *Londonderry Asylum.*

At the monthly meeting of the committee of management of this asylum held on Dec. 20th, 1901, the resident medical superintendent reported that an outbreak of typhoid fever had occurred on the female side of the institution, affecting two patients and one female attendant. There were also many cases of sickness and sore-throat. 16 attendants had been more or less off duty from sickness during the month. The place is overcrowded, and the inspectors of lunatics have threatened to recommend the Lord Lieutenant to withdraw the capitation grant if the committee does not proceed without delay to provide accommodation for the inmates of the asylum. It was decided to adopt the plans submitted for the proposed extension at Gransha and tenders for building are to be sought.

### *Death of Mr. Robert Cromie, C.M. Glasg., J.P.*

One of the very oldest medical practitioners in Ulster, Mr. Robert Cromie, J P., died at his residence, at Clough, county Down, on Dec. 18th, 1901. Born in the neighbourhood of Rathfriland, Mr. Cromie studied at Glasgow, where in 1834 he took the degree of Master in Surgery. Returning home he settled at Clough, county Down, where he was dispensary medical officer and where he enjoyed an unusually extensive practice for a lengthened period. No man was better known in county Down (the Yorkshire of Ireland) than was Mr. Cromie, where he was a justice of the peace. A man of great ability, of striking individuality, and with marked gifts, he was very popular with all classes of the community. Mr. Cromie was buried on Dec 21st, a great number of his friends and former patients attending to show a last token of respect to one who had been so kind to them on many an emergency.

### *Banbridge Workhouse.*

Dr. W. Chancellor has been appointed medical officer to the Workhouse Infirmary, Banbridge, county Down, in place of Dr. Waddell (resigned).

Dec. 31st, 1901.

## PARIS.

(FROM OUR OWN CORRESPONDENT.)

### *Death of Dr. Gougenheim.*

THE death of Dr. Gougenheim, who had recently retired, is announced. He was one of the few medical men in Paris who had taken up laryngology and rhinology as a speciality. His department at the Lariboisière Hospital, to which institution he was physician, was often thronged with patients and learners, for it was the only hospital clinic in Paris where the diseases of the throat and nose could be studied. Dr. Gougenheim was a Chevalier of the Legion of Honour.

### *Statistics of the Population of France for 1900.*

The official report upon the population of France for 1900 shows that the excess of deaths over births was 25,988, whereas in 1899 the births exceeded the deaths by 31,394 The result for 1900 is due to two causes. Firstly, there were fewer births—namely, 827,297 in 1900, as against 847,627 in 1899—and secondly to an increase in the number of deaths—namely, 853,285 in 1900, as against 816,233 in 1899. Thus for the year 1900 there were 20,330 births fewer and 37,052 deaths more than in 1899. The death-rate per cent. of the population for 1900 was 2·21, an increase over the mean for the decennium 1890–1899, when it was only 2·16 per cent.

### *A Potato Hydrocarbon Diet in Diabetes.*

Dr. Dujardin-Beaumetz recently put forward the theory that of all starchy bodies potato is that which may be taken by diabetic persons with the least inconvenience. Although this theory has not been universally received, yet M. Mossé, professor at the Faculty of Toulouse, discussed the point before the Academy of Medicine at the meeting held on Dec. 10th. In his opinion potato is not merely slightly harmful but actually beneficial and constitutes an essential element in the treatment of diabetes. M. Mossé gives potato in the place of the ordinary ration of bread in the proportion of three times the weight of potato—i.e., from 500 grammes to two kilogrammes per diem. Far from increasing the sugar the use of potato diminishes its output and chemical examination of the urine shows that the carbohydrates of the potato are absorbed and utilised. The results are better in that form of diabetes which is marked by thinness than in the fat form. The *rationale* of the treatment is probably that potato contains twice the amount of water weight for weight that bread does and nearly the same quantity of potassium salts Therefore if a patient takes a weight of potato three times greater than his ordinary quantity of bread he takes six times as much water and three times as much potassium salts, while the quantity of albuminous and starchy matter remains practically unchanged. Potassium salts are an integral part of the alkaline treatment of diabetes and the good which they do easily counterbalances the harm done by the ingestion of the starchy matter. Under the potato treatment the sugar disappears, the general health improves, as does also the appetite, and if the patient is not cured he at all events lives under quite supportable conditions. M. Mossé's results will have great interest for sufferers from diabetes, as potatoes are within the reach of everybody's purse.

### *The Prophylaxis of Venereal Diseases.*

In consequence of the excitement caused by the prohibition of the new play *Les Avariés*, which I have mentioned in a previous communication,[1] and owing to the foundation of a society for the furtherance of both hygienic and moral prophylaxis, the Minister of the Interior has just appointed a commission. This commission is to be charged to inquire into the various questions connected with syphilis and other venereal diseases, especially their prophylaxis. It will also inquire into the frequency of these diseases, into the condition and management of the various institutions existing in France for their treatment, and into the best means, both legislative and administrative, for preventing the spread of such complaints.

Dec. 31st, 1901.

## BERLIN.

(FROM OUR OWN CORRESPONDENT.)

### *Statistics of the Medical Profession in Germany.*

ACCORDING to Hirschwald's Medical Directory, edited by Dr. Wehmer and quoted in the *Vossische Zeitung*, there are now 27,039 medical men in Germany, an increase of 560 over the number for 1900, which was 26,479. Since 1897 the increase of the profession is 2646 = 10·7 per cent. ; that of the population in general is 6·1 per cent. 16,500 medical men reside in Prussia, 2724 in Bavaria, 1967 in Saxony, 1019 in Baden, 1009 in Wurtemberg, 766 in Alsace-Lorraine, and the remainder in the smaller States of the Empire. In Berlin there are 2305 medical men residing, and it is interesting to note that the increase of the profession in the metropolis is rather less than in last year, being 43 = 1·9 per cent. only. Munich has 654 medical men, Hamburg 569, Breslau

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[1] THE LANCET, Nov. 16th, 1901, p. 1357.

520, Dresden 428, Leipsic 418, Cologne 346, Charlottenburg 336, and Frankfort 331. In the larger towns a decrease *in the number of medical men occurred only in Bremen.* As to the age of the Berlin medical men there is one practitioner who qualified in 1842, while 18 others qualified more than 50 years ago. The latter class includes Professor Virchow, who qualified as early as in 1846. Of Berlin practitioners 40 qualified 49 years ago, 166 from 30 to 39 years ago, 278 from 20 to 29 years ago, 753 from 10 to 19 years ago, and 853 within the last 10 years. To every 10,000 of the population there are on an average 4·80 medical men, this number varying from 7·55 in Hamburg to 2·63 in Reuss. In Berlin there are 12·22 medical men for each 10,000 of the population. The number of dentists continues to increase from year to year. There were 1586 in 1901, 1489 in 1900, 1401 in 1899, 1327 in 1898, and 1238 in 1897. Of licensed pharmacies there are 5559, this number having increased by 100 as compared with that of the preceding year. In Berlin there are 167 pharmacies. For each 10,000 of the population there are 0·99 pharmacies.

### *Researches on Cancer.*

A citizen of Frankfort has recently bequeathed to the municipal authorities of this town the sum of 500,000 marks, equal to £25,000, of which the interest is to be expended on researches concerning the etiology of carcinoma. The city of Frankfort has handed over these funds to Professor Ehrlich, the celebrated bacteriologist who is at the head of the institution of experimental therapy there. Apart from this legacy Professor Ehrlich has at his disposal other considerable funds for this purpose. In Berlin, as has been already reported in these columns, a committee exist for collective investigations on cancer. Professor Czerny, who is one of the committee, has recently issued a circular letter to all the surgeons of Germany asking them to state after what lapse of time on an average recurrence is wont to occur after the operation for cancer of the mamma. In this way the committee hope to get sufficient material to ascertain the duration of the latent period of the disease.

Dec. 23th, 1901.

## Obituary.

### JAMES JOSEPH TRACY, M.B., M.CH., B.A.O. R.U.I.

CORK has lost a well-known member of the medical profession by the death of Dr. J. J. Tracy on Dec. 26th, 1901. He was educated at the Queen's College, Cork, and graduated at the Royal University of Ireland in 1890. For a brief period he became an assistant in England, but returned to Cork, his native city, and was appointed surgeon to the Mercy Hospital. Subsequently he transferred his services to the medical side of that institution and was appointed physician. He took a great interest in the Cork Medical and Surgical Society, of which he was honorary treasurer, and his remarks in debates were listened to with much attention. He took a very active part in "the battle of the clubs" at Cork, and in the early days of the fight he was appointed one of the honorary secretaries of the medical organisation. When it was decided to draw up a code of rules to bind the local profession together Dr. Tracy displayed a wonderful prescience of the difficulties which were likely to occur and by his foresight considerably helped his profession. As the fight went on it was seen that it would be necessary to offer an alternative to men in humble circumstances who desired to become members of a club and it was decided to establish the Cork Medical Benefit Society. Dr. Tracy at once mastered the intricacies of the Friendly Societies Act, and mainly under his guidance rules were drawn up which readily obtained the sanction of the Registrar of Friendly Societies, and the Cork Medical Benefit Society became an established fact. Its membership is steadily increasing, and from every point of view it is a distinct success.

Last winter, acting on the advice of his medical friends, he decided to make a sojourn in the south of France for the benefit of his health. On his return it was seen that he was suffering from tuberculosis in an advanced stage, but with characteristic energy he worked on to the last. A week before he died he was visiting his patients. His funeral was most representative, his medical brethren attending in large numbers, the lord mayor and the high sheriff of the city being also present.

## Medical News.

UNIVERSITY OF LONDON.—At the B.S. examination for honours the following candidates were successful:—

*Surgery.*—First Class: Felix Bolton Carter, M.D., University College; Arthur Edmunds (Scholarship and Gold Medal), King's College; and Thomas Copeland Savage (Gold Medal), University College. Second Class: Charles Archibald Scott Ridout, St. Bartholomew's Hospital; and Ralph Paul Williams and W. Halliburton McMullen, King's College. Third Class: Ernest Lewis Lilley, Charing Cross Hospital.

N.B.—The foregoing list, published for the convenience of candidates, is provisional only, and is not final until the reports of the examiners shall have been confirmed by the Senate.

DONATIONS AND BEQUESTS.—A donation from "H. M. E." of £500 has been received by the Chelsea Hospital for Women.

MEDICAL MAGISTRATE.—The Lord Chancellor has placed Dr Henry John Mackay on the commission of the peace for the borough of Devizes.

EPSOM COLLEGE.—Mr. A. J. May of Epsom *College has been elected to an open scholarship for Natural* Science of the value of £50 at Sidney Sussex College, Cambridge.

A MEDICAL PEER.—Herr Coloman Müller, professor of medicine at the University of Hungary, chief physician of the Rochus Hospital, and organising secretary of the eighth Congress of Hygiene and Demography held at Budapest in 1894, has been elevated to the House of Magnates of Hungary.

VACCINATION PROSECUTIONS. — At the Truro Police-court on Dec 23rd, *1901*, several persons were summoned for neglecting to have their children vaccinated. Orders were made for the vaccination of the children within 14 days and for the immediate payment of 10s costs, with distress or imprisonment in case of non-compliance.

BOARDS OF GUARDIANS AND ISOLATION HOSPITALS.—At the meeting of the Yeovil Board of Guardians held on Dec. 20th, 1901, a communication was received from the town council inviting the guardians to coöperate with the council in the enlargement of the isolation hospital. After a prolonged discussion the guardians decided that the duty of providing an isolation hospital for Yeovil, including paupers, whether inmates of the workhouse or not, rested with the town council as the sanitary authority of the district, and that the guardians were under no obligation to contribute towards the cost of such hospital further than by payment of the expenses of such paupers as might from time to time be in the hospital.

PRESENTATIONS TO MEDICAL PRACTITIONERS.—At Abercarn, Monmouthshire, on Dec 14th, at a public meeting, Mr. Edmond Walsh, L.R.C.P. & S. Edin., L.F.P.S. Glasg., was presented *with an illuminated address*, a gold watch suitably inscribed, and a gold chain as a mark of respect and esteem on the occasion of his leaving the neighbourhood.—Mr. William Parson, M.R.C.S. Eng., M. & L.S.A., J.P., medical officer of health of Godalming, on his retirement from private practice was recently presented by his old patients and friends with a silver tea and coffee service in Louis XIV style, a pierced silver cake basket, a tea urn, a tray, a silver lamp with column and base and Corinthian capital, and a Chippendale easy chair.

CONSUMPTION SANATORIUM IN WORCESTERSHIRE.—Earl Beauchamp is actively interesting himself in the movement for erecting an open-air sanatorium for the reception of consumptive patients in Worcestershire. His lordship has sent a cheque to the honorary treasurer (Dr. H. E. Dixey) of Woodgate, Malvern. Mr. George Cadbury has warmly endorsed the scheme and has given a donation of £100, with a promise of £200 annually towards maintenance. Mr. Alfred Baldwin, M.P., has sent £100, and a like sum has been received from Mrs. Williams, a former resident of Malvern; Mr. H. Howard, chairman of the Sanitary Committee of the county council, has given £50; Mr. James Atkins, £52 10*s.*, and *Dr. Dixey*, £50. The estimated cost of a sanatorium with 48 beds is £12,500, but the committee intend to start in a small way by spending £5000 on sufficient accommodation for 20 beds. Committees are being formed all over the county for the purpose of obtaining subscriptions, and the committee are hopeful of starting building operations in about three months' time.

CARDIFF AND COUNTY PUBLIC HEALTH LABORATORY.—The Cardiff and County Public Health Laboratory was established in the first instance in the year 1898 by the Glamorganshire County Council who spent about £500 in the erection of a suitable building and upon apparatus, &c. In June, 1899, the laboratory came under the joint control of the county borough of Cardiff and of the Glamorgan County Council, when the administration was placed in the hands of Dr. E. Walford (medical officer of health of Cardiff) and Dr. W. Williams (medical officer of health of Glamorganshire). The paid staff consists of a clerk to the joint committee, a bacteriologist (Dr. W. G. Savage), an assistant bacteriologist, and an attendant. The expenditure incurred by the committee from June, 1899, to the end of March, 1900, was £436, and for the year ending March 31st, 1901, it was £743. In the last report of the directors they state that during the three months ending Nov. 30th last 51 samples of water were submitted to chemical analysis and 77 to bacteriological examination; 178 specimens were examined bacteriologically—64 being for diphtheria bacilli and 60 for tubercle bacilli—and 31 specimens were submitted to pathological or chemical examination. Five medical practitioners are attending the public health lectures and are receiving practical laboratory instruction, while the classes for sanitary inspectors are being attended by 22 students.

## BOOKS, ETC., RECEIVED.

BRITISH MUSEUM (NATURAL HISTORY), Trustees of, Cromwell-road, S.W.

A Monograph of the Culicidæ or Mosquitoes. Mainly compiled from the collections received at the British Museum from various parts of the world in connexion with the investigation into the Cause of Malaria conducted by the Colonial Office and the Royal Society. By Fred. V. Theobald, M.A., F.E.S. Two volumes and book of plates. Printed by order of the Trustees. Price not stated.

CHATTO AND WINDUS, 111, St. Martin's-lane, W.C.

Herbert Fry's Royal Guide to the London Charities. Edited by John Lane. Thirty-eighth Annual Edition. Price 1*s.* 6*d.*

FISCHER, GUSTAV, Jena.

Die Bakterien. Naturhistorische Grundlage fur das Bakteriologische Studium. By Johs Schmidt and Fr. Weis. With a Preface by Professor Dr. E. Chr. Hansen, Carlsberg Laboratorium, Copenhagen. Price 7 marks.

HAY, NISBET, AND CO., Limited, 19, Queen-street, Glasgow.

Glasgow International Exhibition, 1901. Russia: its Industries and Trade. Issued by order of State Secretary S. J. de Witte, Imperial Russian Minister of Finance. Price 4*s.* 6*d.*

HIRSCHWALD, AUGUST, Unter den Linden, 68, Berlin.

Lehrbuch der Speciellen Pathologischen Anatomie von Dr. Johannes Orth. (Die Pathologische Anatomie des Auges. Bearbeitet von Professor Dr. Greeff. 1 Hälfte). Price 7 marks.

Atlas der Pathologischen Histologie des Nervensystems. Redigirt von Dr. Victor Babes of Bucarest. VIII. Lieferung. Lésions des cordons postérieurs d'origine exogène. (Suite.) Price M. 12.

KARGER, S., Karlstrasse, 15, Berlin.

Atlas der Krankheiten der Nase, ihrer Nebenhohlen und des Nasenrachenraumes. By Privat-docent Dr P. H. Gerber. Achte (Schluss-) Lieferung. Price M. 6.

MACMILLAN AND CO., Limited, London.

The Healing of Nerves. By Charles A. Ballance, M.S., F.R.C.S., and Purves Stewart, M.A., M.D., M.R.C.P. Price 12*s.* 6*d.*

WARD, LOCK, AND CO., Limited, London, New York, and Melbourne.

Underground Watering of Plants and Gardens, to which is added hapters on the Culture and Propagation of Rose Trees. By John Grant. Price 1*s.*

## Appointments.

*Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to* THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

BARBER, A., L.R.C.S.I., has been appointed Government Medical Officer and Vaccinator at Penrith, New South Wales.

BODY, HENRY MARTEN, M.R.C.S., L.S.A., has been appointed Medical Officer for the Sandford District of the Crediton (Devon) Union.

BOON, J. G., L.R.C.P.I., L.R.C.S.I., has been appointed Certifying Surgeon under the Factory Acts for the Borough of Wenlock in the county of Salop.

CREED, Hon., J. M., M.R.C.S., M.L.C., has been appointed Chairman of the Visiting Committee for Institutions licensed under the Inebriates Act, 1900, New South Wales.

DAKIN, T. B., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory Acts for the Ulceby District of Lincolnshire.

DEANE, E. W., M.B. Melb., has been appointed Officer of Health for the Borough of Carisbrook, Victoria.

DOUDNEY, E., M.R.C.S., has been appointed Government Medical Officer and Vaccinator at Port Macquarie, New South Wales.

FENWICK, CHARLES, L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Cheriton Bishop District, Crediton Union.

FETHERSTON, R. H. J., M.D. Edin., has been appointed Officer of Healt for the city of Prahran, Victoria, and Certifying Medical Pract tioner under Factories and Shops Acts, Metropolitan District Melbourne.

GOADBY, KENNETH W., L.D.S. Eng., D.P.H. Camb., has been appoint Bacteriologist and Lecturer on Bacteriology to the National Dent Hospital.

GRAHAM, A. W., M.B. Lond., has been appointed Medical Officer Health for the District of Beaconsfield and Dalrymple, Tasmania.

GREEN, FREDERICK KING, F.R.C.S. Eng., L.S.A., has been appoint Honorary Consulting Surgeon to the Royal United Hospital, Bat

HALL, J. N., M.R.C.S., L.R.C.P. Lond., has been appointed Medic Officer of the Mayfield District of the Uckfield Union.

HAYCROFT, CHARLES H., M.R.C.S., L.S.A., has been re-appoint Medical Officer for the Coleridge and Colebrooke Districts of t Crediton Union.

JEROME, ERNEST J., L.R.C.P. & L.R.C.S. Edin., has been re-appoint Medical Officer of Health for the Camelford (Cornwall) District.

KNOTT, E. M., M.R.C.S., L.R.C.P. Lond., has been appointed Medic Officer of Health for the Brixworth Rural District.

LACK, H. LAMBERT, M.D. Lond., F.R.C.S., has been appointed Au Surgeon to the London Hospital.

LONERGAN, T. J., L. & L.M.R.C.P. & R.C.S. Edin., has been appointed District Medical Officer and Public Vaccinator, Northampton, Western Australia.

M'KENDRICK, G. BROWNLIE, F.R.C.P., F.R.C.S. Edin., L.F.P.S. Glasg., has been appointed to take charge of the Department for Kidney and Urinary Diseases in the Glasgow Public Dispensary

MANLY, R. A. A., M.B. Melb., has been appointed Medical Officer of Health for the Shire of Lancefield, Victoria.

MUIR, W. C. C., M.B. Glasg., has been appointed Officer of Health for the Shire of Alberton, Victoria.

O'BRIEN, J. A., M.B. Glasg., has been appointed a Member of the Medical Board of Victoria.

O'FLAHERTY, L. S., L.R.C.P. Edin., has been appointed Public Vaccinator at Bulong, Western Australia.

PARDOE, JOHN, M.B., M.R.C.S., has been appointed Surgical Assistant to St. Peter's Hospital, Covent-garden.

POWNE, LESLIE, M.R.C.S., L.S.A., has been re-appointed Medica Officer for the Newton St. Cyres and Shobrooke Districts of t Crediton Union.

RIDOUT, C. A. S., M.B., B.S. Lond., M.R.C.S., L.R.C.P., has bee appointed House Surgeon to the North Staffordshire General Infi mary and Eye Hospital, Stoke-on-Trent.

ROWAN, T., L. & L.M.R.C.P. & R.C.S. Edin., has been appointe President of the Medical Board of Victoria.

SCOTT, A. T., M.B. Glasg., has been appointed Public Vaccinator f Whangaroa, New Zealand.

SCOTT, RICHARD JAMES HERBERT, F.R.C.S. Edin., has been appointe Honorary Consulting Surgeon to the Royal United Hospital, Bath.

SMITH, G. U., M.B. Lond., has been appointed Bacteriologist to th Cambridge Town Council.

SPRINGTHORPE, J. W., M.D. Melb., has been appointed Visitor to t Metropolitan Lunatic Asylums, Melbourne, Victoria.

STENHOUSE, A., M.A., M.B., B.Ch. Univ. N. Z., has been appointe Public Vaccinator for Blackstone, New Zealand.

STEVENS, THOMAS GEORGE, M.D. Lond., F.R.C.S. Eng., M.R.C.P. Lond has been appointed Obstetric Tutor to St. Mary's Hospital.

STEWART, J. E. F., M.B. Glasg., has been appointed Officer of Healt to Bayswater Local Board of Health, Western Australia.

TEAGUE, D. G. M., M.B. Edin., has been appointed Public Vaccinato at Kanowna, Western Australia.

TUCKER, JOSEPH, M.R.C.S., L.S.A., has been re-appointed Medica Officer for the Chawley District, Crediton Union.

WADE, CHARLES, L.R.C.P., M.R.C.S., has been re-appointed Medica Officer of Health for the Boscastle (Cornwall) District.

WINTER, W. H. T., M.R.C.S., has been appointed a Medical Refere under the Workmen's Compensation Acts, 1897 and 1900, and to ac for the Wolverhampton County Court District of Circuit No. 25.

## Vacancies.

*For further information regarding each vacancy reference should b made to the advertisement (see Index).*

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon, unmarried Salary £150 per annum, with rooms, fire, lights, and attendance

BOROUGH OF BOOTLE HOSPITAL FOR INFECTIOUS DISEASES.—Residen Medical Officer, unmarried. Salary £120 per annum, with boar washing, and apartments.

BRADFORD ROYAL INFIRMARY.—Dispensary Surgeon, single. Salar £100 per annum, with board and residence.

COUNTY COUNCIL OF SALOP.—Medical Officer of Health. Salary £75 per annum.

DERBYSHIRE ROYAL INFIRMARY, Derby.—Assistant House Surgeon fo six months. Salary of £30 for the six months, with board residence, and washing.

DERWENT VALLEY WATER BOARD WORKMEN'S VILLAGE, Birchinlee North Derbyshire.—Medical Officer.

DEVONSHIRE HOSPITAL, Buxton, Derbyshire.—House Surgeon an Assistant House Surgeon. Salary, House Surgeon £100 per annum Assistant £50 per annum, with apartments, board, and lodging

DISTRICT ASYLUM, Mullingar.—Junior Assistant Medical Office (female), unmarried. Salary £100 per annum, with board, apartments, attendance, and laundry.

**Durham County Asylum.**—Junior Assistant Medical Officer. Salary £140, rising to £160, with board, laundry, and attendance.

**Essex and Colchester Hospital,** Colchester.—Assistant House Surgeon, unmarried, for six months, renewable. Salary at rate of £50 per annum, with board, lodging, and washing.

**Evelina Hospital for Sick Children,** Southwark Bridge-road, S.E.—Junior Resident Medical Officer and Registrar. Salary £60, with board and washing.

**Glasgow Royal Infirmary.**—Superintendent. Salary £500 per annum, with board, residence, &c.

**Hampstead Hospital.**—Resident Medical Officer for six months. Salary at rate of £120 per annum, with rooms, coals, and gas.

**Hospital for Sick Children,** Great Ormond-street, London, W.C.—House Surgeon, unmarried, for six months. Salary £20, and board and residence.

**Joint Counties Lunatic Asylum,** Talgarth, Breconshire.—Medical Superintendent. Salary £450 per annum, with house, coal, light, and washing.

**Lancashire County Asylum,** Winwick, Newton-le-Willows.—Assistant Medical Officer. Salary £150 per annum, with board, lodging, and washing.

**London Hospital,** Whitechapel, E.—Assistant Director of the Pathological Institute. Salary £200 per annum.

**Macclesfield General Infirmary.**—Junior House Surgeon. Salary £70 per annum, with board and residence.

**Medway Union Workhouse and Schools,** Chatham.—Resident Medical Officer. Salary £150, with fees estimated at about £160, and apartments and attendance.

**Noble's Isle of Man General Hospital and Dispensary,** Douglas, Isle of Man.—Resident House Surgeon. Salary £82 per year, with board and washing free.

**North Devon Infirmary,** Barnstaple, Devon.—House Surgeon. Salary £80 per annum, with board, residence, and washing.

**Royal Infirmary of Edinburgh.**—Pathologist. Salary £400 per annum.

**Royal Surrey County Hospital,** Guildford.—Assistant House Surgeon. Salary £75, with board, residence, and laundry.

**St. Bartholomew's Hospital.**—Assistant Surgeon.

**Seacliff Lunatic Asylum,** Dunedin, New Zealand.—Assistant Medical Officer, unmarried. Salary £250, with board, lodging, and washing.

**Stockton and Thornaby Hospital,** Stockton-on-Tees.—House Surgeon. Salary £250 per annum.

**Stroud General Hospital.**—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

**Tottenham Hospital.**—House Surgeon. Salary £50 per annum, with board, residence, laundry, &c.

**Victoria Hospital for Children,** Queen's-road, Chelsea, S.W.—House Surgeon for six months. Honorarium of £25, with board and lodging.

**West Bromwich District Hospital.**—Resident Junior House Surgeon. Salary £50 per annum, with board, lodging, washing, and attendance.

**West Herts Infirmary,** Hemel Hempstead.—House Surgeon, unmarried. Salary £100 per annum, with rooms, board, washing, and attendance.

**Whitechapel Union Infirmary,** Vallance-road, N.E.—First Assistant Resident Medical Officer. Salary £130 per annum, rising to £150, with rations, apartments, coal, gas, and washing.

**Wolverhampton and Staffordshire General Hospital.**—Two Honorary Assistant Surgeons.

**Worcester County and City Asylum.**—Junior Assistant Medical Officer, single. Salary £140, rising to £160, and all found.

**York County Hospital.**—Assistant House Surgeon. Salary £80 per annum, with board, residence, and washing.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies under the Factory Acts as Certifying Surgeons at Coleshill, in the county of Warwick; at Banff, in the county of Banff; at Chatham, in the county of Kent; and at Ross, in the county of Hereford.

# Births, Marriages, and Deaths.

## BIRTHS.

**ACKENBURY.**—On Dec. 25th, the wife of Henry B. Brackenbury, M.R.C.S., L.R.C.P. Lond., of a daughter.

**THELL.**—On Dec. 26th, at Merton House, Ross, the wife of Arthur Cuthell, B.A., B.Sc., M.R.C.S., of a son.

**UHIG.**—On Sunday, Dec. 29th, 1901, at Little Langtons, Hornchurch, Essex, the wife of David John Duhig, M.B., L.R.C.P., of a daughter.

**ALKER.**—On Dec. 29th, at Worple-road, Wimbledon, the wife of George Walker, M.R.C.S., L.R.C.P. Lond., of a daughter (Mary Hildegard).

## DEATHS.

**ARRINGTON.**—On Dec. 26th, at 8, Battersea-rise, S.W., aged 45 years, Dr. William Henry Carrington, L.S.A., L.R.C.P. (suddenly), youngest son of the late Mr. Frederic George Carrington, *Gloucestershire Chronicle*, Gloucester.

**EAKE.**—On Dec. 27th, at Orotava, Teneriffe, Matthew William Stuart Leake, M.R.C.S., L.R.C.P. Lond., aged 30.

**ASON.**—On Dec. 29th, at Albany-road, Stroud-green, N., John Wallis Mason, M.R.C.S., L.S.A., in his 80th year.

**HAW.**—On the 31st of December, 1901, at the residence of her parents (Dr. and Mrs. Merson), De-la-Pole, Hull, Amy Gertrude, aged 31, beloved wife of J. Custance Shaw, M.R.C.S., L.R.C.P.

*N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

# Notes, Short Comments, and Answers to Correspondents.

### MEDICAL PRACTITIONERS AND THE SALE OF POISONS.

*To the Editors of* THE LANCET.

SIRS,—The recent edict of the General Medical Council constitutes it "infamous conduct" for a medical practitioner to leave in charge of a medical hall or shop where scheduled poisons are sold to the public a person not legally qualified to sell these. Now I am at a loss to know whether by the words "sold to the public" is meant only selling the poisons in their simple (unmixed) state or does it apply to dispensing medicines containing them to one's patients, for is not the handing over for money of a poison, mixed or diluted, as much a sale as retailing the unmixed article? And is not one's patient a member of the public? Also, is not the place where such mixtures are sold—be it a "surgery," "dispensary," or whatever it may be called—not a "shop" or "medical hall"? If this view be correct every medical practitioner throughout the kingdom who cannot afford to keep a qualified dispenser must either have no dispensary or surgery containing scheduled poisons or lock it up in his absence, leaving no one, not even a senior student, far less his wife, family, or domestic, in charge of it. How much more has the long-suffering general practitioner to endure at the hands of the General Medical Council?—I am, Sirs, yours faithfully,

Dec. 30th, 1901. VULNERATUS.

### THE DISSEMINATION OF INFECTIOUS DISEASE.

*To the Editors of* THE LANCET.

SIRS,—A poor woman of my acquaintance recently found her youngest child ill and took him to a large hospital in her district. The malady was pronounced to be scarlet fever. The hospital ambulance conveyed the mother and child back to their one-roomed home with three other child occupants in a house of many tenants. The public medical officer of health acted, I believe, as promptly as circumstances permitted and in 24 hours or so the fever-stricken patient was removed. Is it impossible for large general hospitals to have an isolation ward where infectious cases might be detained pending their transference to the care of the Metropolitan Asylums Board? Such a course would seem to possess some advantages to AN OUTSIDER.

Dec. 28th, 1901.

### MEDICAL AID ASSOCIATIONS AND THE GENERAL MEDICAL COUNCIL.

*To the Editors of* THE LANCET.

SIRS,—In answer to your correspondent, Mr. Harry Clough, in THE LANCET of Dec. 28th, 1901, p. 1848, whose wish seems to be to vindicate the medical aid associations and to champion the unqualified assistant, I would like to offer a few remarks. In the first place let it be understood that I write as a general medical practitioner. The first duty of the General Medical Council is to guard the interests of the public and though progress is slow and at times erratic some noteworthy successes have been achieved. It is admitted that the general practitioner is a hard-pressed individual, but whose fault is that if not his own? People judge the practitioner very largely as he estimates himself and if the club doctor values himself at a penny per week he is valued by his patients accordingly. The stringent rule as to unqualified assistants at least prevents men with large club practices from employing these in the same manner as formerly, and makes room for the legitimate article. In other words it prevents the covered competition that we were at one time subject to. The Midwives Bill has not made much progress, so we can turn to the later effort of the General Medical Council, the veto against the medical aid associations—in plain English a veto against clubs in connexion with insurance companies where canvassing is carried on and where the bait offered for insurance is the services of a qualified practitioner. I assert, and I think every man with any claim to common sense will give me his support, that professional knowledge cannot be increased by contract work, and to compare it with the training and experience to be obtained at a general hospital is, to say the least, ridiculous. The time at one's disposal is much too short to make a satisfactory examination of the case, let alone to take that thorough interest which is essential to obtain good results. Advertisement is granted, but is it fair to allow one's name to be touted from door to door and one's services held out as an inducement to insure? Does it give true merit the best chance and reward those deserving of reward? I know from experience that the beginner would have a better chance if he took no medical aid work, for I know that whatever work fell to his lot would be done well and the healthy interest he would bring to bear on the case would have its own reward. The young practitioner does not shine in the public eye as an officer in a medical aid company. When anything serious comes along he is passed over with "he is only a club doctor," and the man who does no club work is employed. The General Medical Council has conferred a very great benefit on the beginner in holding him aloof from such work. Your correspondent points out that medical aid cases are usually trivial; where then does the experience that he would have as against this mean come in? To my mind, it teaches the impossibility, however earnest the man may be) of attending more than a given number of cases in a manner that will reflect credit on the medical man and the profession. No; contract work is not, and never can be, science. The practitioner is entitled to remuneration for his work and the public is entitled to have the work done in a thorough manner, and not in the slipshod method that club work leads to. Who ever saw a man who adhered to medical aid work rise in his profession? He remains a hack, a common drudge, at the beck and call of every 1*d.* and ½*d.* subscriber to the club, and undertakes an amount of work that it is physically impossible to do properly. 3. I would like to see the General Medical Council go one or two better. I would like to see them prohibit contract work absolutely, make a fixed scale of charges and treat the provident dispensary employing canvassers as they have done the medical aid companies. Then, and not till then, will the beginner have an equal chance. He will then have time to study, which is very necessary, he will be able to show some interest in his work, and the public will reap some benefit. Contract work is humbug and no man with broad views on the standing of the profession would be satisfied with it. When the young practitioner gets a few more years over his head time will have probably demonstrated to him the truth of my remarks. His energy would be well spent in other directions instead of championing what is to a great extent the curse of the profession. Apologising for the amount of space I have occupied,

I am, Sirs, yours faithfully,

Leicester, Dec. 28th, 1901. JOHN MACCORMAC.

## SECOND-HAND.

*To the Editors of* THE LANCET.

SIRS,—Will you let me ask through your columns if any of your readers could make use of an invalid's bed-table and a "Turkish bath at home" which will be disposed of at half their cost, although practically as good as new? The bath, one of the sort known as a "Thermal Cabinet," has only been used once or twice. The bed table is of the ordinary pattern, the heavy foot standing on the ground and the slab turning over the patient's bed and forming a table on which to rest writing materials, a book, or a plate.

I am, Sirs, yours faithfully,

Dec. 30th, 1901. X. Y. Z.

## WEIR MITCHELL TREATMENT.

*To the Editors of* THE LANCET.

SIRS,—Would any of your readers kindly inform me if there is any hospital or institution in London where a servant could have Weir-Mitchell treatment? I am, Sirs, yours faithfully,

Jan. 1st, 1902. PHENAD.

## THE BAEL TREATMENT OF DYSENTERY.

*To the Editors of* THE LANCET.

SIRS,—As fatal cases of dysentery have been rather numerous among our troops in South Africa, I have frequently wondered whether the Indian bael treatment has been adopted for the cure of that terrible disease. The fresh fruit is undoubtedly the finest remedy for dysentery that could be used; it is extensively prescribed by the medical profession in Calcutta with the very best results. It is not so much used in Upper India, where the bael tree does not appear to thrive so well as in the continuously warmer temperature of the lower provinces. Not being a member of the profession I feel some diffidence in venturing to write these few lines to you on the subject, but I do so as I have known the great value of the bael fruit during my residence in India of over 30 years. I was myself cured of an exceedingly severe and prolonged attack of dysentery by that remedy (albeit from dried fruit in pulverised form) after other treatment had signally failed. The same occurred in the case of one of my children who (while absent from me) was believed to be dying at a hill sanatorium. I was sent for by telegram, and thinking that bael would not be there procurable I took up some powdered bael which was prepared in Calcutta, and with the medical man's permission gave some doses of it to the apparently dying child. It was a very difficult job, in his utterly prostrate condition, but the result was that his life was saved. I have known other cases of recovery from dysentery and severe diarrhœa effected by bael, a remedy I always kept in my house in India (I do so still in England), and though I am a layman I have always strongly recommended it for the above very obvious reasons. The tinctures of bael I have not found effective; the fresh fruit, or the powdered, are splendid remedies for dysentery. Bathgate and Co., chemists, of Calcutta, have an excellent preparation of powdered bael which they call "Dietetic Bael." I used this in my own case with perfect success and many others have been grateful to me for telling them of it. In my humble opinion were this preparation to be used freely in South Africa we would not read of many fatal cases of dysentery in the lists of casualties. I write this letter with all due deference to the profession; perhaps you may deem it suitable for insertion in your valuable journal.

I am, Sirs, yours faithfully,

J. E. B. PARSONS, Major-General, I.S.C.

Southbourne, Hants, Dec. 21st, 1901.

⁂ Bael in the treatment of dysentery has long been well known, and it has been, and still is, frequently prescribed in India. Preparations of the fresh fruit should be used, other forms of it being comparatively inert. Squire and Sons of 413, Oxford-street, London, obtain the fresh fruit direct from India which they keep in the form of a confection. As we are occasionally asked about bael we may say th this preparation of it is a good one and it is occasionally found to of use in some of the chronic forms of dysentery met with in the who have contracted the disease abroad and returned to this countr For those desirous of trying this remedy the confection makes palatable and pleasant form in which to prescribe it.—ED. L.

◆

*For 35 Years a Subscriber.*—1. Yes; the statement that "when t income exceeds £160 but does not exceed £400 a year, an abateme of £160 may be claimed," is quite correct. The abatement should claimed each year on the same form as that on which the annu return of income is made—the usual six-page buff form. 2. N repayment cannot be claimed for all the years of overcharge—thr years is the limit. 3. Apply to the Secretary, Inland Reven (Repayment Branch), Somerset House, London, W.C., for the nece sary forms, if it is decided to make a claim for repayment.

*Doubtful.*—The fee would in this case be chargeable to the patient father who called in the medical man and made use of his servic Such fee is usually one guinea, but, if the circumstances of the ma do not permit of his paying it, a lower fee, usually half a guine is often charged. The magistrate may be appealed to if the ma declines to pay and an order for payment can then be secured, to presented to the clerk to the board of guardians in whose jurisdi tion the patient is.

*L.R.C.P.*—We could not possibly act as agents in the matter. O correspondent might write to the Society of Authors, 39, Old Queen street, Storey's-gate, S.W.

*Materfamilias.*—Fifty-one years ago. A new edition has just bee published by Messrs. John Murray, in a paper cover, admirabl printed, price 1*s.*

*X. Y. Z.*—Cold baths are certainly inadvisable in the circumstance described by our correspondent.

*M.I.C.E.*—We do not think that our correspondent's theory will hol water at all.

*Gec.*—The question is purely legal.

COMMUNICATIONS not noticed in our present issue will receive attentio in our next.

# Medical Diary for the ensuing Week.

## OPERATIONS.

### METROPOLITAN HOSPITALS.

**MONDAY** (6th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.) St Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M. Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M. Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-squar (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M. Gt. Northern Central (2.30 P.M.) West London (2.30 P.M.), Londo Throat (2 P.M.).

**TUESDAY** (7th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), West minster (2 P.M.), West London (2.30 P.M.), University Colleg (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throa (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. an 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

**WEDNESDAY** (8th).—St. Bartholomew's (1.30 P.M.), University Colleg (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cros (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's Colleg (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M. National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samarita (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Norther Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M. London Throat (2 P.M.), Cancer (2 P.M.), Throat, Golden-squar (9.30 A.M.).

**THURSDAY** (9th).—St. Bartholomew's (1.30 P.M.), St. Thomas' (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlese (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-Wes London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæco logical, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.) St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

**FRIDAY** (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt Northern Central (2.30 P.M.). West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.) Throat, Golden-square, (9.30 A.M.), City Orthopædic (2.30 P.M.).

**SATURDAY** (11th).—Royal Free (9 A.M. and 2 P.M.), London (2 P.M.) Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University Colleg (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary (10 P.M.), London Throat (2 P.M.), Throat, Golden-square (9.30 A.M.

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmi (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and th Central London Ophthalmic Hospitals operations are performed daily.

## SOCIETIES

**TUESDAY** (7th) —PATHOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W ) —8 30 P M Dr Poynton and Dr Paine: The Experimental Production of the Osteo-arthritic Variety of Rheumatoid Arthritis —Dr A L Eastwood: On the Occurrence of Supra renal Rest Tumours in the Pelvis —Mr L H McGavin Multiple Osteomata —Mr H L Barnard Specimens of Intestinal Obstruction from Gall stones —Dr Fairbairn Renal Tumour —Dr Fennell: Congenital Malformation of Heart A Card Specimen will be shown by Dr Thursfield

**WEDNESDAY** (8th) —DERMATOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W ) —5 15 P M Demonstration of Cases of Interest

SOCIETY OF ARTS —5 P M Sir Henry T Wood, Photography and its Applications (Juvenile Lecture )

**THURSDAY** (9th) —BRITISH GYNÆCOLOGICAL SOCIETY (20 Hanover-square, W ) —8 P M Annual Meeting The President Valedictory Address Specimens will be shown by Dr J A Mansell Moullin and Dr F Purcell

**FRIDAY** (10th) —CLINICAL SOCIETY OF LONDON (20 Hanover-square W ) —8 30 P.M Papers —Mr A W Mayo Robson The Radical Treatment of Chronic Tuberculosis of the Intestines —Mr F P Paton A Case of Hair ball removed from the Stomach of a Child of nine years —Mr H W. Page Two Cases of Arthritis of the Knee and Leg with an Investigation into the Pathogenesis by Dr A Paine and Dr F J Poynton

INCORPORATED SOCIETY OF MEDICAL *OFFICERS* OF HEALTH (9 Adelphi terrace W C ) —7 30 P M Meeting 8 P M Dr D S Davies Plague Exclusion and Control

LARYNGOLOGICAL SOCIETY OF LONDON (20 Hanover square W ) —4 30 P M Annual General Meeting 5 P M Ordinary Meeting Cases and Specimens will be shown by Dr Bronner Dr S Spicer Dr Thorne Dr Horne Dr Sharman Dr Milligan and Dr StClair Thomson

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION (11 Chandos-street Cavendish square W ) —4 P M Cases will be shown and papers read by Mr C Wyles Dr W Wingrave Mr A Thorne Mr Lennox Browne Mr M Collier, and others

## LECTURES ADDRESSES, DEMONSTRATIONS &c

**WEDNESDAY** (8th) —CENTRAL LONDON THROAT NOSE AND EAR HOSPITAL (Gray's Inn road W C ) —8 P M Dr Abercrombie Nasal Diseases with Obstruction

**THURSDAY** (9th) —THE HOSPITAL FOR SICK CHILDREN (Gt Ormond street W C ) —4 P M Dr Fennell Pathological Demonstration

## EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "To THE EDITORS, and not in any case to any gentleman who may be supposed to be connected with the Editorial staff It is urgently necessary that attention be given to this notice

*It is especially requested that early intelligence of local events having a medical interest or which it is desirable to bring under the notice of the profession, may be sent direct to this Office*

*Lectures, original articles, and reports should be written on one side of the paper only* AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR AND IF POSSIBLE OF THE ARTICLE SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION

*Letters, whether intended for insertion or for private information must be authenticated by the names and addresses of their writers—not necessarily for publication*

*We cannot prescribe or recommend practitioners*

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*Letters relating to the publication sale, and advertising departments of* THE LANCET *should be addressed "To the Manager"*

*We cannot undertake to return MSS not used*

## MANAGER'S NOTICES.

### THE INDEX TO THE LANCET

THE Index to Vol II of 1901 which was completed with the issue of Dec. 28th and the Title page to the Volume are given in this number of THE LANCET

### VOLUMES AND CASES

VOLUMES for the second half of the year 1901 will be ready shortly Bound in cloth gilt lettered price 18s, carriage extra

Cases for binding the half year's numbers are now ready cloth, gilt lettered, price 2s, by post 2s 3d

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## METEOROLOGICAL READINGS

*(Taken daily at 8 30 a m by Steward's Instruments )*

THE LANCET Office Jan 2nd 1902

| Date | Barometer reduced to Sea Level and 32° F | Direction of Wind | Rain fall. | Solar Radia in Vacuo | Maximum Temp Shade | Min Temp | Wet Bulb | Dry Bulb | Remarks at 8 30 A.M |
|---|---|---|---|---|---|---|---|---|---|
| Dec 27 | 29 51 | W | | 48 | 41 | 33 | 33 | 34 | Foggy |
| " 28 | 29 53 | S W | | 50 | 49 | 34 | 39 | 41 | Raining |
| " 29 | 29 13 | S W | 0 27 | 66 | 62 | 41 | [illegible] | 44 | Cloudy |
| " 30 | 29 54 | S W | 0 37 | 64 | 56 | 44 | 52 | 57 | Raining |
| " 31 | 29 90 | S W | 0 12 | 57 | 53 | 52 | 53 | 53 | Raining |
| Jan 1 | 29 82 | S W | 0 05 | 63 | 52 | 45 | 44 | 46 | Cloudy |
| " 2 | 29 27 | S W | 0 21 | 66 | 51 | 45 | 44 | 4 | Cloudy |

**During the week marked copies of the following newspapers have been received** —*Cambridge Chronicle Macclesfield Courier Glasgow Herald Dundee Advertiser West Sussex Gazette Macclesfield Times Lincolnshire [illegible] [illegible] Advertiser Bolton Chronicle, Liverpool Mercury Manchester Evening Mail Bell's Messenger Middlesborough [illegible] Birmingham Post Aberdeen Free Press Yorkshire Post Cardiff W Mail Sheffield Independent Sussex Daily News Walton Gazette Wiltshire Mirror Bradford Observer Morning Post Essex Herald Birmingham Argus Newcastle Journal Cambria Leader Hereford Mercury Exeter Times Penrith Observer Sheffield Daily Telegraph, Bristol Mercury Dublin Express Darlington Star Citizen, [illegible] Pioneer Mail Huddersfield Examiner Scotsman Times of India [illegible] Sanitary Record Local Government Chronicle Mining Journal Merthyr Express Hertfordshire Mercury Burton Chronicle [illegible] London Advertiser North Herald [illegible] Telegraph Hartlepool Mail Brighton Gazette Kent Examiner Suffolk Chronicle York [illegible] Observer (North Wales) Sheffield and Rotherham Independent Surrey Advertiser Salisbury and Winchester Journal Local Government Journal &c*

## Communications, Letters, &c., have been received from—

**A.**—Mrs. Dexter Allen, Oxford; Apollinaris Co., Lond.; A. M. G.; A. G. M. G.

**B.**—Mr. C. Birchall, Liverpool; Mr. F. A. Brockhaus, Lond.; Messrs. Foster Brown and Co., Montreal, Canada; Dr. J. M. Barbour, Hill Grove, Wells; Miss Bagshawe, Wormhill; Mr. Brocklehurst, Weymouth; Mr. W. H. Best, Ilford; Messrs. Baillière, Tindall and Cox, Lond.; Mr. A. Hamilton Burt, Brighton; Messrs. Burroughs, Wellcome, and Co., Lond.; Mr. A. E. Barker, Lond.; Mr. Georg Bondi, Berlin; Sir W. H. Bennett, Lond.; Mr. J. B. Bamnolkar, Ahmedabad; Messrs. G. Barth and Co., Lond; Mr. F. Barraclough, Leeds; Mr. S. H. Benson, Lond.; Messrs. F. Bagger and Co., Lond.; Mr. W. B. Bennett, Aigburth; Mr. C. L. Bedford, Birmingham; Mr. G. B. Browne, Lond.

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**I.**—International Plasmon, Lond.; Irish Medical Association, Hon. Secretary to.

**J.**—Messrs. W. and A. K. Johnston, Edinburgh; Mr. W. Jones, Ruabon; Joint Counties Lunatic Asylum, Brecon, Clerk of, Mr. A. Jones, Birmingham.

**K.**—Mr. R. C. B. Kerin, Lond.

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**T.**—Mr. W. E. Tarbet, Ledbury; Tottenham Hospital, Clerk of; Taunton and Somerset Hospital, Accountant of; Mr. W. Thorp, Limerick; T. J. C.

**U.**—University of London, The Principal of; Mr. H. Upwell, Lond.

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**Y.**—Mr. T. Young, Exmouth; York County Hospital, Secretary of.

## Letters, each with enclosure, are also acknowledged from—

**A.**—A. H. M. M.; A. B. S.; Messrs. Allen and Hanburys, Lond.

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**Z.**—Messrs. A. and M. Zimmermann, Lond.

# A Presidential Address

ON

# SOME DISEASES INCIDENTAL TO SCHOOL LIFE IN NEW ZEALAND, WITH SUGGESTIVE METHODS FOR COMBATING THEM.

*Delivered before the Members of the New Zealand Branch of the British Medical Association at their Annual Meeting at Wanganui.*[1]

BY G. R. SAUNDERS, M.B., B.C. CANTAB., &c.

MR. PAST-PRESIDENT AND GENTLEMEN,—In acknowledging the honour you have done me in electing me as your President a feeling of satisfaction and anxiety is very apparent to me—satisfaction that things have so befallen me that you should consider me worthy to preside over your deliberations, and anxiety that the debt which I owe you in return will, in all probability, be poorly and inadequately repaid. I have chosen for my address a subject that I have long considered ought to be fully ventilated—a subject that concerns all Britishers—a subject which pertains to the gospel of flesh and blood, the gospel that has made England and the gospel that will maintain Greater Britain in the future—viz., attention in every detail to our rising generation.

There is no doubt that the State can soon discipline its men if they are of the right sort, but the problem that lies nearer to us as members of the medical profession is to do all we can to encourage those ideas which we know full well will build up the stamina of the race and which, if carried out, will tend to give the nation healthy men and women fit to play their parts as individuals, as units of a nation, and as the breeders and rearers of the future representatives of Great Britain and her colonies. Herbert Spencer indeed aptly put it when he wrote: "To be a nation of healthy animals is the first condition of national prosperity." The object of my address to-night is not to tell you anything new on the subject, but to endeavour to keep this, to my mind, most important theme ever green before you, and to endeavour in this way, by perseverance, patience, and determination, to bring the subject by degrees—if by no more rapid movement—prominently before the existing authorities until the end has been accomplished. It is only at our annual conferences that such opportunities arise, for, like the stewards of the English Jockey Club, the members of the medical profession do not, as a rule, write to the newspapers airing their thoughts and grievances. The English Jockey Club through their stewards speak out their minds on affairs connected with the Turf from time to time at the annual dinner of the Gimcrack Club which has been held at York for the past 134 years. This is the opportunity embraced by those interested reformers in Turf pursuits to express their thoughts, to make suggestions, and to criticise shortcomings generally. During the past few years marvellous Turf reforms have resulted as a sequel to these expressions, and great benefit in the way of purifying the Turf of many objectionable practices has come about. Now this conference gives us the same opportunity of doing so from a medical standpoint. We are all by the nature of our calling very apt to get into grooves, but in attending gatherings such as this in which we now have the privilege of taking part we are forced out of the groove. We amend views which by necessity tend to become parochial and accordingly regain our power of observation and correct thought. The gain is, therefore, all round to our advantage and to the advantage of our patients. It consequently comes about that the laity look to conferences such as this our annual gathering to speak with an authority such as no individual can exercise on any question which affects the public welfare, and to give such advice and solemn warnings as may assist the real lay reformer to check the evils which we happen to place before him, and especially those which are likely to affect generally the health and development of the nation as a whole and of its rising generation in particular. I feel, therefore, that it is my duty to do something in this direction and I cannot, I think, do better than follow in the wake of some of my immediate predecessors in the presidential chair in choosing as a subject the following: "Some Diseases Incidental to School Life in New Zealand with Suggested Methods for Combating Them." This subject, I feel sure you will all agree with me, is one of great seriousness and includes a vast variety of diseases. My object is to draw your attention to but a few of them—for the time at my disposal is limited—those which in my opinion are of paramount importance.

## THE EYESIGHT OF SCHOOL-CHILDREN.

In the first place, the question of eyesight in schools is one of the highest interest and demands great attention. There can be no possible doubt whatever, it appears to me, that abundant and convincing evidence exists that the vision of school-children, which should apparently under normal conditions have remained sound, is constantly deteriorating during the epoch devoted to school life. Expanded knowledge explains why it comes about that we see so many children and youths walking about with spectacles at the commencement of the twentieth century than was formerly the case. As a matter of fact, the eye in youth is often asked to perform tasks which it cannot possibly accomplish. There was a time when distant vision was the only sight required, that for near objects being trivial in comparison to it; but general civilisation has completely altered this state of things and the existing condition is now exactly the opposite—viz., the eyes are now used almost constantly for near objects and that for distance only occasionally in proportion to the past. The long hours of study that even little children spend over work close to their eyes is the cause which brings us to the opposite extreme. The means by which the eye accomplishes this close work is of course entirely muscular, and when "focussing" is undertaken for a near object convergence of course accompanies it. The growth, development, and the functional activity of the eyes, as of other bodily organs, are influenced by the amount of work which they are called upon to do. The normal or emmetropic eye is so constructed as to obtain perfect distant vision of objects not less than 20 feet away. There is, then, no individual adjustment, and therefore it is in a passive condition as regards its fellow. As this distance is diminished the eyes assume in a constantly increasing ratio an altered shape and direction, and this can only be accomplished by muscular effort obtained by increasing the convexity of the internal lens. The result is that weariness will ensue just in the same way as an overtaxed biceps becomes weary.

*It will not be difficult to show that the process of ordinary* scholastic education, as applied to the young, or the circumstances associated with higher civilisation, tend to the production and promote the handing down to offspring of eyes of an inferior type. Indeed, the ordinary methods prevailing in schools of imparting knowledge promote the alteration in the shape of the eyeball produced by long convergence. It follows, then, that eyes of an inferior type or of faulty shape, when subjected to undue convergence strain, are more liable to suffer injury than are those which are of normal proportions and of natural acuteness of vision. In the face of such circumstances it is not unreasonable to come to the conclusion that many schools are manufacturers of defective vision. This question, as you will recollect, was first investigated by Cohn of Breslau, who examined 10,060 scholars and who published the results as far back as in 1867. Among the whole number he found 1072, or more than 10 per cent., short-sighted, and he found that the short sight increased steadily both in numerical prevalence and degree as the school life was persevered with, being less frequent and least pronounced in the elementary schools, more frequent and more pronounced in the intermediate schools, and most frequent and most pronounced in the finishing schools. His investigations have been since repeated by numerous observers in all parts of the world, with the result that notwithstanding variations in the percentage found in different localities the general statement made by Cohn concerning the progressive increase of short-sight in school-children, both in amount and degree, has been abundantly verified. Such an examination, as far as I can learn, has never been made in this colony, but each one of us is frequently meeting within our daily practice instances of defective vision in school-children. It is our duty, I think, as medical men, for the well-being of our colonial youth, to express our views clearly on the subject and to make suggestions whereby the abuse may be met. Dr. H. Lindo Ferguson of Dunedin in a most interesting paper read by him at the Inter-colonial Medical Conference, in the section connected with the eye, ear, nose, and throat, held in 1899 at Brisbane, came to the conclusion that in New Zealand the children attending schools were comparatively free from myopia, that for every case of myopia he observed more than 10 hypermetropes whose eyes had from one cause or another failed during school life, adding that "this freedom from myopia in New Zealand is not in any way due to special precautions on the part of the authorities to prevent it. ...... I can only consider that the small percentage of myopia is due to racial immunity from the condition." Mr. Brudenell Carter's statement to the Education Department in England in 1896 comes to the same conclusion, for he found that the ordinary refractive condition among 8000 children examined was hypermetropia. Mr. Priestley Smith in Birmingham found about 5 per cent. of short sight among 2158 school-children, the great majority being between the ages of eight and 11 years; but among 357 students in training colleges, persons taken from the same class, or nearly so, as the children, and of ages ranging from 18 to 23 years, he found short sight in 72, or what comes to 20 per cent. Mr. W. Adams Frost as a result of his examination of a South London board school found that 9·6 per cent. so suffered and Mr. Roberts has published the result of an examination of 596 boys held at Marlborough which made the percentage even higher still.

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[1] The MS. of this paper has, owing to misfortune in the post, made three journeys between New Zealand and London before reaching us.—ED. L.

I do not propose to weary you by going into the pathological changes taking place in the eye as a result of carelessness in correcting (or doing nothing to assist) such conditions of refraction. Myopia is not only a most serious defect (although it is, curiously enough, a vulgar error to suppose that such a condition is more of a blessing than a curse), but it is a disease the nature of which is quite beyond our art to cure. At the same time, it is to an immense extent preventable and unless its progress can be arrested the eye must soon lapse into a condition of grave jeopardy. "Hypermetropia is congenital; myopia acquired." This statement is nearly correct, for myopia is but very seldom found in newly-born infants. The refraction of babes, as has been demonstrated by Horstmann, Ely, and others, is, pathologically speaking, that of constant hypermetropia. This condition alters and passes gradually into the emmetropic eye, or remains hypermetropic, or it passes into the myopic condition; the later state generally about the eighth year. Indeed, the myopes are recruited constantly by eyes which have passed over into this group from the hypermetropes.

Now it has been clearly established by the evidence set forth from statistics that defective vision is induced during the whole period of school life, and that children entering school with healthy eyes have developed faulty vision, and that the proportionate number of the scholars affected increase as we ascend in the classes and also in the grade of the school. Besides these undoubted facts regarding the effect on the eyes themselves the general nutrition and well-being of the body is sure to suffer on account of the necessity of bringing the eyes close to the work. The neck is bent forward, the chest cannot expand freely, and therefore the blood becomes imperfectly aerated. The brain will, after a time, not be supplied with healthy blood, and the bodily and mental vigour will accordingly suffer. This will explain how it comes about that such a large proportion of our New Zealand children appear to suffer from hypermetropia, due to defective nerve force for the accommodative effort, with pain in the eye and the supraciliary region.

The present South African war will of necessity call great attention to the eye. Indeed, the habit of seeing accurately is itself an education—it is the very best feeder of memory, and nobody with a perceptive eye can possibly be a dunce It is the duty, therefore, of a teacher to know how well or how ill each one of his pupils is provided with "eyes," because they are the chief portals through which instruction must be conveyed to him.

I will now pass on to consider what are the influences which act injuriously on the eyesight of school-children and what can be done to combat them.

The chief causes leading up to this defect are long continuance of close work with imperfect light, a stooping posture, work with brain and body fatigued, and indifferent type in the books perused. Mr. Bullar has recently drawn up tables with which it would be easy for any master or mistress to make a preliminary test which would hardly allow any serious defect of sight or high degree of hypermetropia to escape detection. The apparatus required for both tests is (1) a set of test types made for his tables by Curry and Paxton of London for the first and for test No. 2 a pair of spectacles with round glasses one and a half inches in diameter, with lenses + 1·5 D. The directions for the first of these tests are as follows. 1. Fix the card of letters in a good light which should be daylight. The child should stand with his toes on a chalk line 20 feet from the card. 2. Cover the child's left eye first and let the child attempt to read the rows of letters on the card from the top downwards. Enter in the column arranged for the purpose—viz., Column 6 (the first five columns being the number of the case, the date, the teacher's initials, and the name of the child)—the number which is printed on the test line of letters which the child can read perfectly. 3. Cover the right eye and enter in Column 7 the same particulars. As regards the second test, let the child put on the glasses and let the following directions be observed. 1. Cover the left eye (over the glass) and let the child read as previously and enter under Column 8 the number over the last line which he can read. 2. Cover the right eye similarly and proceed as before and enter in Column 9. Let the teacher note if the child may chance to see better with the glass or worse, or that the glass may make no difference. Now it is obvious under this simple examination that the first test excludes all practical important defects except long sight and that long sight is controlled by the second test. Column 10 is for the teacher's remarks on these tests, such as "cannot read well" or "has a squint," or the noting of any abnormality of the eyelids or eye, and the last column (11) is intended for the use of the medical man connected with the school, to whom the tables are sent when they are filled up. The tables are, of course, merely intended to ascertain the existence of defects of vision and not their nature. Such a test should be used in all schools, and the teacher should inform the parents of those children whose sight appears to be defective. If this were carried out we should see fewer cases of young men (as Mr. Bullar says) disqualified by defective sight after having suffered the process known as "cramming" for the army and navy, and, I may add, in New Zealand for employment which is quite unsuitable for them, in the railway department and in the marine service, in both of which services I regret to say that I have during the past few years been compelled to refuse the issue of certificates on account of various errors of refraction, especially to young men who have just left school.

### SCHOOL-ROOM REQUISITES.

In a school-room a good light is absolutely necessary, for a room which is badly lighted necessitates a close approximation of the pupil to his book and a still closer approximation for writing. What is very necessary, too, the light should be properly directed, for it will be of no avail, even if a room be well lighted as far as quantity goes, if the child be placed so that he reaps no proper advantage from it. It is well-nigh impossible to act up to the ideal in this direction, which would be to light all school-rooms from the roof. There can be no doubt that light proceeding from the left is to be insisted upon, because the very best position for anyone is to have the light passing over the left shoulder and somewhat behind. Light passing from the right must be objected to, because from the position of the right arm on the desk the point to which the attention of the scholar is directed is cast into the shade, and this is the exact spot where a really good illumination is imperative. No artificial light can replace daylight for the purposes of study, but when required artificial light should be abundant and steady; a flickering light is both fatiguing and dazzling, and if placed near to the eye the heat given out occasions great discomfort and is of course injurious. I understand that the electric light is now almost universally used in all high-class schools in England, for it is found that a room can be lighted up to an equal degree on all the desks by an arrangement of concave mirrors which throws the light up to the ceiling and is thus diffused equally through the room.

As to the desks and seating of the scholars, a bad posture is not only injurious to the eye but it is a frequent source of crooked spine. Eulenburg states that "90 per cent. of cases of curvature of the spine, not induced by local disease, are developed during school life; ...... that in a school at

Neuchatel among 381 girls 156 were found to have a more or less deviation of the spinal column" The proper seating of school children becomes, therefore, a very important *subject and of late years has received very great recognition* In the Paris Exhibition of 1867 only three school desks were shown, while in a recent one there was more than 70 displayed The manner in which the spine becomes distorted in sitting at a desk in a bad position—on a backless bench—can be readily demonstrated by any observant teacher by inking the spinous processes carefully and then placing the boy or girl at the desk in a faulty posture, the altered contour of the spinal column will at once be apparent A backless bench must be condemned, and desks and seats should be readily regulated according to the size of the pupil *Our object is to prevent undue approximation of the* scholar to the lesson book and at the same time to avoid stooping To bring this about the following essentials are emphatically necessary A back rest should be provided because a child will not sit for long upright The "rest' should reach up to the lower part of the back and no further If it did so it would interfere with the movements of the body and would favour a negligent reclining posture A footboard, too, should be provided if the scholar cannot easily reach the floor with his feet, because if his feet are compelled to "dangle" fatigue will ensue Indeed, the height of the seat, the desk and its slope are now attended to most carefully in all schools in England The slope for writing should be between 15 and 20 degrees, and for reading it should be 40 degrees Delay in establishing this desideratum in the schools of New Zealand should, in my opinion be regarded as mischievous In early life of course the bones are soft and easily moulded and even a slight but constant pressure brought to bear on them—be it ever so little out of the normal lines—may produce irremediable deformity It is consequently of the utmost importance that the desk, the form, the book, and the light should be so arranged that the scholar may have command over the subject in hand without fatigue and also without being compelled "to loll about" into vicious attitudes The pupil ought to sit equally on both buttocks, the head should be erect and the spine straight, and no unusual bending forward of the body should be permitted The forearms should be upon the desk about halfway to the elbows *This is the correct attitude* and should be insisted on The seats and desks as at present used are inadequate, because the present seating arrangement for the scholar prevents him from sitting correctly at work As a matter of fact, the only time the back rest is now used is when the pupil sits "idly" on the seat That there is great room for improvement in this direction is obvious, for the best possible posture should always be maintained while sitting, whatever the occupation of the moment may be The Glendinning adjustable modern school desk and seat will be found most beneficial for school children and even for many adults

As regards special dealing with the subject of early lateral urvature of the spine all that is necessary for me to say is hat the deformity should not be allowed the opportunity of making its appearance If it be slight immediate medical dvice should be sought and its further advance checked by n alteration of the level of the seat, and by absolutely orbidding study in the malplaced position, by joining in ut door games, and by methodical exercises of a suitable haracter with dumb bells or chest expanders All these xercises should be undertaken to the point just short of atigue, followed by rest on a cane deck chair with a sloping ack, which makes an ideal couch for a boy or girl so roubled.

### SCHOOL WORK

The mischievous influences which I have now mentioned vill act with greater force if associated with bodily fatigue and verwork, and more especially so if it be excessive brainwork t leads up to nervous exhaustion in which girls (especially etween the ages of from 12 to, say, 16 years) obviously suffer nost." Our present system of education entails much xhaustion and must cause us *to contemplate* as to what the esults will be, not only to the children in their adult life ut also to their children and the generations coming after hem Observant visitors to this colony, and more especially hose from England, are immediately struck with the number of our colonial girls who suffer from anæmia, and he cause of this condition will probably be found in our educational system and its general surroundings among the poorer classes Excessive hours of study mean extra strain The intervals of rest in the hours of study, even if short, should be frequent, and, what is of the very utmost importance to children, there should be a really good substantial midday meal *How many of our country school children get it? Many of them start the day's work by milking cows* before breakfast They hurry over this meal and run or ride to school—often a considerable distance—with their dinner, consisting of a few slices of bread and butter, in their satchels They work at their lessons far too long and walk or ride home weary and played out only to resume "preparation" for the following day after what is known as "high tea." As a matter of fact, I know, from evidence which I can rely upon, that children actually fall to sleep during school hours owing to real fatigue due to overwork, in the milking districts of this colony No wonder then that we see so many cases of *nervous instability, indigestion, carious teeth, and anæmia* in our colonial youth Apart from this cause the evil is first, the promotion of children from standard to standard by examination and secondly, the system of educational scholarships given in the primary and all of the secondary schools Under this system there is a tremendous temptation offered to teachers to "cram" their pupils for the annual examinations, seeing that their reputation as teachers depends on the percentage of their pupils who pass the examination The system of cramming is to be most heartily deprecated, for it can only lead to evil results You all *remember what the boy said* when he was asked by his mother, "What has become of your little brother?" "We were playing, he said, "to see who would poke his head furthest out of the window, and he won" Some triumphs are bought too dearly, since they are not likely to be repeated. I learn with great pleasure that something is now being done by the Education Department to check this terrible evil, and I trust that the measures adopted will be drastic There is no doubt that scholarships will continue to be competed for, and theoretically the system is all right, but its effects are extensive and in a variety of ways undesirable. We all appreciate the great advantages that the Education Boards in this colony offer to those children of the settlers in remote parts who show the ability for it, but it really means that if one or two boys (or girls) in a school are entered for one of these scholarships the rest of the class have to do the same work Consequently the penalty is paid by the rest of the class who are doing more work than they are able to do, and the result is that they may break down or become lazy spectators, seeing that they cannot digest the work of this standard These children unconsciously are really wise in their generation because they are reserving their bodies and minds for future use Nor does the evil end here because the class immediately below has to be prepared to take up the work of the scholarship class the following year, and the general standard of the whole school even down to the little ones, is regulated by an examination for which in all probability they will never enter As you all know, these Junior Education Board scholarships in the primary schools are only open to children under 13 years of age and failure in the Junior does not (provided the candidate obtains about 65 per cent. of the marks) debar them from competing in the Senior with the three years more education at school that it represents, and consequently those who have failed to obtain the Junior are during this interval straining every nerve to obtain the Senior prize which gives them their only chance of proceeding to a university career

Now, if one looks carefully into the course of study set for the highest class with the object of proceeding to a university degree in a girls' college or high school in New Zealand it means practically that when they have passed through it they have really aimed at a standard higher in some respects than that necessary for a pass B A degree. As a matter of fact, it is much more difficult to obtain a junior university scholarship in New Zealand than it is to proceed to a B A. degree which students are not supposed to reach until after a course of three years' extra study at the university In a recent issue of THE LANCET the statement was made that at the last B A. examination connected with the University of London (at which the average age of the women candidates is 23 years), out of 71 candidates 17 were manifestly anæmic (i e, 25 per cent.), 15 wore spectacles, and some 20 stooped or sat twisted or crooked, the reason being that the course of study is entirely sedentary

An odious system is prevalent in some schools It is the practice of pouring in a mass of undigested knowledge which is allowed to remain untested until the objectionable monthly or quarterly examination comes round. It is a sure sign of want of organisation and defective teaching. Every well-given lesson consists partly of teaching and partly of testing by cross-examination. Let the teacher revise the work done by all means, but do not subject the pupils to harassing and unreasonable examinations. The system adds extra strain on the child and only encourages cramming.

Now what is to be done to check these evils? I found that I could not answer this question to my complete satisfaction. I therefore consulted Miss Fraser, the head-mistress of the Wanganui Girls' College, a lady renowned for her organising capacity. Miss Fraser and her lady assistants are well known throughout the colony for their wonderful successes in the open competitive examinations and for at the same time keeping their girls in the very—to use a sporting phrase—"pink of condition." This is the ideal to aim at. Miss Fraser, to whom I am much indebted for her communication, has kindly permitted me to use her reply, which was as follows:—

Girls' College, Wanganui, Feb. 26th, 1901.

Dear Dr. Saunders,—You have asked me to give an opinion as to how the evils incidental to unwise competition for scholarships may be checked. I give my answer with a certain amount of diffidence and first shall strive to classify what have seemed to me the chief causes of evil in cases where harm has resulted from competition. The following covers all the cases I have known. 1. Poor physique on the part of candidate. 2. Undue ambition of parents forcing a child to take up work beyond its mental powers. 3. Unskilled teaching power and weak organising power on the part of teachers. Cause 1 might, I think, to some extent be met by requiring from candidates a medical certificate as to fitness. The drawback to this is that medical men as a body are so tender-hearted that they grant certificates when the ordinary lay observer would judge them unwarranted. Cause 2. Parents are usually very amenable to reason, and a word of advice from the head of a school is rarely taken amiss if sensibly given. Cause 3 is the most fruitful of all causes. In New Zealand there is absolutely no provision for the training of secondary teachers, most of whom approach their work with no conception of the laws regulating the human mind, very many of whom are without the sympathetic insight into mental processes that is much better than knowledge of mere laws. These teachers, having no idea of *training* minds and developing natural powers, simply pour in knowledge in a more or less crude form till the poor brain becomes clogged and breakdown follows. The obvious answer, then, to Cause 3 is that there is urgent need for more intelligent teachers.

Perhaps you will permit me to say that so far as my experience goes cases of illness are at least three times as numerous among the girls who do little as among the girls who do much work. This is, of course, as it should be, for the least work is given to the least fit. I merely state the fact for the sake of showing that mental work, properly regulated, does not lead to an undue proportion of sickness among the workers. The most exacting examination of our country is that for junior scholarships in the University of New Zealand, but suitable candidates can prepare successfully for that while never touching a book after eight or half-past eight in the evening and while spending at least three hours a day in the open air. With cricket, hockey, tennis, basket ball, gymnastics, swimming, croquet, cycling, and photography to keep the body in good condition it is surprising how much work a bright mind can accomplish. Trusting that my answer is not too lengthy,

I am, yours sincerely,
(Signed) M. I. Fraser.

The more I have contemplated over this letter the more satisfied I am that the writer's opinion is accurate. Not very long ago, in connexion with the examination for medical degrees in one of the British universities, it was remarked by someone in authority that examiners ought to be "angels from heaven." Probably the authority in question meant in wisdom and graces rather than in the possession of special medical knowledge. A similar idea must have entered not infrequently the minds of parents and guardians. There is, I believe, a real need—not so acutely felt as it should be—for the education of the educators. It is said, with a wise neglect of mathematical accuracy, that every child who is brought to a hospital on account of chorea has received physical punishment on at least three separate occasions—once for general restlessness and naughtiness, again for breaking crockery, and a third time for making faces at his grandmother. How often has an unfortunate child suffering from enuresis been subjected to active discipline on account of a supposed moral defect termed "laziness," when the real defect that needed a direct remedy was the over-acid condition of the secretions? How often has physical castigation been applied by affectionate friends to so-called hysterical children who are really passing through a post-epileptic state? It has been stated, somewhat dogmatically perhaps, that if we knew everything we would forgive everything. And it might equally well be said that if we knew everything we should actually punish the ordinary child little or not at all. You recollect what Sir Samuel Wilks—when called in consultation to see an imbecile child who had been given all sorts of medicines, some presumably atrocious in flavour, by the conscientious person in attendance—*asked*, if it was expected thereby to produce an additional cortical convolution. "One of the early steps in the wise education of children is to recognise their limitations before exhibiting moral treatment."

There is no one who admires our army and navy more than I do, but the Imperial troops in one respect set our colonial boys a very bad example during their recent circuit through New Zealand. I refer to the absurdly tight-fitting uniforms worn by the officers and men. It is pitiable to see this existing at the commencement of the twentieth century, which prides itself on being civilised and scientific, for it is as certain as any proposition can be that the breathing organs and the limbs should have free play. One might expect such fads from foolish young ladies with pinched-in waists and wriggling gait engendered by that modern abomination of abominations, the abdominal corset, and the modern boot, which are regarded with so much contempt by all sensible men and women. There is now at the head of the War Office a strong, sensible, and practical man, and I venture to predict that ere long we shall note that Lord Roberts will revolutionise the attire of our soldiers even when on parade, for it is a known fact that if a number of soldiers and sailors take a long march on a sweltering day many of the former will fall out and not one of the latter.

### INFECTIOUS DISEASES IN SCHOOL LIFE.

Of all the absolute pests of school life, infectious diseases must be placed first and foremost. When a serious outbreak occurs the schoolwork for the time being is demoralised. I consider that in all boarding-schools an infectious ward, isolated far away from the main building, should be insisted upon, because if this provision be made any suspicious case suddenly arising can be immediately isolated and its accurate nature soon determined upon and the necessary precautions taken. How many boarding-schools in New Zealand have such a ward? The so-called infectious ward is generally placed in, or is really a part of, the main building. The usual rules concerning infectious cases occurring during the holidays should be strictly enforced. It ought to be regarded as criminal for any parent to send his son or daughter back to school who has recently been the victim of any of the exanthemata without a certificate from a medical man that everything has been done in every direction to make the pupil's return safe and secure. This is a course, I believe, which is not at the present time carried out as it should be.

### CARDIAC STRAIN IN SCHOOL-CHILDREN.

Cardiac strain is met with in school-children. It causes sudden definite and occasionally alarming symptoms which need special attention at the moment and care also of a continuous nature during school life. Many of these cases are, I am satisfied, "cured" by care; but, if neglected, they are prone to run a terribly rapid downward course. The question then arises, What kind of work and play may be permitted? Prognosis, of course, depends upon the valve involved, and the future line of action as to what rules and restrictions should be carried out must remain entirely at the discretion of the medical adviser, and these instructions must be rigorously enforced. In the majority of cases it will be found sufficient to exercise ordinary care, for the boy will be passing through the period of puberty when radical organic changes are being worked. As long as "compensation" keeps up and the bodily vigour is encouraged by suitable exercises "a prominent murmur, instead of sounding the death-knell, is a subject for congratulation," as Sir William Broadbent long ago pointed out. As a matter of fact, the pupil so troubled must not be kept in a glass-case; he should be encouraged to walk in the middle of the road, exercising his body according to his general condition and under the guidance, as I have already stated, of the medical adviser who will prescribe those exercises which are suitable and condemn those which are not. I attended a schoolboy about 10 years ago who had met with an accident, and in the course of my investigations I discovered a systolic murmur. I prescribed the usual routine of exercises suitable for him, but, like a boy, he soon forgot all about his trouble. In due course he went to Cambridge and it was only when he found that he had a certainty of rowing in the trial eights and a reasonable chance of getting into the Cambridge boat that the extra strain necessary for the occasion was brought home to him. He then, he told me, remembered my remarks, and, seeking advice, found it necessary to retire from the position which he had hoped to attain.

### DEAFNESS IN SCHOOL-CHILDREN.

A condition of deafness in school-children is occasionally responsible for what teachers, from want of knowledge, may consider to be gross inattention or stupidity on the part of their pupils, and many a poor boy and girl has been punished when no punishment ought to have been inflicted. We all know the "vacant expression" brought about by adenoids and nasal obstruction and the dull, stupid look of the child so often accompanied by deafness. These are evils which, if left to themselves, cause in many instances future disaster, and teachers should be acquainted with the characteristics of these complaints and report accordingly. I look upon it as criminal for any teacher to "box the ears" of his pupil; it is a most reprehensible practice and occasionally it leads to serious disaster. There are other places for inflicting punishment: the ear is to be respected. I have heard it said that teachers never act in this way now. I trust that this statement is a universally accurate one, but that some parents continue this barbarous practice is certain, for I have been an eye-witness of the atrocity quite lately.

This is no world for lazy, stupid, and indolent people. Unless a boy works honestly at school he will have in this era of competition but a poor chance in the battle of life as fought nowadays. Both boys and girls, especially of the poorer classes, should be placed under much greater parental control than they are at present. We would then hear of less sad cases of disaster occurring which are due in by far the majority of cases to this neglect.

### CONCLUSION.

Boys and girls should wear suitable boots. Boots and shoes too narrow and too short produce deformities of the feet which lead to physical misery in advancing years.

I originally intended to devote a considerable portion of this address to a consideration of outdoor games in schools. I find that I have already occupied too much of your attention and I will merely say that in the secondary schools of New Zealand and in the various colleges school sports of every description flourish. Immense advantages accrue to those engaging in them, for the moral influence of sport is to be regarded even higher than mere physical power and alertness. Outdoor games develop mutual control, command of temper, and honesty. It is a matter of satisfaction to find how much games are encouraged in our girls' schools. ootball, our most popular game, I believe, brings out all ie qualities that ought to be innate in a brave soldier. hat I think, to a large extent explains how it comes about iat our boys in South Africa have rendered such an xcellent account of themselves and have added lustre to ie "Britain of the South."

The age in which we live is one of keen international ompetition, and the prize must ultimately be gained by that ation which, possessing great physical vigour, natural esources, or acquired means of sustenance, finds its oppor-unity in equable development of mind and body, in strict dherence to that which is right, in patience and persistence, nd in the avoidance of all causes that lead to physical, aoral, and mental degeneracy, for evolution proceeds apace n nations as in individuals.

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**THE HEALTH OF LEICESTER.**—During the past l2 months the following certificates of infectious disease vere received for the borough of Leicester: Diphtheria, l080; scarlet fever, 764; erysipelas, 194; typhoid fever, l38; puerperal fever, 11; and small-pox, 4; total, 2191.

**LONDON HOSPITAL MEDICAL CLUB.**—A meeting of the London Hospital Medical Club and its annual dinner ook place on Dec. 31st, 1901, at the Café Royal, Regent-street, W. Dr. Albert S. Morton of Putney occupied the chair, and was supported by Dr Sansom, Dr. Herman, Mr. T H, Openshaw, and others Dr Morton, in proposing the toast of "The King" pointed out that His Majesty had peculiarly honoured the medical profession by accepting the Fellowship of the Royal College of Physicians of London and of the Royal College of Surgeons of England, and that so far as tuberculosis and cancer were concerned, the knowledge of the King was equal to that of any medical man present The company separated at 11.30 after a most enjoyable evening. The members of the club voted that a sum of 10 guineas should be given to the fund now being raised for the benefit of the family of the late Mr. William Smyth who so heroically sacrificed his life.

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# A Clinical Lecture

ON

# ACUTE SUFFOCATIVE PULMONARY ŒDEMA.

*Delivered in the Glasgow Royal Infirmary on March 8th, 1901,*

BY JOHN LINDSAY STEVEN, M.D.,
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I INTEND this morning to direct the class's attention to acute suffocative pulmonary œdema, an affection which may suddenly plunge the patient into the most acute agony, and in a short time place his life in the gravest jeopardy. Fortunately, it is a disorder which is but rarely met with, but on that very account it is necessary that you should be acquainted with its leading phenomena, in order that when a case does occur in your practice you may not be taken by surprise and may be able to do the most that may be done for the relief of the patient

Œdema of the lungs in its more chronic forms is a morbid state which is well known to, and easily recognised by, both the pathologist and the practical physician. It is, however, almost invariably a secondary or complicating condition the importance of which is quite subsidiary to that of the primary disease by which its incidence is determined. The chronic and even subacute forms of pulmonary œdema are usually met with in the course of cardiac, pulmonary, renal, and febrile diseases, and in the case of the specific fevers and diseases of the heart more particularly it is not infrequently associated with that passive hyperæmia of the lungs to which the name "hypostasis" is usually applied. The symptoms and the post-mortem appearances of this form of œdema of the lungs are very well known, and you will find them described in greater or less detail in all the well-known text-books of medicine Your attention has frequently been directed to the symptoms of chronic pulmonary œdema in the course of our ward visits

The affection of which I mean to speak, however, is of a different kind—at least as to its chief clinical phenomena. It can only be called "acute suffocative pulmonary œdema" and you will look in vain in most of your books for a description of it If you look through a sufficient number you will find here and there short references to acute œdema of the lungs, but no detailed descriptions. Some of these references indicate a condition similar to that of which I am now speaking, but it is difficult to be sure. Hilton Fagge[1] speaks of "an œdematous inflammation of the lungs which comes on acutely and without previous disease," and gives references to "marked and severe cases" which, however, he says, "are rare." On consulting the accounts of the cases to which he refers I find that they are hardly of the same character as that which I am about to describe. To our case the term "œdematous inflammation" would not apply, as you will shortly see Kingston Fowler[2] says that "cases are occasionally observed in which œdema of the lungs supervenes with remarkable rapidity during an acute illness of sudden onset" He relates briefly one case in which enormous quantities of frothy fluid were expectorated after three days of illness characterised by fever and pain in the chest. The nature of the case could not be determined and it was classified in the post-mortem reports under the head of "acute pulmonary œdema." Neither is this case similar in several particulars to those which I am about to relate. Strumpell[3] says: "In very rare cases, as we have seen, an apparently primary acute pulmonary œdema with a speedily fatal termination develops in men who were before that apparently perfectly healthy and the necropsy gives no further explanation of its origin. We probably have to do in these cases with the sudden failure of the left ventricle." Dieulafoy,[4] under the heading of "*œdème brightique du poumon,*" gives a detailed account of a case very similar to that which is the text of this lecture. The description given by this distinguished physician of his case of acute pulmonary œdema and his subsequent analysis and discussion of the symptoms are the most thorough and complete that I have met with. It is unnecessary to refer further to the literature of the subject and I shall now relate to you the clinical history of a very striking case of acute suffocative pulmonary œdema, as it is recorded in the ward journal. You have frequently examined the patient with me in the ward although you did not, as I did, see her in the depth of her agony. As the patient left for her own home in the North of Scotland yesterday I can now submit to you the full clinical report of the case, after which I shall recall to your memories the history of another patient whom you saw earlier in the session and who had several attacks of this affection—"*cette terrible complication,*" as Dieulafoy calls it—the last ending in death. Having described the cases I shall offer to you a few remarks on the symptoms, diagnosis, and treatment.

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[1] Text-book, third edition, vol. I., p. 1002.

[2] Diseases of the Lungs, p. 221.

[3] Text-book of Medicine, second American edition, p. 183

[4] Pathologie Interne, thirteenth edition, tome I., p. 282.

The following are the clinical notes entered in the ward journal by my resident assistant, Mr. E. H. Roberts:—

Case 1.—"A woman, aged 38 years, was admitted into the Glasgow Royal Infirmary in a somewhat collapsed and highly dyspnœic condition at 2 30 A.M. on Jan. 29th, 1901. She had retired to rest at 11 P.M. in her usual health. Shortly afterwards she felt that she could not get her breath properly, and attempted to improve matters by first lying on her left side, then on her right side, and lastly in the dorsal decubitus, but all to no purpose, the difficulty of breathing becoming rapidly worse. The dyspnœa was increased in a short time by frothy material coming up her throat which was chiefly whitish and at times pinkish in colour. The frothy fluid was expectorated in considerable quantity, the patient in the intervals gasping for breath. At this time severe lancinating pain was experienced across the front of the chest. A loud wheezing in the chest during the respiratory acts was observed by her. The patient was housekeeper to an old bachelor friend of Dr. Lindsay Steven who saw her at midnight and advised her removal to the Glasgow Royal Infirmary, whither she was removed in a cab. During the journey her condition was so critical that at times it was feared she would have succumbed. Upon admission she was gasping for breath. The face was somewhat flushed, the lips were livid, and she was freely expectorating a whitish frothy sputum. There was no cough. The respirations were noisy and wheezing, were greatly embarrassed, and numbered 34 per minute. The pulse was small, rapid, regular, and numbered 105 per minute. The temperature on admission registered 96·4° F., at 8 A.M. 99·8°, at noon 99·6°, at 4 P.M. 99 4°, at 8 P.M. 99 4°, and at midnight 98·6°. On auscultation of the chest, as quickly as possible, it was found to be the seat of fine and medium moist râles. By 6 A.M. she had sufficiently recovered to be bathed in bed, and by 9 A.M. she was able to lie down, her head being supported by two pillows, and henceforth she continued to make rapid and steady progress.

"*Jan. 30th.*—To-day the patient was almost herself again and it was possible to make a formal clinical report.

"*Past history.*—The patient states that she had always enjoyed good health until the onset of the present attack. She had never noticed any swelling of her face, but had noticed some swelling of her feet and ankles at night occasionally which she attributed to her having to be a great deal on her feet. She had never had any urinary trouble, not having noticed anything unusual in the quantity or appearance of her urine. She had been subject to headaches occasionally. There had been no nausea or vomiting, no anæmia, or general weakness. Her appetite had been fair.

"*Family history.*—Her mother is alive and well. Her father is dead, the cause of his death being unknown. She has two brothers who are alive and well.

"*Present condition.*—Decubitus is dorsal and quiet. She is well developed and of fair nutrition. The pupils are equal, medium, and react normally. The lips and mucous membranes are of normal colour. The tongue is moist and coated irregularly with a greyish fur. The respirations are quiet and unembarrassed, and number 26. The pulse numbers 76 per minute, is of fair volume, medium tension, and regular. The temperature is 98·6°. There is a highly varicose condition of the veins of the right lower limb, with brownish discolouration of the middle and lower thirds of the leg.

"*Respiratory system.*—The chest is well-developed and symmetrical, while the respiratory movements are of normal excursion. On examination nothing abnormal with the exception of an occasional moist râle is detected, the respiratory murmur being of normal vesicular quality.

"*Circulatory system.*—The apex beat is somewhat heaving and diffuse and located in the fifth interspace, three and a half inches to the left of the mid-sternal line. The præcordial dulness has the following limits: upper, upper border of the fourth rib; right, three-quarters of an inch to the left of the middle line; left, three and three-quarter inches to the left of the middle line. The greatest transverse measurement is three inches. There is accentuation of the second sound in the aortic area, while the first sound in the mitral area is somewhat low-toned; otherwise the cardiac sounds are pure.

"*Abdomen.*—The hepatic dulness cuts the sixth rib in the mid-clavicular line and measures vertically three inches. No splenic enlargement can be detected. On examination no abnormality is detected.

"*Alimentary system.*—The tongue is moist and coated irregularly with a greyish fur. The bowels are regular, but the appetite is indifferent. The urine is acid, its specific gravity being 1022; it is clear amber in colour, and there is a slight flocculent deposit. Microscopically hyaline and granular tube casts, leucocytes, and squamous epithelium are observed. Albumin is fairly abundant. The tests for sugar and blood are negative.

"*Feb. 1st, 1901.*—Since Jan. 30th there has been marked and steady improvement. The patient is now practically well. The temperature has ranged between 98·6° and 99°. The respirations have varied between 24 and 32, and the pulse between 68 and 78. She sleeps well and her appetite is fair. The bowels are regular. It has been impossible to estimate the amount of urine passed owing to some being lost."

The following note was made by me on Feb. 5th. "The whole course of this case indicates that the patient has been suffering from acute suffocative pulmonary œdema associated with acute renal disorder, as evidenced by the albuminuria and tube casts at the time of admission. Very great improvement is now to be recorded. Absolutely no trace of albumin is found in the urine this morning, which to the naked eye presents perfectly healthy appearances. The temperature throughout has been normal, and the quantity of urine on the whole somewhat less than usual. There is perhaps very slight accentuation of the second aortic sound and quite distinct of the second pulmonic. The first sound at the apex is slightly muffled in character and the apex beat is very vaguely palpable in the fifth interspace four inches to the left. Posteriorly pulmonary percussion is normal and the respiratory murmur presents healthy characters back and front."

The clinical notes continue: "*Feb. 12th.*—Since the above record the patient has remained practically well. Her appetite to-day is good, the urine is normal, and the bowels are regular. On examination of the lungs nothing abnormal is observed. The cardiac condition remains much as in the previous note. She is now allowed up daily, a Martin's elastic bandage being worn for the varicose condition of the veins of the right lower limb.

"*March 7th.*—Since the previous record the patient has remained quite well. The lungs, on examination, are found to be quite normal, as is also the heart. The urine is entirely free from albumin, and microscopically nothing beyond an occasionally squamous cell is to be observed. She leaves for her home in the north, feeling quite well."

The clinical record which I have just read to you may be taken as a very characteristic history of an almost pure case of acute suffocative pulmonary œdema occurring in the midst of apparent health and associated with renal disorder of a temporary character. Before offering some general remarks on the subject under discussion, I wish briefly to summarise for you the leading phenomena of a case which we have frequently examined together and in which the attacks of suffocative pulmonary œdema were but incidents in the development of a chronic cardiac and renal disorder.

Case 2.—The patient, a man, aged 40 years, was admitted into the infirmary for the first time on Dec 27th, 1899, on account of swelling of the legs of a month's duration, and shortness of breath on exertion, cough, and expectoration of a fortnight's duration. It is unnecessary to go into the clinical history in detail. It is sufficient to say that the man was found to be the subject of aortic obstruction and regurgitation and of mitral regurgitation. In addition the presence of albumin, blood, and granular tube casts in the urine indicated a subacute nephritis, probably of tubular character. These parts of the case were frequently made the subject of clinical demonstration in the wards during both his first and his second residence, the latter beginning on Nov. 23rd, 1900, and ending with his death on Jan. 27th, 1901. At present we are interested in these elements of the case in so far only as they were complicated with attacks of acute suffocative pulmonary œdema, and I shall from the ward journal read to you the accounts written at the time of the first and the second last seizures. You will at once recognise that the paroxysms were in all respects similar to those occurring in Case 1, although, unlike the attack in that case, they did not come on in the midst of perfect health.

"*Dec. 30th, 1899.*—To-night, at 7.25 P.M., the patient was suddenly seized with great dyspnœa He was terribly distressed for breath and plucked at the clothes on his chest. His face was cyanosed and the veins of the neck were distended. The pulse during the attack numbered between 150 and 160 and was full and bounding. There was a good deal of rattle in the trachea and he spat up copiously a white frothy material which later became pinkish. Amyl nitrite and inhalations of oxygen were administered with some relief, after which the pulse numbered between 120 and 130 The heart was beating very forcibly and the chest was full of râles. A hypodermic injection of strychnine ($\frac{1}{30}$ grain) was given. The patient still continued very breathless. His body was cold and covered with a profuse clammy sweat. The pulse continued about the same rate but varied greatly in force. Additional inhalations of oxygen seemed to give but little relief and stimulants were refused. The sputum became very profuse and was more distinctly red. *About 9.15 P.M. strychnine ($\frac{1}{30}$ grain) was again given* hypodermically. Dr. Lindsay Steven was telephoned for and saw the patient at 9.30 P.M. when the condition was much the same Since then he has had brandy both hypodermically and by the mouth. At 11.30 P.M. the patient was still very ill and breathless. The pulse was fairly good and numbered about 140. His sputum was rather less profuse but distinctly red. The body surface was warmer and the sweat much less.

"*Dec. 31st.*—About 2 A.M. the patient began to recover from the seizure described in the foregoing note. Dr. Lindsay Steven from his own observation confirms the accuracy of the account, and taking all the phenomena into consideration is on the whole disposed to think that the seizure has probably been caused by embolism of one of the large pulmonary branches. The blood-stained and highly frothy sputum with the excessive struggling for breath were indicative of an acute pulmonary œdema, and the presence of the renal disease raised the question as to whether the whole seizure might not be uræmic in origin. The discovery this morning of distinct dulness at the right base below the scapula and of numerous fine, moist, crackling râles, chiefly inspiratory, and of a distinct bronchial respiratory murmur, is a strong indication in favour of embolism. At 3 P.M. the patient complained of cold but had no actual rigor. His pulse at 4 P.M. was 124 per minute *and his respirations* were *50. His temperature* was 103.6°. He was not expectorating so much but the sputum was very bloody. He continued much the same and at eight o'clock his pulse was 120 and his respirations were 60 per minute. When seen at nine o'clock he was lying on his right side The body surface was very warm and the skin was covered with sweat. The pulse was 132 and the respirations were 60 per minute; the breathing, however, was not very distressed. There was still a good deal of rattle in the trachea.

"*Jan. 11th, 1901.*—Last night about 7.25 P.M. the patient passed into a dyspnœic attack in all respects similar to that described in note of Dec. 30th, 1899 The seizure lasted until 2 A.M. and was accompanied by a frothy bloody expectoration to the extent of 26 ounces. During the seizure the respirations numbered 56 and the pulse 160; the chest was full of snoring and wheezing rhonchi; and the patient had to sit up, being unable to remain in bed. When the violence of the paroxysm had passed he was able to return to bed, but not to lie down, and in the sitting posture obtained short snatches of sleep. The expectoration examined this morning consisted of three parts—(1) a large amount of pink and white froth which floats on (2) a thin watery tea-coloured fluid, and, (3) of a very small amount of blood-clot at the bottom of the spittoon. The physical characters of the expectoration can only indicate acute pulmonary hyperæmia and œdema. This morning the apex beat is found in the fifth interspace five and a half inches to the left, and is abrupt and slapping in character. The cardiac area is greatly increased, particularly to the right. Right border two and a half inches to right of mid-line; left border five and a half inches to the left at level of fifth interspace. Upper border is at level of upper margin of fourth cartilage. A loud superficial ventricular systolic murmur is heard at the apex and faint ventricular systolic and ventricular diastolic murmurs in the aortic area. At the right base posteriorly, from the level of the sixth dorsal downwards absolute dulness on percussion is obtained, and in the area numerous fine crackling râles with inspiration are heard. Similar crackles are also obtained at the left base. Throughout the present residence the temperature has been normal or subnormal and the average daily quantity of urine rather above than below the normal amount The amount of albumin has averaged about 2 per cent (Esbach) and a trace of blood has always been present."

The patient died in a similar attack on Jan. 27th, 1901; and I now read to you Dr. C. Workman's report of the post mortem examination

"*Post-mortem summary.*—Subacute tubular nephritis; chronic changes in aortic valve; stenosis of mitral valve; and congestion of other organs.

"*Post-mortem report* —A well-developed and well-nourished body, rigor mortis still present. There is well-marked œdema of the lower extremities. The heart is enlarged. This is chiefly in left ventricle. The pericardium contains a considerable quantity of serous fluid. The pulmonary valve is competent; the aortic is incompetent. The pulmonary *curtains are* healthy. The aortic curtains are considerably thickened, especially along the margins. The right curtain and the adjacent portion of the posterior are infiltrated with lime salts. There is a large thrombus pyramidal in shape adhering to the margin of the posterior curtain. The endocardium over the septum immediately below the right aortic curtain is thickened over an area of about one inch square. The left ventricle is dilated and the wall is considerably hypertrophied. There is stenosis of the mitral valve and great thickening along the margin of the curtains. There are several small thrombi on the auricular surface of the valve. The left auricle is dilated. The right ventricle shows some hypertrophy and the right auricle is also dilated Coronary arteries present one or two small patches of atheroma Cardiac muscle is of good consistence and colour Both pleural cavities contain a quantity of serous fluid. Both lungs present a number of adhesions to the chest wall. Both are deeply congested and œdematous and there is no evidence of pulmonary embolism or thrombosis. The liver is enlarged and presents a nutmeg appearance. The spleen is enlarged and congested. Both kidneys are enlarged, the capsules being non-adherent. The surface presents a mottled appearance, the yellow of the mottling being due to a fatty degeneration of the tubules. The left kidney presents slight hydronephrosis. No obstruction is found in the right ureter. The aorta presents a per*fectly healthy* appearance. The brain presents nothing unusual. The stomach and intestines are healthy. The weight of the organs is as follows: heart 19 ounces, right lung 39½ ounces, left lung 40 ounces, liver 80 ounces, spleen 13¾ ounces, and the right kidney and left kidney together 20½ ounces."

### SYMPTOMS.

I have thus described to you, from the actual clinical notes written at the time, two cases of a morbid state which I have ventured to call "acute suffocative pulmonary œdema," and I think that you will agree with me that here we have an affection which might well find an independent place in nosology. The clinical phenomena of both the cases are striking and distinctive, but they differ perhaps in this, that the one may possibly be regarded as a primary and the other certainly as a secondary or complicating condition. The onset of the symptoms in Case 1 was so abrupt and the disappearance of the signs of renal disease took place so rapidly that we are perhaps justified in regarding the acute suffocative œdema of the lungs in this case as primary and the albuminuria as perhaps the effect rather than the cause of the pulmonary affection. As regards the second case there can be no reasonable doubt that the acute pulmonary œdema was merely a complication of the chronic cardiac and renal disease from which the patient was suffering. Whether this view as to the nature of the two cases just described be correct or not, it may be granted that Case 1 was primary inasmuch as the pulmonary symptoms set in in the midst of apparent health and inasmuch as the renal symptoms disappeared with the pulmonary symptoms.

The symptoms of acute suffocative pulmonary œdema are so striking that there is, on the whole, but little difficulty in recognising their significance, especially after one has had the opportunity of seeing a case. Without warning, and without, as in our two cases, any over-exertion or excitement, the patient is suddenly seized with great difficulty of breathing accompanied by a sense of intense oppression behind the sternum. It is quite impossible for him to lie down, and almost simultaneously with the onset of the dyspnœa—a most important diagnostic point—expectoration of a perfectly white, finely frothy, watery sputum begins. The frothy fluid seems to flow up the trachea, and is expelled with a "hawk" as if clearing the throat, but there is no cough in the ordinary sense of the word. The sputum continues during the whole period of the dyspnœa and the seizure is not usually accompanied by fever. The pulse may be very rapid; and wheezing and fine moist râles are everywhere heard. The extremities soon become cold and blue, the face is ashen grey, and the agony and anxiety of the patient are extreme. After a little the frothy sputum becomes slightly pink in colour, and in some cases, after the attack has lasted for an hour or two, definitely bloody. In the course of five or six hours as much as one and a half pints of this frothy fluid may be expectorated. Such is a brief description of a morbid state which I can only interpret as significant of acute suffocative œdema of the lungs. The whole clinical phenomena indicate that the pulmonary alveoli are suddenly inundated with watery serum, and it is quite conceivable that such a condition might prove very rapidly fatal.

### DIAGNOSIS.

Notwithstanding the characteristic nature of the symptoms, it is necessary to say something about differential diagnosis, as there are several forms of acute dangerous dyspnœa with which that of acute pulmonary œdema might be confounded, and to which I shall now briefly refer.

1. *Pulmonary embolism.*—The first thing that occurred to me on seeing both of the cases described in this lecture was that the patients were suffering from embolism of some of the larger branches of the pulmonary artery. Indeed, in Case 1, so strongly did the patient's general condition resemble that of pulmonary embolism that one of my first questions to her was, "Have you got bad varicose veins?" As we have seen she was the subject of great varicosity of the veins of the right lower extremity. In Case 2 the presence of valvular heart disease and the development subsequently to the seizure of dulness and moist râles at the base of the right lung suggested a diagnosis of pulmonary embolism. The subsequent course of both cases negatived such a diagnosis, and in Case 2 the necropsy revealed no evidence of embolism. The symptom which in my opinion establishes the diagnosis of acute œdema of the lungs as against pulmonary embolism is the rapid development, practically coincident with the onset of the dyspnœa, of white, frothy, watery expectoration which afterwards becomes slightly pink in colour. In embolism expectoration is a later development and when it is established the sputum is definitely bloody from the first.

2. *Acute spasmodic asthma.*—This is a condition which might be thought of in the presence of symptoms such as I have been describing. In asthma, however, although the distress of breathing may be very great, there is no expectoration during the attack, the expectoration only being established when the dyspnœa is passing off and usually being limited in amount to a few sputa of grey mucous pellets.

3. *Uræmic asthma of the ordinary type.*—This is usually not so severe as that which we have been considering, it is not so sudden in onset, and it is unaccompanied by the profuse frothy sputum or by marked physical signs of pulmonary œdema. Its occurrence, also, in the course of well-marked renal disease, usually of a chronic type, distinguishes it from the severer form of respiratory distress such as occurred in Case 1.

4. *Acute pulmonary œdema.*—This, with abundant watery expectoration, following the removal of large pleural effusion by the operation of paracentesis thoracis, is a condition which somewhat resembles, as regards the expectoration at least, that with which we are at present concerned. On one occasion I have seen this complication in a case where I had removed a large pleural effusion by tapping, but although the amount of expectoration was very large and the spitting lasted for nearly 24 hours there was none of the severe respiratory distress which was so alarming in the two cases of acute suffocative pulmonary œdema which I have narrated above.

### TREATMENT.

This is all that I need say on the subject of diagnosis, and a few remarks upon the treatment to be adopted will form a fitting conclusion to this lecture. Both of these cases were treated by free stimulation, and I think that is the first therapeutic procedure which would naturally suggest itself to the practitioner on witnessing the state of collapse into which the patient soon passes. On account of the great dyspnœa and the overpowering sense of suffocation caused by the continuous flow of fluid from the trachea into the mouth the stimulants are better administered hypodermically and by the rectum. An ounce of brandy may be injected into the rectum diluted with an ounce or two of water or beef-tea. At the same time a hypodermic injection of strychnina ($\frac{1}{60}$ grain) and of digitalin ($\frac{1}{100}$ grain) may be administered. The patient should be kept absolutely at rest in the sitting posture. A sinapism over the præcordium is of assistance, and the extremities should be kept warm by hot bottles. Opiates in any form are, I think, to be avoided as tending to prevent the expulsion of the œdematous fluid from the pulmonary alveoli. The injections may be repeated, if necessary, in three or four hours. If the patient is able to swallow, diffusible stimulants such as sal volatile are certainly to be recommended, and small quantities of milk, beef-tea, and brandy from time to time.

The propriety of blood-letting also suggests itself in considering the treatment of acute suffocative pulmonary œdema and is favourably spoken of by Dieulafoy. The blood may be taken either at the arm or by wet-cupping of the chest. The depression and collapse, however, are frequently so extreme that I confess one hesitates to deplete. In spite of this Dieulafoy thinks it should be tried, and certainly from the point of view of a possible mechanical relief to the labouring heart it is a procedure which might be justified. In the first instance, however, I would advise free stimulation in the way which I have described.

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# An Address

ON

# MENTAL SCHOOL HYGIENE.

*Delivered at a Conference of Science Teachers arranged by the Technical Education Board of the London County Council on Jan. 9th, 1902,*

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LADIES AND GENTLEMEN,—School hygiene considered as a science deals not so directly with the children as with their environment; it includes all circumstances which may affect the children and their teachers beneficially as distinguished from those conditions which are inimical to healthy growth and development. The care of the body and the well-being of the children come within the departments of public medicine and sanitation, while the culture of the mental aspects of a complete and healthy life necessitates the careful study of education, as well as scientific training with knowledge on the part of those whose duty it is to guide the teaching and care of children.

A connecting link between the various aspects of school hygiene is supplied by the study of the children themselves after the scientific methods employed in natural history. My present purpose is to show that mental science, founded upon the observation of facts seen in school-children, may furnish us with exact knowledge concerning methods of procedure in training, while sanitation is directed to the prevention of disease and bodily ill-health. Hygiene must be studied in its effects upon the children; but children differ greatly and it has been shown that the environment and educational methods of a school act differently upon various groups of pupils. We should, then, study not only the education required in a school, but also consider the special adaptations that may be needed for certain groups of children who may somewhat differ from the average in mental or physical status Those who habitually observe children will soon gain a practical acquaintance with their varying brain conditions and note points indicating good and intelligent action as well as faults or disorderliness, and thus become able to infer from what is seen the adaptations of method that are needed in training an individual child and building up true character.

The hopeful signs of mental aptitude and capacity for education as commonly seen in children are (1) spontaneity in movement and action; (2) control through the senses, leading to imitation of the teacher and coördinated action; (3) receptivity and retentiveness of impressions produced upon the brain (memory); and (4) response in action and later in the use of words the meaning of which has been gained by experience, showing intelligent mental action under guidance. Thus, we wish to see a lively facial expression with activity, talkativeness, and liking to take part in organised games and occupations, as well as good imitative power and accuracy increasing with practice. For mental healthiness and strength the child needs experience of mental impressions, graduated and connected under the control and guidance of his teacher—stage by stage—leading to coördinated brain-power such as may afford self-control and volition adapted by, and therefore in harmony with, the varying circumstances of adult social life.

The principal means of controlling the brain and producing in it those impressions which give the child an experience useful in subsequent education are through the eyes, the ears, and by muscular sense. The brain produces all movement and expression seen in the child; it is desirable early—before the use and meaning of words has been fully attained—to train movements in the young pupils; in other words, we seek to train the faculties of "attention," "controllability," and "response" at an earlier period than it is possible or advisable to give instruction and to impart knowledge. This should be the work of the kindergarten, where speech with the proper use of words may be acquired without books, and training is more useful than learning to read and write; and let me add, this may be accomplished without destruction of that healthy brain spontaneity which is the basis of potentiality for education. This elementary training in the infant school is most necessary; good mental faculty is not acquired by children left untrained and with nothing to do all day. In the training college no subject of study is more important for teachers than a knowledge of children based upon observation and scientific principles. Observation shows that some children are controlled more readily by sight than by the spoken word of direction; the former class of pupils are kept under better discipline by a signal intimation (sight) of what is required of them, than by a command to "go on," which may cause mental confusion and fidgetting. This mode of discipline is used practically in schools for the deaf. Training should proceed stage by stage, so as to preserve and to cultivate mental health and growth. Thus eye-drill is needed to obtain the power of accurate seeing, before learning to read, to write, and to work sums. Inaccuracy in arithmetical work on paper or the blackboard, in reading, spelling, and in transcription, is often due to irregular movements and want of control of the eyes; if they are directed towards the wrong figure or word a mistake results, but eye-drill tends to prevent such errors which are not mental. The pupil who looks at the mouth (not the eyes) of his teacher learns pronunciation from the lip movements seen. Children while still young may learn to imitate the planned free manual exercises of the teacher and to move their fingers, hands, and bodies usefully, in a manner trained or coördinated by practice, so as to bring them into harmony with the later requirements of advancing education. All this requires knowledge and thoughtful labour on the part of the teachers, but is easily acquired by young pupils, in whom such method produces faculty for attention, control, retentiveness, and useful experience.

Muscular sense trained in the performance of free hand exercises may be followed by experience in feeling graduated weights and size; then by the appreciation of weight and dimensions their comparison, proportions, and description. Colours should be seen separately, their names taught and subsequently associated with the colours. Feelings of number and weight and the sense of time may be taught by planned experience; then the numerals and, later, methods of comparison are understood by the association of previous experiences.

Impressions are more useful and better retained when produced one at a time; they must subsequently be associated in like classes in a mental exercise of comparison. Weight may logically be compared with weight, size with size, colour with colour, and when standards of comparison have been learned, correct inferences may be formed; without such care in teaching, mental confusion results in the pupil and leads to fatigue. In the pupil's brain, words are impressions produced by sound, or by sight when written; their meaning arises from association with the child's experiences. Words may become connected without meaning, such as the letters of the alphabet and the numerals, &c. Education conducted stage by stage, always planned so as to implant in the pupil's brain experiences to be subsequently used, gradually builds up without confusion or waste of energy the power to appreciate agreement and difference of mental impressions with comparison of the degree (quantity, number) and the time (duration or order of succession) of impressions gained by experience. As teaching proceeds mental guidance must be afforded to the pupil by certain terms of instruction; he must learn what is wanted of him when told to repeat what he has learnt; to add or to subtract figures, or as more complex and advanced to compare a buttercup with a daisy or one triangle with another. The early training suggested will do much to make him receptive of the mental methods required in advanced instruction. Happily most children are naturally quick enough to pick up some knowledge and mental ability under any teaching; but if the method of procedure be carefully graded and planned for sequential employment, I think it will be found that their advance is more rapid and sure, happier to themselves, and attended with little fatigue and misunderstanding. The method and consecutive order in teaching have much to do with the ease and rapidity of mental evolution as well as avoidance of mental confusion which is inimical to mental healthiness

The observation of children and of their signs of brain action illustrates principles of wide application in mental hygiene and education, and affords a scientific basis for studying their mental abilities and faults. Early training of the natural characters of brain action by physical exercises prepares the way for the systematic cultivation of healthy mental action, and during the whole period of education the teacher's observation of the external evidence of mental status in the pupil will afford useful indications of the action and interaction of training and knowledge. Two examples may be given in illustration. Spontaneity of brain function is evidenced by movements seen in the face, the eyes, and the fingers; this is usually accompanied by analogous mental action. If this is well under control thoughts arising may easily be connected under guidance, while original thoughts are expressed. Mental spontaneity aids in recalling a fact or word forgotten; its failure is one cause of lessened memory and may be accompanied by the signs of fatigue. If spontaneity is not coordinated a crowd of thoughts arising leads to confusion and exhaustion. A spreading area of activity in the brain is seen in the display of emotion and mental excitement; if the increasing action is coördinated by direction, intensity of mental application may result, the greater activity raising some thoughts previously associated; on the other hand, if not guided, irregular mental action and exhaustion result.

There are many recognisable groups of children whose educational requirements differ and sometimes necessitate great discernment to assure that their respective needs are duly provided for. Nervous children may be recognised by a large amount of spontaneity, with a lively face, much movement of the eyes and fingers, the general balance of the body being asymmetrical, the head not held erect, and they are talkative The hands when held out balance in what has been described as the "nervous posture." These children are gregarious in social disposition, quick-witted, encouraging one another in frivolity. Such pupils need careful training to prevent emotional excitement and the tendency to hysteria; physical exercises in imitation of their well-trained teacher are useful. Defective children are now happily provided for in our schools. Their training presents interesting problems; all require the elementary teaching that has been described.

The social and economic value of mental hygiene may be illustrated by some results of investigation as to the physical and mental conditions of 100,000 children seen in schools. Time will only allow of a brief summary. Girls of school age are more numerous than boys, but their average school attendance is lower. Boys present a higher average number of dull pupils, and a higher proportion below normal development of body with brain-disorderliness. The proportion of girls who are delicate is higher than with boys, but among children of normal development the proportion of delicate ones is about equal. One-third of the dull pupils present signs of listlessness, lounging, inertness, which are largely removeable by attention to physical exercises and movements. The want of good training is a more general cause of mental dulness than congenital deficiency. In schools where physical training is well carried out the proportion of dull pupils is lessened.

The study of children and their requirements may draw together those who differ on many educational points and afford a basis for wise and united efforts in national education. I trust it has been shown that mental hygiene is a department of scientific knowledge based upon physiology, and that observation of children possesses a practical value entitling its inclusion in a scheme of university teaching.

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# VOLKMANN'S CONTRACTURE.

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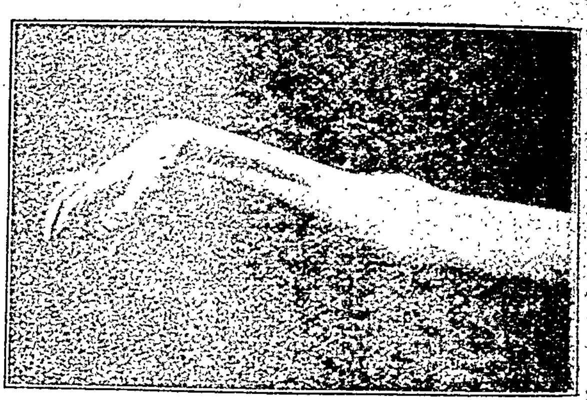
THIS deformity, which was first described by Professor Richard Volkmann[1] in 1875, has since received little attention from the medical profession in this country. There is little to be found on the subject in books on surgery (either past or present) or on deformities, or, in fact, anywhere in the literature, except in a few scattered papers of which those by Page, Littlewood, and Barnard are the best; full reference will be given to these papers later. This form of contracture is said to be rare. This statement, I think, is incorrect; it is far more probable that it is only rare in the sense that there is a scarcity of literature on the subject. I have considered it best to give first the four cases which have come under my own notice and which are recorded here for the first time; secondly, to give a summary of all the cases in the literature as far as it has been possible to do so; and, finally, to discuss the deformity at length.

CASE 1.—The patient, a child, aged five years, was admitted into St. Thomas's Hospital under the care of Mr. H. H. Clutton on Sept. 15th, 1897. At Christmas, 1896, she had fallen downstairs and had broken her right arm just above the elbow-joint. She was taken at once to a medical man, by whom the fracture was set and the arm was put up in splints. According to the relatives there was no trace of a wound when the arm was first seen. Two days later they called in another medical man who took the splints off and found that there was a considerable wound over the seat of the fracture and a great deal of inflammation present, while the fingers were swollen and discoloured. The arm was dressed but the splints were not reapplied. Wasting and contracture seem to have set in during the process of healing, which appears to have been very slow and not finally completed until about six months after the original accident. On admission into St. Thomas's Hospital the condition was noted as follows: "The whole right arm is wasted, the forearm especially, consisting of little more than skin and bone. It is held pronated midway between pronation and supination and slightly flexed on the arm. The hand is flexed at right angles to the forearm; the fingers and thumb are slightly flexed on the palm. Extending right across the elbow-joint is a large scar which has produced considerable contraction in the surrounding skin. At the inner end of this scar begins an abnormal bony prominence on the inner edge of the humerus, half an inch above the front of the internal condyle which appears to be in the normal position. A sharp ridge runs upwards from this bony point which is just beneath the skin. Complete flexion of the forearm is prevented by this bony prominence. Movements of pronation and supination cannot be performed actively and only to a slight extent passively. The head of the radius appears to be in the normal position, likewise the head of the ulna. The hand cannot be moved voluntarily. The interossei act fairly well. The fingers are flexed on the palm. Sensation of hand and forearm is normal; the hand cannot be extended." Dr. H. G. Turney, physician to the electrical department, reported that the electrical reactions were normal. The diagnosis of ischæmic myositis was made. The treatment adopted was massage twice daily. On Oct. 15th the following note was made: "There is some improvement of the movement of the fingers, otherwise the condition practically remains unchanged, despite the massage twice daily." The patient left the hospital on Oct. 25th, 1897. On Nov. 22nd, 1901 the child was brought up to St. Thomas's Hospital at my request (Fig. 1). The forearm was extremely wasted, more so if possible than before, except at the upper end of the forearm, where the muscles were more bulky and firm and hard. The forearm, which w  strongly pronated, was considerably shorter than its fellow, and the bones—i.e., the radius and the ulna—were much smaller in every way. The hand was flexed and could not be extended, neither could pronation or supination be performed, while the fingers were more pliable than they usually are in such cases, being able to perform all movements to a certain extent. The inter-phalangeal joints were flexed, but on full flexion of the wrist they could be completely extended. The hand was cold and blue, but sensation was absolutely normal. There were no trophic changes of the skin or nails, &c. The finger-joints were quite normal. There was a well-marked prominent boss at the back of the wrist-joint. There was a large scar at the upper part of the forearm, showing the site of a past extensive pressure sore. All movements of the elbow-joint were perfect. Electrical reactions to both nerves and muscles were normal; it was surprising to see such atrophied muscles contract so sharply and so strongly. Both Mr. Clutton and Dr. Turney who saw the patient considered the case to be the worst one that they had ever seen. When the child left St. Thomas's Hospital in 1897 the parents were told to try massage. When I inquired of the child's father to what extent he had carried out the instructions his answer was: "As I found no improvement after three weeks' massage I gave it up as useless." I think that I can therefore state that the patient received practically no treatment, hence this disastrous result.

FIG. 1.



Showing condition of hand and forearm in Case 1 on Nov. 22nd, 1901

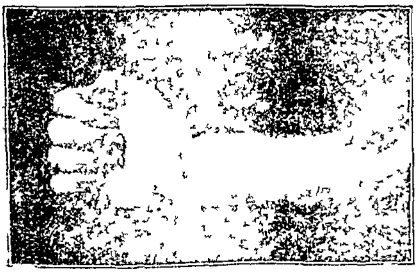
CASE 2.—The patient, a man, aged 20 years, was admitted under the care of Mr. Bernard Pitts into St. Thomas's Hospital on April 13th, 1898. He gave the following history. On June 18th, 1897, he sustained an injury to his forearm by means of a sledge-hammer; he was seen by two medical men at the time of the accident and five weeks later in the out-patient department at a "general hospital." The diagnosis of the injury was different in each case—(1) bad sprain, (2) dislocation of the wrist, and (3) fracture of the lower end of the radius and ulna. The practitioner who attended him at the time of his accident bandaged the forearm and hand on an anterior splint which reached the tip of the fingers. There was a good deal of swelling when the splint was applied. There was no discolouration of the fingers and only slight pain occurred. Five weeks later he went to the hospital. The splint was removed, there was no contracture now, and the arm was put in plaster for more than two months. (It will be noticed that contraction would be impossible if the splint reached to the tips of the fingers, but that it occurred as soon as the plaster splint was applied, as this reached only to the wrist-joint.) At the end of that time massage was applied and passive movements were practised. Contraction of the fingers on the palm of the hand was well marked two months after the accident. As an operation was advised at the hospital he left that institution and came to St. Thomas's Hospital. The left arm was now much wasted and the patient held the wrist flexed and likewise the fingers; all movements were considerably diminished. There was no scar on the forearm or hand which might show the site of a past pressure sore. There was no report on the electrical reactions. The treatment adopted was massage and faradic current daily. The patient left the hospital on April 27th, 1898. On Nov. 7th, 1901, I saw him in the electrical department at St. Thomas's Hospital. He told me that for over a year after he left the hospital he had had massage and passive movements for "some time" each day. The contraction very gradually improved and he could extend the fingers slightly at first and more so as time advanced; there was now no contraction; the fingers were held in the position of semi-flexion, but the movement of extension was perfectly good. The wrist movements were normal. The forearm was slightly smaller and shorter than on the opposite side and the muscles seemed to be firm to the touch. The power was not quite so good as on the opposite side. Sensation was absolutely normal. The electrical reactions which I took myself were normal, both nerves and muscles. The circulation in the hand was good and the skin was quite normal. The patient worked now as a watchman and could do his work, or any other, perfectly well.

CASE 3.—A child, aged five years, was admitted to St. Thomas's Hospital on June 25th, 1898, under the care of Mr. Pitts. On April 20th, 1898, he had fallen down and fractured his right arm. When seen in the casualty department of the above hospital it was found that there was a greenstick fracture of the right ulna and radius at the junction of the middle and upper thirds. This was set and put up on anterior and posterior splints. He was seen again in a week (April 27th), when the splints were removed and the arm appeared to be progressing satisfactorily; the splints were re-applied, and the patient was seen again on May 3rd, when the arm was in good condition and the splints were again re-applied until May 9th. During this last week the boy's mother noticed the fingers to be slightly swollen. On removal of the splints a sore was found on the flexor surface of the forearm; this was dressed and the splints were re-applied. On

May 25th the wound was almost healed but the fingers were flexed and the wrist was slightly contracted. Passive movements massage and the galvanic battery were given every other day but the contracture did not improve. On admission into the hospital he seemed to be a healthy looking boy with contraction of the hand. The wrist was partially flexed and the fingers—i.e., the two terminal phalanges—were strongly flexed and could only be extended on full flexion of the wrist. The wrist and fingers could not be extended at one and the same time. There was no loss of power of extension of the wrist. The electrical reactions were normal. The treatment adopted was massage twice daily. On August 15th there was considerable improvement in the affected arm, the tendons were not so tense and the wrist joint was moved with more freedom. The patient left the hospital on August 6th 1898. At my request the child came to see me in the electrical department on Nov. 14th 1901. Over three years had elapsed since the accident. There was now absolutely no deformity of the hand and the position of the fingers was normal. There were very slight weakness and wasting of the forearm muscles which were firm and hard. The scar of the old pressure sore was a prominent landmark about the middle of the forearm. Sensation was normal and the electrical reactions were also normal. The mother to whom the recovery was chiefly due told me that she had persistently and right up to the time of my seeing the patient carefully rubbed his arm night and morning. He had also been taught to manipulate the mangle and as soon as he could do so to wring out washing; in fact every movement that was of any service was employed. The boy was taught to bend his fingers backwards whenever he could and it was done for him every night and morning after the massage. The deformity very gradually disappeared—in fact it was only during the last three months—i.e. since August 1901—that there had been noticed complete absence of any deformity. The patient was now able to do ordinary work as well as any one of his own age.

CASE 4.—The patient a child aged four years was an out patient at St Thomas's Hospital. On Dec. 6th 1900 she had broken her right upper arm just above the elbow. There was a good deal of swelling at the time. She came to the casualty department where the arm was put up in a flexed position in plaster splints. On the next day the fingers were swollen and were according to the child's mother dark in colour but this fact was absolutely disregarded by the parents. The patient was not brought to the hospital till the fourth day after the application of the splints. There had been no pain and I suppose that this must have been the reason for such delay. When the splints were removed there was found a large pressure sore on the flexor surface of the forearm at the upper part and contraction of the fingers had commenced. The arm was dressed and only lightly bandaged. On Jan. 17th 1901 I saw her in the electrical department at St. Thomas's Hospital where she has continued ever since under the care of Dr Turney. At that time the following notes of her condition were taken: "The elbow joint is fixed and in a semi flexed position. The forearm is held pronated and the muscles are much wasted and seem very firm to the touch. There is strong contraction of the second and third phalanges into the palm of the hand with extension of the first phalanges. The wrist is semi flexed and the fingers cannot be extended except on full flexion of the wrist. The wrist and fingers cannot be extended at one and the same time. The action of the interossei is fairly good. The hand is cold and sensation is normal. There is a scar on the ulnar side of the forearm on the flexor aspect at its upper part showing the site of the past pressure sore. The electrical reactions are absolutely normal except in those muscles supplied by the ulnar nerve in the forearm and hand which show diminished faradic and galvanic irritability. The nerve also shows diminished reaction to the faradic current. The finger joints are unaffected. There is well marked thickening of the internal and lower end of the humerus and this I think limits movements of the forearm on the arm. Dr Turney examined the case and diagnosed it as ischæmic myositis; he also found the electrical reactions as above. Massage was ordered by Dr Turney and was carried out three days a week for 15 minutes at each visit, by a competent nurse the mother doing the massage as directed in the intervals of her visit to the hospital. The condition has shown some improvement but the contraction is quite typical. It is now 10 months after the accident and both flexion and extension of the forearm can be well carried out also pronation and supination but to a much less degree. The hand is still in the same position but the movement of the fingers is better. Passive extension of the fingers causes the child a good deal of pain but not nearly so much as it did. Sensation is normal. Skin normal. No trophic lesions. Electrical reactions quite normal even in the ulnar distribution so it is likely that the partial loss before was due to splint pressure. The circumference of the forearm is markedly diminished as compared with the sound side and there is obvious shortening. Treatment is carried out exactly the same as before."

FIG. 2



Condition of hand in Case 4 on Jan. 17th, 1901.

The illustration (Fig. 2), for which I am indebted to Mr Grimwade, shows the absolutely typical condition of the contraction. I know also of three other cases, but these I am unable to record owing to the fact that I cannot obtain full notes of them.

The following is a brief account of all the cases the literature of which I have been able to obtain.

CASE 5.—A boy aged eight years came under the care of Mr Raymond Johnson with extreme contraction of the wrist and fingers following fracture of the lower extremity of the humerus.[2] The case had been treated by means of wooden splints which as a result of undue pressure had produced a sore on the front of the arm. The length of time between the fracture and the subsequent deformity of the wrist and fingers was not stated. Some slight degree of contractility still remained in the affected muscles—i.e., the flexors of the fingers. An exploratory operation had shown that there was no abnormal condition of the nerves at the seat of the fracture. A diagnosis was therefore made of Volkmann's "ischæmic paralysis." In order to relax the contracted tendons a short piece of bone was excised from the middle of the shaft of the radius of the ulna. The effect on the contracted wrist and fingers was satisfactory but unfortunately the divided bones were repaired only by fibrous tissue and a leather splint was necessary to give strength to the arm.

At the discussion at the meeting of the Harveian Society after the reading of this case Mr Edmund Owen said that he had met with three cases of this sort, all in children. He described one in which the forearm had been fractured in its upper part with subsequent ischæmic myositis. He had cut down on the median nerve and had found it healthy, but the flexor muscles were in a state of fibrous degeneration. Division of the contracted tendons had produced an unsatisfactory result.

CASE 6.—A girl aged six years was admitted to Guy's Hospital under the care of the late Mr J. N. C. Davies Colley[3] on May 18th 1898. The child had fallen out of a cart and had broken her right arm in 1896. The medical man who attended the case is reported to have said that there were three fractures about the elbow joint and that the humerus was split longitudinally to about the middle of the shaft where there was a transverse fracture. The arm was set and it got quite well except for a lump which formed just above the elbow and prevented the child flexing her arm. This lump together with a ridge which formed along the line of the splint was removed by Mr Pollock on the December after the accident with a good result. The power of flexion of the forearm returned. (Owing to the death of Mr Pollock the case came under the care of Mr Davies Colley.) The condition of the patient was reported to be as follows: Elbow very prominent otherwise normal; wrist is flexed at a right angle; metacarpo-phalangeal joints are extended; the inter phalangeal joints are flexed. Extension of forearm is perfect while there is no power to extend the wrist and very slight power to extend the phalangeal joints. The forearm is pronated with great limitation of pronation and supination. Sensation normal. Slightly above the level of the elbow joint is a T-shaped scar and on pressure in this area a few small tender nodules are felt. The flexor muscles of the forearm are wasted and hard. There is no evidence of any nerve palsy. There has been a pressure sore in this case which is shown now by induration of the skin and muscles which are wasted. The treatment adopted was as follows. A three inch incision was made in front of the forearm just below the elbow joint. The muscles which were much wasted and were formed chiefly of fibrous tissue which was also intimately connected with the median and ulnar nerves which were rather swollen were otherwise healthy. The affected muscles—viz. the flexor sublimis flexor carpi ulnaris palmaris longus flexor carpi radialis pronator teres and the flexor profundus—were partly cut and partly torn through. Vigorous efforts were made to straighten the wrists and fingers which succeeded as regards the wrist but not the fingers. The result of the operation was perfect extension of the wrist but all attempts to extend the fingers were useless. One month after the first operation a second was performed. An incision was made just above the wrist line, the tendons of the flexor sublimis, flexor profundus and the flexor longus pollicis were cut through, the fingers and thumb were completely relaxed. The arm and hand were put in position on a splint with the fingers and wrist fully extended. Three months after this operation the fingers were in a good position and had good movement except for flexion which was of course, absent.

Mr Davies Colley, in the same paper, also narrates a case of myositis in the calf muscles, that of a boy with very bad *talipes equinus* so that the toes were pulled down so much that they looked like "claws." Two years previously he had sustained a compound fracture of the tibia and fibula, the calf muscles being injured. The parts healed after long suppuration. Mr Davies Colley had divided the tendo Achillis, all the tendons behind the malleoli and the flexor longus hallucis, so that the boy had his toes and foot in good position.

CASE 7.—A boy aged six years who was sent to Mr J. Jackson Clarke,[4] gave the following history. Six weeks previously he had sustained a fracture of the lower end of the humerus which had been put in splints and had re-set three days later. There had been much swelling of the elbow joint and for the first two or three weeks the boy screamed if his fingers were touched and was incapable of moving them. The swelling about the joint subsided in five weeks but left it immobile from adhesions which were afterwards broken down under chloroform. When Mr Clarke first examined the patient there was no reaction in any of the muscles of the forearm to either the galvanic or faradic current, but after a week's treatment with galvanism and massage slight reaction was noticed, which was followed by some reaction in some of the flexors of the wrist, but the flexor sublimis digitorum, pronator teres, and pronator quadratus never reacted at all, but the supernator longus always reacted. Sensation returned coincidently with the partial return of muscular reaction. Under this treatment the boy got back considerable power in the forearm, but the thumb muscles were very obstinate. For some weeks he had fair use of the arm and hand, but the whole arm then began to waste, stiffen, and become much more pronated. Sensation was perfect. Clawing of the hand began four months after the original accident, and it increased in spite of massage. As soon as the deformity had ceased to increase Mr. Clarke *divided the flexor tendons above the wrist. This operation* removed the whole deformity.

CASE 8.—A boy, aged four and a half years, was admitted into St. Mary's Hospital on Nov. 5th, 1898, under the care of Mr. H. W. Page.[5] In the preceding month he had fallen on his left elbow and had sustained a transverse fracture of the humerus. (Separation of the lower epiphysis was not excluded.) The treatment adopted at the time of the accident was anterior and posterior splints to the forearm, with the limb put up in a flexed position. All seemed well the next day, but when the child was brought to the casualty-room a few days later there was found to be total loss of power in the fingers and wrist. There was a superficial slough immediately below the bend of the elbow caused by splint pressure; this became detached in about four weeks, and left an open wound which healed by granulation. The treatment employed at the second visit to the hospital was a single posterior splint, which was, however, abandoned at the end of four weeks, and the parents were instructed to manipulate and rub the arm, *for an increasing tendency to contraction* of the fingers had been noticed, and the wrist was also becoming more and more flexed. The attempt at reduction under an anæsthetic was fruitless. Mr. Page first saw the patient three months after the accident; the child's arm was then described as follows: "It is flexed and in a position midway between pronation and supination. There is extreme flexion of the wrist and the fingers are flexed on to the palm. The old scar is tender, so is the forearm. The joints are clearly unaffected. Extension of wrist and finger is hardly possible even with force. There is partial anæsthesia, only involving the ulnar distribution of the hand, and some wasting of the first dorsal interosseous muscle. The flexor muscles seem firmer than usual. No injury can be detected to the median, musculo-spiral, or ulnar nerves, except that previously mentioned. My own belief is that there had been a separation of the lower epiphysis of the humerus. Contraction is not lessened under an anæsthetic." Massage, electricity, and passive *movement* were all found to be useless. On Dec. 20th, 1898, Mr. Page operated. An incision was made just above the wrist line, and the tendons were lengthened in the usual way. The muscles gave the impression of being stiff and unyielding, firmer than natural, and as if their structure had been changed. The hand and arm were secured after the operation in the flexed position. The parts healed by first intention. At the end of 14 days gradual passive movements of the forearm, the hand, and the fingers took place. Massage and electricity were added. The patient left the hospital in February, 1899, with very slow improvement. He then attended the out-patient department for electrical treatment, under the care of Dr. Wilfred J. Harris, who stated that there was at first very decided reaction of degeneration in the affected muscles; recently the condition was not so marked. In July, 1899, Mr. Page next saw the child. There was now distinct improvement. The forefinger tendons had not united, otherwise all had. By October, 1899, great progress had taken place. All the tenderness had gone, the forearm could be completely extended, and the wrist and the hand could be voluntarily put in the extended position. Flexion of the fingers was easily performed and the child could "make a fist." In the forefinger the flexor profundus alone acted upon it. The muscles of the forearm had lost that peculiar sense of resistance so characteristic of them.

CASE 9.—A girl, aged eight years, was admitted into the Leeds Infirmary under the care of Mr. H. Littlewood[6] on Nov. 17th, 1898. Four months before admission she had a fracture separation of the lower end of the humerus, with a good deal of swelling of the parts. The arm was put up in an internal rectangular splint for five weeks. When the splint was *removed* it was noticed that the fingers were contracted and the contraction gradually increased. There was some limitation of the movements of the elbow-joint; it could be flexed to about a right angle, but could not be completely extended; flexion was limited by a bony prominence at the inner side of the lower end of the humerus. Extension of fingers was impossible except when the wrist was flexed and then it could be easily accomplished, otherwise the fingers were contracted into the palm of the hand. There was no sign of any past pressure sore. There was a lump in the upper third of the forearm on the flexor aspect, situated in the muscles. There was some loss of sensation in the ring finger and in the little finger. An operation was performed on Dec. 5th. All the flexor tendons were lengthened about an inch; the fingers and wrist were extended. A firm thick pad of antiseptic wool was applied from the finger tips to the elbow. The wound healed by first intention. After leaving off the dressing for a few days it was found that there was a tendency to contraction of the sutured tendons. To prevent this the limb was massaged and a back splint was worn for two or three hours every day. The patient's condition so improved before leaving the infirmary that she could do some knitting. The parents had persevered with the rubbing and the child had a very useful hand as the result.

CASE 10.—A girl, aged six years, was admitted under the care of Mr. Littlewood[7] into the Leeds Infirmary on Jan. 7th, 1899. In May, 1898, she had fallen from a ladder and had sustained a severe fracture about the left elbow-joint, also of both bones of the forearm. There was considerable swelling of the parts and the fractures were with difficulty kept in position. A splint sore formed about the middle of the back of the forearm. Contraction of the fingers was very marked so that in flexion of the wrist the fingers could not be fully extended. Eight months had elapsed since the time of the accident. Both fractures had united and movement of the elbow-joint was good. A lump in the flexor muscles of the forearm was well marked. The operation was performed on Jan. 9th, 1899. All the tendons except the flexor carpal ulnaris were divided, lengthened about an inch, and sutured. Similar dressings were used as in Case 9. The wound healed by first intention. Daily massage was employed and the patient left the infirmary on March 14th, 1899. The fingers were then quite straight and she had some power of flexion. When the case was reported the condition of the implicated parts was greatly improved and the attainment of a very good result appeared probable. On exposing the nerves they were found to be healthy, in both this case and in the preceding case (Case 9).

CASE 11.—A girl, aged three years, was admitted into the Metropolitan Hospital on May 2nd, 1900, under the care of Mr. H. L. Barnard,[8] with the following history. On March 16th, 1900, she broke both bones of the right forearm about the middle; anterior and posterior splints were applied. She was seen on the next day; there was no pain. When the splints were readjusted at the end of the week a pressure sore was found extending about three inches from the middle of the front of the forearm to the front of the wrist, whilst a smaller sore was found at the back of the forearm in its lower part, and a still smaller one upon the thenar eminence. The sores rapidly healed, as did the fracture also. No note was taken at the time whether the child moved her fingers or not. About the middle of April the fingers and the top joint of the thumb began slowly to flex, and this flexion steadily progressed in spite of massage and the restraint of a splint. The position of the hand on admission into the hospital was that of *main-en griffe*. When the wrist was extended the fingers were extended at the metacarpo-phalangeal joints and flexed at the inter-phalangeal joints. The last phalanx of the thumb was fully flexed. When the wrist was completely flexed the fingers could be extended. There was no definite anæsthesia. Voluntary movements of the hand and the wrist were practically lost. On June 27th a chronic whitlow was seen on the tip of the right index-finger. On Dec. 10th Mr. Barnard operated. The four tendons of the flexor sublimis, the tendon of the flexor longus pollicis, and six strands of the flexor profundus were lengthened in the usual way and the tendons were sutured. Although no tourniquet was applied *there was very little bleeding; the wound was very dry*. The muscles exposed were pale, firm, fibrous, and dry, very unlike the muscles of children. The arm was put on a splint with the fingers fully *extended. The wound healed by first intention. The after-*treatment adopted was massage and passive movements every other day. They were begun 14 days after the operation. The child wore a back-splint at night, as there were signs of further contraction. During the day the sound arm was tied to the side so as to give the injured arm plenty of movements when the child was playing with her toys.

CASE 12.—A little boy, aged four years, was admitted into the Metropolitan Hospital on May 12th, 1900, under the care of Mr. Barnard. On March 15th the patient had crushed the upper part of his left forearm, producing extensive swelling from effusion of blood; fracture was excluded by the x rays. The arm was placed on an external angular splint and was only lightly bandaged as it was very painful. About five weeks later contraction of all the flexor tendons commenced, and when seen by Mr. Barnard his hand was in the condition of *main-en-griffe*. The usual wrist sign was present. The forearm was fully pronated and fixed. There was no definite anæsthesia of the hand, although the skin of the digits was smooth and glossy and the whole hand was much colder than its fellow. Patient and persistent massage and passive movements all produced no improvement—in fact, the contraction increased. On May 30th Mr. Barnard operated, splitting the tendons of the flexor sublimis, the flexor profundus, and the flexor longus pollicis as before and then suturing them. Absence of hæmorrhage and dryness of the wound were nearly as marked as in Case 11. The parts healed by first intention. The same treatment was adopted as was used in the last case. A chronic, painless whitlow appeared on the index finger. Improvement was very marked after four months' treatment. As the hand was still pronated Mr. Barnard operated again on Oct. 20th. The pronator quadratus was separated from its ulnar attachment, then the forearm was readily supinated and fixed in this position on a splint. The after-treatment consisted of a splint at night, passive movements, and massage every day. There was very fair rotation of the forearm. In this case and in Case 11 the *patients were progressing favourably at the time that this* paper was written. The electrical reactions of the muscles of the forearm in this case were made by Dr. W. S. Hedley lately, who stated that he obtained a reaction of degeneration.

CASE 13.—The patient, a female, aged 20 years, came under the care of Mr. F. C. Wallis,[10] at Charing Cross Hospital in July, 1900, with the rare deformity of congenital absence of the superior radio-ulnar articulation in both forearms. The right forearm was capable of some degree of supination, but in the left it was impossible to obtain any such movement. In consequence the girl was unable to earn her living. Mr Wallis operated at the earnest desire of the patient and her friends on July 6th, 1900. The operation took one and a quarter hours, and during this time an Esmarch's bandage was kept round the upper arm. The radius was divided close to the head and the arm was forcibly supinated; in doing this the ulna was fractured in its lower third. The wound was closed and the arm was fixed in splints. 24 hours later the arm, which was much swollen, was red and covered in places with large bullæ. Paralysis and loss of sensation seemed complete and the general temperature was raised. The splints were immediately removed and some stitches were taken out to relieve tension and the *arm* was redressed. There was *no suppuration* gradually the swelling diminished, but the paralysis continued, and the fingers assumed the position of *main-en-griffe*. 10 days after the operation it was found that the anæsthesia of the forearm and hand was confined chiefly to the ulnar and median distribution. Passive movements were now daily performed and galvanism was applied, but the ends of the fractured ulna were unable to unite owing to these movements. Three months after the operation Mr. Wallis wired the fractured bone with good result. The condition of the hand and forearm after the ulna had united was reported to be as follows: "With the wrist extended the second and third phalanges are flexed on the palm; with the wrist flexed the fingers can be extended; the thumb is practically useless and the muscles of the hand are much wasted. Loss of sensation as before." For the next seven months the hand and forearm were daily galvanised and faradised, and a hot air bath was used. Massage was daily performed and on three separate occasions the wrist and fingers were manipulated under gas. This treatment at first gave good results; the muscles of the upper part of the forearm improved, the fingers could be easily extended, and a certain amount of active movement was restored to the fingers and thumb. The wrist was more pliable and sensation was much improved. The skin was normal This was the condition of the patient's arm nearly 12 months after the original operation. A second operation was now performed. The tendons of the flexor sublimis, the flexor profundus, and the flexor carpi radialis were divided and lengthened in the usual way The tendon sheaths on being opened were found to be much thickened and more vascular than usual The median nerve was found to be surrounded by fibrous tissue which was adherent to the nerve sheath The muscles exposed were pale in colour and their fibres were to a great extent replaced by fibrous tissue The wound was closed and the hand was placed on a back splint with the fingers extended Passive movements were commenced at the end of a fortnight and active movements in the middle of the third week Galvanism and massage were also applied The report proceeds The present condition of the hand is one of improvement Sensation has completely returned over the distribution of the radial nerve and partially over the median but the ulnar shows little progress After massage the fingers are quite supple and the range of movement is much increased She can also use the hand extremely well for needle-work "

CASE 14 —A youth aged 18 years was shown by Professor Schloffer[11] at the Association of German doctors in Prague The patient was brought to the clinic on Oct 19th 1900 having shot himself with a revolver in the region of the heart The bullet entered at the level of the fifth rib at the midsternum No exit wound was found and no projectile could be felt under the skin The patient was collapsed On examination the heart dulness was found to be normal the right radial pulse could not be felt and the left was very weak rate 100 The patient slowly improved in bed In the next four hours the action of the heart becoming stronger On the following day there was severe pain in the right arm and the right radial pulse could not be felt the left pulse was good and fairly strong the movement of the right elbow joint was normal and the right hand and finger joints were immoveable except for a slight amount of extension of the hand The muscles of the right forearm were swollen hard and very tender on pressure The skin of the forearm and hand was cyanotic Passive movement of the fingers caused severe pain in the forearm Sensation was intact in the upper arm, but was very much diminished below the elbow joint in the region of the median ulnar and musculo spiral nerves Professor Schloffer diagnosed ischæmic paralysis On examining for the projectile in the depths of the right axilla in the region of the axillary artery there was a hard sense of resistance which was thought to be the projectile and this was confirmed by the Röntgen rays This had produced closure of the axillary artery probably from thrombosis and had led to such an extraordinarily rare result as ischæmic paralysis A little later there was dulness at the base of the right lung behind, with a temperature of 39 5° C , both these signs finally disappeared The local condition improved greatly under very energetic massage so that the power of movement greatly returned , but at the time that the case was reported the right forearm was markedly atrophic when compared with the left side The muscles felt hard and firm In some places hard nodules could be felt Dr Margalie found the reaction of degeneration in the affected muscles Sensation had on the whole become a little better, especially in the forearm but in the hand it was still diminished to all three nerves and in the fingers sensation was almost absent The treatment adopted had been hot air baths but these caused severe blisters on the third and fourth fingers without the patient being aware of the fact No effort was made to remove the bullet Professor Friedel Pick in the discussion which followed remarked that this case was noteworthy owing to the change in sensation for judging from the literature the rule in ischæmic paralysis was that motor paralysis lasted for a long time but sensation was rapidly recovered

CASE 15 —The patient a boy aged 12 years was admitted to St Thomas's Hospital under the care of Mr W H Battle[12] on Dec 2nd 1895 and remained under treatment until Feb 14th, 1896 , since then he has been in the out patient department till June of this year The history of the case is as follows The boy broke his forearm on May 21st 1895 Six weeks after the fracture he could not put his fingers straight The fracture had been treated by means of anterior and posterior splints which had produced a pressure sore in the middle of the forearm under the anterior splint The left arm was wasted and the forearm was held pronated with the fingers flexed When the wrist was flexed the fingers could be extended , this however could not take place with the wrist extended There was marked wasting of the hand muscles A scar was present over the front of the forearm showing the site of the past pressure sore Sensation was normal The electrical reactions were normal No lengthening of the flexors could be brought about under an anæsthetic The muscles were very rigid The treatment adopted was rubbing galvanic current, and gymnastic exercise and there was some improvement

*Definition* —A contraction of the fingers and sometimes of the wrist which comes on rapidly with loss of power which is not absolute in the forearm muscles after a severe injury, usually in the region of *the elbow joint, generally* in young children The deformity is due to changes in the flexor muscles without injury to the peripheral nerves caused in many cases by tight bandaging and the pressure of splints

I next come to discuss the deformity from its different standpoints

*Etiology* —By the following tables (Tables I and II ) which I have made of my own cases and of *those* of the literature the chief causative influences can be seen at a glance

In Table II pressure sore occurred in six out of a possible 11 cases In one of the six cases there were three pressure sores , of the remaining five cases it did not occur in three, in one it is not stated whether it did or did not, and in the last case bullæ were present instead In Table I , out of four cases pressure *sore occurred* in three and was absent in one From this it is easy to see how common a factor it is I do not think it causes the contracture, for it is generally limited to one part of the forearm, not over an extensive area, nor does it usually extend down deeply into the soft tissues , therefore it is hard to understand why it should cause such contraction of all the forearm muscles , but I do think it is a sign of great importance, as it does show to what pressure the parts have been subjected There is usually a good deal of swelling, which has been treated by tight bandaging and splints , with such great resistance the skin is nearly bound to slough The late Mr Davies Colley,[13] on the other hand, believed that "pressure sore" was a cause of the contracture, but it is obvious if it is in some cases that it cannot be in all Splint pressure is claimed by many as the "cause" Mr Littlewood[14] disagrees with this statement and his argument is backed up by the fact that it is clearly shown by looking at Table II that there was no splint pressure in certainly *three* cases out of the 11, and possibly more It is far more likely that it is a combination of large effusion into the soft parts and splint pressure, but that it does occur without any splint pressure I have already stated Mr Page thinks that the contracture is caused by a combination of pressure, fixation and ischæmia Other causes are Esmarch's bandage (Case 13 shows this fact very well and Volkmann[15] states "I have never seen a case result from the use of Esmarch's bandage although it is known to be a cause") , when the main artery of a limb has been ruptured, ligatured, or contused , and lastly, the very interesting case (Case 14) published by *Professor Schloffer where it followed thrombosis* of the axillary artery , long continued and severe cold ,[16] rupture and severe contusion of the flexor muscles in young children (this fact will be dealt with in the pathology) , the suppuration of muscles , and finally, Mr Anderson summarises the etiology thus "It is a result of prolonged fixation of forearm fractures by any form of apparatus that intercepts the free circulation of blood through the muscles and nerves of the part "

*Symptoms* —These come on rapidly, as Volkmann describes, "in half a day or less in very severe cases" The great feature in the history of a case of this deformity is the onset of paralysis of a limb with contracture, this is most important and characteristic The fingers sometimes go blackish in colour and frequently swell There is rarely any pain , the absence of this symptom may be the cause of the splints not being loosened more rapidly, but on removal of the splints the *forearm* is *often* tender and *sometimes* extremely so There is often sloughing of the skin, usually in the middle or upper part of the flexor surface of the forearm The fingers are at first simply flexed, but soon pass into the position so characteristic of this deformity, which has been so ably described by Mr Littlewood Once this position is seen it is not *easily* forgotten , it has been present in every well marked case With the wrist extended the *metacarpo* phalangeal joints are extended also , the inter phalangeal joints of the fingers and the terminal joint of the thumb are, however, strongly flexed, so that the tips of the fingers touch the lower part of the palm, and no reasonable amount of force seems capable of straightening them , but as soon as the wrist joint is flexed to a right angle then the inter phalangeal *joints* can be *easily extended* *In* very bad cases the wrist becomes strongly flexed and is incapable of extension The hand is pronated and the forearm is generally semi flexed The flexor muscles of the forearm seem hard firm, and much wasted A thickening is sometimes felt in the soft tissues, usually in relation to the pressure sore which is so frequently present. A swelling bony in character, is sometimes to be found at the lower end of the humerus, generally at the inner side *Sensation may* be normal or there may be partial or complete anæsthesia , this is dependent on the condition of the peripheral nerves There are thus to be seen usually three grades of this deformity (1) partial contraction of the fingers , (2) the hand in the typical position , and (3) strong flexion of the wrist and fingers, without any power of extension There are no true trophic lesions in pure ischæmic myositis *but the hands are frequently cold and blue and the* skin smooth The fingers frequently swell when the arm hangs down by the side for some time It is said that the joints become ankylosed, similar to the ankylosis in traumatic arthritis, but I could find no such case in the literature or any mention of such a *condition having been recorded* , *in* those cases in which any reference was made to the joints *they* were always said to be normal In well marked cases there is as much *shortening* of *the* bones as *is* met with in acute anterior poliomyelitis &c How does this occur? Dr. Turney's explanation seems completely to explain such a result. He says "The growth of bones proceeds only *pari passu* with the amount of support it has to give to its attached muscles "

*Electrical reaction* —Dr Turney tells me that he considers

TABLE I.—CASES PUBLISHED FOR THE FIRST TIME.

| Cases. | Under the care of— | Nature of the accident. | Treatment adopted. | Remarks. |
|---|---|---|---|---|
| Case 1 | Mr. Clutton and Dr. Turney. | Fracture of the right arm just above the elbow-joint. | Splints, anterior and posterior. | A good deal of swelling of the soft parts and pressure sore |
| Case 2 | Mr. Pitts and Dr. *Turney.* | Some injury, cause uncertain. | Anterior splint to the forearm for five weeks; plaster-of-Paris for two months. | Well-marked swelling of the soft *parts. No pressure sore.* |
| Case 3 | Mr. Pitts and Dr. Turney. | Greenstick fracture of the right radius and ulna at the junction of the middle and upper thirds. | Anterior and posterior splints. | Pressure sore on flexion on the surface of the forearm. |
| Case 4 | Mr. Clutton and Dr. Turney. | Fracture of the lower end of the right humerus. | Plaster splints. | Well-marked swelling of the soft parts; pressure sore. |

TABLE II.—CASES FROM THE LITERATURE OF THE SUBJECT.

| Cases. | Under the care of— | Nature of the accident. | Treatment adopted. | Remarks. |
|---|---|---|---|---|
| Case 5 | Mr. Raymond Johnson. | Fracture of the lower end of the humerus. | Wooden splints. | No statement as to whether any swelling was present; pressure sore on the front part of the fore-arm. |
| Case 6 | Mr. Davies-Colley. | Severe fracture of bones "about the elbow-joint." | Not stated. | Considerable swelling of the soft parts and a pressure sore. |
| Case 7 | Mr. Jackson Clarke. | Fracture of the lower end of the humerus. | Splints. | Much swelling of the elbow-joint. |
| Case 8 | Mr. Page. | Transverse fracture of the lower *end of the humerus; separation* of the lower epiphysis. | Anterior and posterior splints to *the forearm (limb put up in* flexed position). | Pressure sore; presence of swell*ing of the soft parts, but stated.* |
| Case 9 | Mr. Littlewood. | Fracture separation of the lower end of the humerus. | Internal rectangular splint. | Marked swelling of the tissues; no pressure sore. |
| Case 10 | Mr. Littlewood. | Severe fracture of the lower end of the humerus, radius, and ulna. | Splint (kind of splint used not stated). | Considerable swelling of the soft parts; pressure sore. |
| Case 11 | Mr. Barnard | Fracture of the radius and ulna (about the *middle of the shaft).* | Anterior and posterior splints. | Large pressure sore on the fore-arm and two others of smaller size; presence of swelling not stated. |
| Case 12 | Mr. Barnard | Severe contusion of the upper part of the forearm; fracture excluded by the x rays. | External angular splint and very light bandaging. | Great swelling of the soft parts with bloody effusion; no pressure sore. |
| Case 13 | Mr. F. C. Wallis. | Esmarch's bandage to the upper arm for one and a quarter hours. | — | Much swelling and redness and the arm covered with bullæ. |
| Case 14 | Professor Schloffer. | Thrombosis of the right axillary artery. | — | The skin of the right forearm and hand swollen and slightly cyanotic; the muscles very tender. |
| Case 15 | Mr. Battle. | Fracture of the forearm. | Anterior and posterior splints. | Pressure sore. |
| Case 16* | Mr. Davies-Colley. | Compound fracture of the tibia and fibula; calf muscles injured. | — | Prolonged suppuration. |
| Case 17* | Mr. Edmund Owen. | Fracture of the upper part of the forearm. | — | — |

* No details of these cases are given in the present paper.

the normal electrical reactions of both muscles and nerves to be the most diagnostic feature of this deformity. It was present in all my cases, and in one case in Table II. the *reactions were taken by Dr. Turney and also by* myself. There is no mention of the electrical reactions in the different books on medical electricity except by Dr. Hedley who says: "It is stated that the electrical reactions are not altered." On the other hand, when one refers to the recorded cases composing Table II. the exact opposite is found in four of those that were examined; out of the 11 recorded these showed reaction of degeneration, in the fifth case the reaction was normal. Dr. Harris, who examined Mr. Page's case, says: "Any ischæmic condition would, I imagine, damage the nerve end-plates as well as the muscles, and one might expect, I should think, some reaction of degeneration." He also mentions the fact that in acute myositis there are no electrical changes until in the late stages, when atrophy, if any, sets in. Dr. Hedley, who examined the muscles of the forearm in Case 12, reported that he obtained reaction of degeneration. Professor Erb states that in a primary muscular condition the electrical reactions are normal. It is possible, however, that he had not examined cases of ischæmic myositis. There are several points against the presence of the reaction of degeneration. 1. One cannot be certain that the nerves were unaffected in those cases in which reaction of degeneration was obtained. 2. If reaction of degeneration was present then we conclude that those muscles are practically paralysed for the time being, and whether this is due to the main nerve trunks being affected or to the motor end-plates makes no difference from a diagnostic point of view. Now, how is it that when the paralysed muscles had their tendons lengthened they could perform the movements of normal *muscles, as they did in Mr. Page's case, and also seem to* have done in Mr. Barnard's case? This is surely peculiar for paralysed muscles to act normally because their tendons are lengthened. It may be that the muscle recovered from the reaction of degeneration, but no absolute statement to that effect is made, and if the nerve end-plates are damaged by the changes in the muscles, as Dr. Harris suggests, it seems quite unlikely that much improvement will ever take place when one considers the fibrous tissue which has taken the place of the muscle fibres. The peripheral nerves are no doubt affected in some of the cases, as in two cases in Table II. the nerves—i.e., ulnar and median—where cut down on and examined were found to be surrounded by fibrous tissue which was adherent to the nerve sheath, and in one case the nerves were rather swollen. In Case 14, although it is not stated, it seems to me that the ulnar and median nerves were seriously injured. A point of particular importance is that the muscular branch of the nerve may be injured in some cases and may cause the reaction of degeneration, while, of course, it is quite possible that these might recover and, in fact, are far more likely to do so than the motor end-plates, which to my mind, for reasons already stated, if they are once injured, must be so for ever. Lastly, what do we know at the present day of the motor end-plates, more especially their relation to electrical reaction?

*Pathology.*—I will simply state here the opinion of the

Wells, and Civil Surgeons Sterne, Bowen, Pickering, Wilkinson, and Buckley have been discharged from hospital to duty.

### The Medical Journal of the Italian Navy.

The *Annali di Medicina Navale* enters upon its eighth year of existence with a double number comprising the parts for January and February, 1902, and consisting of 260 pages, rather more than half of which are devoted to reviews. In a prefatory note the editors apologise for the delay which has arisen from unforeseen causes and is by no means attributable to a lack of material. As a matter of fact they receive a continuous influx of important papers from their colleagues, some of whom are fortunate enough to be following university courses in Italy or elsewhere, while others are charged with the care of the sick in the various naval hospitals, with the sanitary superintendence of these and other establishments, with the supervision of the emigration department, and, in fine, with general medical and sanitary duty in different quarters of the world. Having such a wealth of matter there can be no difficulty in conducting the *Annali* in a satisfactory manner, but it is also the intention of the editors to keep their readers well abreast of all scientific progress wherever it may occur. In the present issue the leading article is by Dr. O. M. Belli who discusses the important question of "Bilge-water in Men-of-War" at considerable length and with much erudition. A shorter paper by Dr. Enrico Bindi on Operative Procedure in Cardiac Traumatic Lesions is also of considerable interest, being admirably illustrated.

### Sudden Deaths in the Russian Army.

During the quinquennium ending December, 1898, there were 537 cases of sudden death among the soldiers occupying the Warsaw district, 204 of the fatalities being ascribed to disease, 223 to accident, and 110 to suicide. Dr. Scherkin, who is the author of a statistical paper on the subject in the *Voienno Medicinski Journal* for October, 1901, does not mention the exact strength of the troops concerned but merely enumerates the various units as follows: infantry, 57 regiments; Chasseurs, seven corps; garrison infantry, 16 regiments; garrison artillery, six battalions; field artillery, 11 brigades; siege artillery, seven batteries; cavalry, 25 regiments; Cossacks, six regiments; sappers, four battalions; pontoon-trains, two battalions; and railway corps, one battalion—in all 142 units, probably comprising about 125,000 men. Deaths from disease were classified as sudden when less than 24 hours had elapsed after admission to hospital.

### Memorial to the late Surgeon-General W. Nash.

The following subscriptions to the above fund have been received since our last notification:—Lieutenant-Colonel E. A. H. Roe, £1 1*s.*; Colonel F. W. Moore, 10*s.*; and Sir J. Fayrer, K.C.S.I., £2 2*s*, making a total of £23 2*s*.

# Correspondence.

"Audi alteram partem."

## SERUM REACTION IN MALIGNANT ENDOCARDITIS.

*To the Editors of* The Lancet.

Sirs,—In The Lancet of March 22nd, p. 817, is a report by Dr. W. Hale White and Mr. W. C. C. Pakes on a case of malignant endocarditis giving the serum reaction (so-called "Widal" reaction). Upon this I should like to offer a few remarks. I know that it is not quite fair to either author or critic to base arguments on an abstract report. Not having heard the paper read I must excuse myself that it is all I have to go upon. The points at issue are of some importance regarding the value of the test. The authors base the title of their paper on the fact that the serum in this case gave a reaction when diluted 1 in 20 with four strains of the typhoid bacillus and with a fifth partially at 1 in 200. Now I would submit that a reaction occurring in a dilution of 1 in 20 will not suffice for the diagnosis of enterica. The dilution is not high enough. This was pointed out some years ago by myself and others. It is, of course, not often that a blood is found which does react in this dilution, but they do occur occasionally, even in normal individuals. In the case of the fifth sample of typhoid bacillus the fact that it reacted partially in a dilution of 1 in 200 to my mind throws some doubt on the identity of the bacillus or its virulence must have been minimal.

I do not gather from the abstract what the time-limit was or whether the reaction was obtained only after the treatment with anti-streptococcus serum had commenced. Since many bloods will agglutinate if given sufficient time and since horse-serum also often spontaneously agglutinates typhoid bacilli in comparatively high dilution I think these are points of importance, especially the latter, since the reaction seems to have appeared only after treatment had been begun. Should any number of cases occur which give a positive reaction with suitable technique in cases *not* enterica the test will be practically valueless. I have not myself in the course of some experience (based on a dilution of a 1 in 33 and 30 minutes' time-limit) seen any *positive* results in cases where enterica, either past or present, or conferred immunity could be definitely excluded. *Negative* results in cases which are clinically thought to be enterica are comparatively common, especially in the early days of the disease; but in view of recent work by various investigators, as well as of some observations which have come under my own notice, I feel certain that the clinical diagnosis in some of these negative cases has not always been correct. I am, Sirs, yours faithfully,

*Liverpool, March 24th, 1902.* Albert S. Grünbaum.

## DRUNKENNESS AND THE ABUSE OF NARCOTICS.

*To the Editors of* The Lancet.

Sirs,—

> "Intemperance, like a roaring flood,
> Is sweeping o'er our land;
> Its dire effects in tears and blood
> Are traced on every hand."

Everybody deplores drunkenness. Everybody admits that something should be done to mitigate the evil. Everybody will not agree about how the mitigation is to be accomplished. Total abstainers desire their way; prohibitionists and local-vetoists desire theirs. Others think that it would be sufficient to restrict the number and hours of public-houses and to abolish all grocers' licences. The latest proposal hereabout is to make the publicans in populous places—in specified areas of Glasgow and Dundee—close at 10 P.M., the same as in country districts. The most pernicious drinking is in the morning, and it would be much better not to allow any alcoholic beverages to be sold before noon.

It is often said that a nation cannot be made sober by legislation: this nation will never be made sober by any other means. The laws of a nation that would be happy and prosperous should be like the unwritten laws of a well-ordered household, giving every facility to all its members to do well but no facilities to do otherwise. When a member of a family betrays a weakness for alcoholic beverages the use of these beverages in that house is either entirely abolished or very much restricted, and if the same restrictions could be kept up when that weak member was outside the house he would never become, as too often happens, a drunkard and a disgrace to the family. The other members of the family may feel these restrictions somewhat irksome; but they cheerfully acquiesce in the new arrangements for the sake of their weaker member. In the greater family—the nation—it is well enough known there are many weak members, and if restrictions be put upon the procuring of alcoholic beverages which may be somewhat irksome to many, they should not complain for the sake of the weaker members. The total abolition of drunkenness might be quickly accomplished by the Government undertaking the making, importing, storing, and distributing of all alcoholic beverage and, instead of granting licences to publicans to sell these to Tom, Dick, and Harry in indefinite quantities, granting descriptive licences to whoever desires to use these luxuries, with coupons attached for each day's allowance to be given up when obtained. A small sum to be paid for the licence which may be valid for a week, month, or year, and the drink to be paid for when obtained. The day's allowance for an adult should not be more than five fluid ounces of proof spirit, or the alcoholic equivalent of that in any other beverage; and the licence coupons could be so arranged that the day's allowance could be obtained at two, three, or four

*Midwifery*.—D. Cotes-Preedy, Cambridge and St. George's Hospital; G. M. Crockett, Royal Free Hospital; E. F. Forjett, Edinburgh; H. S French, Oxford and Guy's Hospital; H. M Jones, Royal Free Hospital; J. A Kilpatrick, King's College Hospital; M. E. Martin, Royal Free Hospital; H. H. Sloane, St. Bartholomew's Hospital, G. B S. Soper, Guy's Hospital; and S. Zweibach, Königsberg.

The diploma of the Society was granted to the following candidates, entitling them to practise medicine, surgery, and midwifery: W. T. Colver, S. J. H M. Eastwick Field, H. S. French, E. O. Libbey, S. C. Wilkinson, and J. H. Williams.

THE Dawlish and Teignmouth District Councils have decided to erect a joint isolation hospital.

LARYNGOLOGICAL SOCIETY OF LONDON.—The ordinary meeting of this society has been postponed to Friday, April 11th, at 5 P.M.

VACCINATION GRANT.—Mr. David T. Key, M.R C.S Eng., L S.A., public vaccinator for Wyke Regis, has received for the first time the Government grant for successful vaccination.

AT a public meeting at Peterborough last week it was decided to commemorate the Coronation of King Edward VII. by raising by voluntary subscription a sufficient sum to add a new wing to the hospital presented to the city by the late Earl Fitzwilliam.

KING EDWARD'S HOSPITAL FUND FOR LONDON.—The Organising Committee of King Edward's Hospital Fund for London, 81, Cheapside, E.C., has signified that it has much pleasure in accepting an offer which has been made to it with regard to Mr. Percy Godfrey's "Coronation March." This proposal is to the effect that *6d.* derived from the sale of each copy of the march shall be devoted to the "coronation gift" and that all sums derived from licences to perform the march and collections made at concerts shall be given to the same object. Mr. Godfrey's composition gained the prize recently offered by the Worshipful Company of Musicians for the best coronation march, the adjudicators being Sir Frederick Bridge, Sir Walter Parratt, and Sir Hubert Parry.

THE ROYAL INSTITUTION.—In a lecture on Some Electrical Developments delivered at the Royal Institution on March 22nd Lord Rayleigh said that although the Roentgen rays were so easily produced and were capable of giving such remarkable effects, their essential nature was in several respects unknown. They travelled in straight lines and could neither be refracted nor reflected, from which it necessarily followed that they could not be polarised. Diffraction experiments made with great care by Dutch investigators had led to no result beyond proving that if the rays had an undulatory character their wave length could not exceed the one-hundredth of that of light. As was well known, they produced photographic effects by the decomposition of silver salts and rendered certain fluorescent substances luminous; the only other respect in which they were found to resemble ordinary light was that both the Roentgen rays and the ultra-violet rays of the luminous spectrum caused electric leakage of gases. At one time it was supposed that the Roentgen rays admitted of partial reflection but it was now considered that the apparent effect was probably due to some secondary emission. There were many points of resemblance between Becquerel rays and Roentgen rays. Becquerel formerly believed that the rays discovered by him could be polarised but this view was now abandoned Roentgen rays could be deflected by magnets and experiments were shown in which the rays passing through a hole in an aluminium plate and falling on a fluorescent screen were by means of magnets displaced both in straight lines and in curved lines. Changes produced in jets of steam and water by electrification were also shown In another experiment common air was blown through a Woulfe's bottle containing sulphuric acid which did not cover the end of the inlet tube, so that the air did not bubble through the acid but merely passed over its surface. A jet of steam cast only a faint shadow on a screen when a beam of electric light was turned on it, but when the air from the Woulfe's bottle was directed against the jet of steam the shadow became much darker. When nitric acid was substituted for the sulphuric acid the effect did not take place. Lord Rayleigh said that the cause of this phenomenon was quite unknown and he recommended it to the notice of young experimenters because of the simplicity of the apparatus required.

NOTIFICATION OF CHICKEN POX.—The Bath Rural District Council on March 12th decided to include chicken-pox in the list of notifiable diseases.

BRIDGWATER INFIRMARY.—On March 20th Colonel W. Barratt, the president of the Bridgwater Infirmary, formally opened the new operation room which has been provided by means of a bequest of £300 left for that purpose by the late Mr. George England.

ROYAL HOSPITAL FOR INCURABLES, DUBLIN.—A meeting of the board of governors of this hospital was held on March 18th, when six new patients were elected. The hospital is entirely unsectarian and provides accommodation for 212 patients, including separate wards for the treatment of 72 patients suffering from cancer and consumption, in addition to 140 inmates afflicted with various other incurable maladies, all of whom are disqualified for admission into the general hospitals The average daily number of beds occupied throughout last year was 203 and further financial assistance is urgently needed to reduce a debt of £974.

BIRMINGHAM AND MIDLAND HOSPITAL FOR WOMEN.—During the past year 3285 new out-patients have attended at this hospital, showing a decrease of 38 as compared with last year's figures. The total number of new and old cases treated during the year was 17,174, being 570 less than last year. 440 patients were admitted to the in-patient department, an increase of 13 on last year and the total number of operations was 422, an increase of 12. The number of operations involving abdominal section was 213—that is, nine more than last year; of these nine patients have died, giving a death rate of 4 2 per cent This compares with 2·94 per cent. on 204 operations in 1900.

DOWN DISTRICT LUNATIC ASYLUM.—On March 15th at a meeting of the committee of management of the Down District Lunatic Asylum the following motion with reference to the necessity for the establishment of a central laboratory in Ireland for the investigation of the pathology of insanity was unanimously carried: "That we, the committee of management of Down District Asylum, desire to express our warm approval of the proposed central laboratory for research in the pathology of insanity; we hereby state our readiness to affiliate this institution with such an undertaking when it assumes a practical shape and to contribute towards its maintenance a sum of £25 per annum We are of opinion that the project is deserving of general support, believing, as we do, that the prevention and the most effective treatment of mental disease must be largely aided by an accurate knowledge of the morbid physical conditions associated with it, and feeling that any step that tends to promote such knowledge must ultimately prove an important factor in the reduction of the burden of the lunacy charges of the country."

DONATIONS AND BEQUESTS TO HOSPITALS.—The Lord Mayor and Lady Mayoress of London have contributed 20 guineas to the Royal Hospital for Diseases of the Chest, City-road, London, towards the fund now being raised to build and to furnish a home for the nursing staff.—The committee of the Hospital for Consumption, Brompton, has received £1000 from the Goldsmiths' Company and £105 from the Mercers' Company for the country branch of the hospital at Bagshot where the open-air treatment of phthisis is to be carried out.—By the will of Miss Frances Hester Robinson of Richmond £2000 are bequeathed to the British Home for Incurables at Streatham, £2000 to the Deaf and Dumb Asylum in the Old Kent-road, £2000 to the School for the Indigent Blind (for the Junior Branch at Wandsworth), £2000 to the Society for Granting Annuities to the Poor Adult Blind, £1000 to the Charing-cross Hospital, and £1000 to the Hospital for Consumption and Diseases of the Chest, Fulham-road.—Under the will of the late Miss Olivia Atherton of Everton the Royal Infirmary (Liverpool), Northern Hospital (Liverpool), Southern Hospital (Liverpool), and Liverpool Country Hospital for Chronic Diseases receive £1000 each; the Hospital for Women (Liverpool), the Eye and Ear Infirmary (Liverpool), the Liverpool Dispensaries, Liverpool Children's Infirmary, Bootle Hospital, and Stanley Hospital receive £500 each; the Children's Convalescent Home at West Kirby, Wirral Children's Hospital, Home for Incurables, Cancer Hospital (Liverpool), and Liverpool Hospital for Consumption receive £250 each; and the Wallasey Cottage Hospital (Liverpool) receives £200 times. Special licences could be granted as now for special occasions and to responsible persons who would guarantee that there would be no abuse of the beverages; and as all the alcoholic drinking of the country would be under the eye of the Government any abuse of these licences or privileges could soon be put down.

About 30 years ago a circular was sent to all the medical men in this district "asking them to refrain as much as possible from prescribing alcohol in any form." My reply was that I prescribed castor oil when required and *that I expected when the patients got* better they would cease taking it, and that I expected that if I prescribed any alcohol the patients would do the same. I received another notice that many drunkards alleged that the beginning of their bad habits took place when they were under medical treatment, which may be quite true in some cases. Certainly it is perfectly true that many women begin to use alcohol in some form for painful menstruation and during puerperal weakness, and many others have begun to use narcotics by a medical man being either too busy or too lazy to write a prescription, telling his patients to go into the nearest druggist's and purchase a narcotic and take so much of it. Much drunkenness and narcotic-consuming might be prevented by medical men always and only administering alcohol and narcotics medicated in a prescription, not to be repeated unless sanctioned by the prescriber.

Thanking you in anticipation of your finding room in your valuable journal for the above, and hoping that other members of our profession may be induced to state their opinions how best to combat these evils,

I am, Sirs, yours faithfully,

Paisley, March 18th, 1902. J. B. HUNTER.

## A NATIVE REMEDY FOR BLACKWATER FEVER.

*To the Editors of* THE LANCET.

SIRS,—I have read with great interest the notes by Dr. D. R. O'Sullivan-Beare in THE LANCET of Feb. 1st, p. 282, on the native remedy for blackwater fever and I should like to offer a few suggestions on this most important subject.

Before dealing with the question of the remedy there are several points raised in this paper as to the nature of blackwater fever which call for some comment. In the five cases quoted the patients had either never tasted quinine or at least had not taken it for two months previously, so that this adds one more to the many facts which militate against the dangerous doctrine that quinine is the cause of blackwater fever which has prejudiced large numbers against the use of quinine. I most emphatically differ from Dr. O'Sullivan-Beare in his view that blackwater fever is not a form of malarial fever, and I consider that "the test of practical experiment" is in favour of the use of quinine in its treatment. I believe it to be an assumption which has not been proved that the hæmoglobinuria is caused by a toxin rather than by the parasite itself, and the idea which is suggested that nephritis is set up in *ordinary* cases is in my opinion an erroneous one, the albumin present being due to the presence of hæmoglobin. The mention of two cases of blackwater fever occurring among negroes is interesting, as I do not think this is common, and it will be still more important if the information can be borne out which Dr. O'Sullivan-Beare has obtained concerning *some tribes in* the interior, "amongst whom blackwater fever would appear to be endemic"; but may not this be hæmaturia due to bilharzia hæmatobia?

Having delivered myself of these criticisms I desire to thank your correspondent most heartily for the interesting particulars which he has given us concerning this native remedy, for although I do not agree with his estimate of the value of quinine in this disease there can be no question that we are in need of other remedies, and I think that after the testimony we have received *Cassia Beareana* should receive a full trial. As to its mode of action and the reason for its usefulness a few remarks may not be out of place. The most important points in the treatment of blackwater fever, apart from any specific malarial treatment, are to maintain the flow of the urine and to deal with the vomiting which is often a dangerous feature of the malady, making it difficult to administer either food or medicine and weakening the patient. It seems to be a point in the prescription of this medicine to give it with a great deal of fluid, and probably this assists in promoting free diuresis, even if the drug itself is not a diuretic. But what interests me more is the influence which it appears to have upon vomiting. In the cases mentioned vomiting seems to have been a prominent symptom and the medicine seems to have relieved it. Perhaps even more striking than the effect of the remedy upon blackwater fever is the result obtained in so-called bilious remittent fever. I have sometimes wondered whether the number of cases classed under this head are all of them malarial; at all events the trouble here is usually vomiting and this the medicine seems to relieve. If this is so, the drug may be useful in other cases where vomiting is a troublesome symptom and it is to be hoped that all who use it will note carefully the effects produced, so that we may not be acting in the dark in prescribing the remedy.

I am, Sirs, yours faithfully,

CHARLES F. HARFORD-BATTERSBY.

Livingstone College, Leyton, E., March 24th, 1902.

## VAGARIES OF VACCINIA.

*To the Editors of* THE LANCET.

SIRS,—From personal experience of the vagaries of vaccinia I am intensely interested in the clinical note sent you by Dr. J. W. Washbourn, published in THE LANCET of March 8th, p. 664. It is within the recollection of many of your readers that when the Local Government Board first introduced the glycerinated calf-lymph it was found to be very irregular and uncertain in action. A not uncommon experience was to make four careful scarifications, insert the glycerinated calf-lymph from the same tube in each, and then to find quite a variety of vesicles, papules, blebs, and minute vascular spots, these last resembling small nævi, none of them coming to maturity and disappearing without leaving a cicatrix; one class of immature vesicles left a slight scar more like staining of the skin than a scar.

I have notes of a case almost identical with the one recorded by Dr. Washbourn. In March, 1899, I vaccinated a child, a female, aged two years, in four places. Two of the scarifications developed into mature vesicles leaving well-marked cicatrices; the other two were simple blebs, with no areola; the serous fluid was re-absorbed, the vesicles shrank and never scabbed. The mark left was more like a stain than a cicatrix. After a lapse of nine months the mother complained that whenever the child had a cold the vaccination spots came back. At first I treated this piece of curious information as purely mythical—on a par with many of the funny things said about vaccination. However, to please the mother I asked her to let me see the child's arm when she had the "spots" on again. This she did in the course of a few weeks, when, to my surprise, at the site of the *imperfect vesicles only* the superficial layer of the epithelium was raised in the form of two or three small vesicles resembling exactly a group of herpes; be it noted there were none in the cicatrices left by the mature vesicles. I saw them two days after the child scratched them; they were red at the base and covered by a scab. To prevent further scratching the arm was dressed; the sores soon healed and left *no scars*. Now, it may be due to over-dulness, but it requires a stretch of the imagination to fancy that in this case the vaccinal virus in the original lymph was of two kinds—one active, producing satisfactory results; the other inert, lying dormant for nine months and then by the aid of a cold or, as in Dr. Washbourn's case, scarlatinal infection developing its latent powers in producing good results. Or shall we put it this way—the more or less inert lymph having exhausted its strength in its first abortive effort, by a further period of rest in the living tissue acquired sufficient vitality when reinforced by scarlet fever to produce true vesicles.

With your permission, Sirs, I should like to ask so great an authority as Dr. Washbourn one or two questions. His patient was vaccinated in four places, "only *one* of which took and that very slightly," yet we are informed further on that Mr. Percy Rose found four spots on the left arm at the usual site of vaccination. Query, were there cicatrices "at the usual sites of vaccination"? Again, and more important, did the four spots, "exactly like mild vaccination at about the seventh day," leave cicatrices behind them like genuine cases of primary vaccination? Is it not generally the case that the concurrence of scarlet fever, whooping-cough, and

Health of Tiverton Rural Distict.—Mr. J. R. R Pollock, the medical officer of health, reports that during 1901 the birth-rate in this Devonshire rural district was 25·51 per 1000, and the death-rate was 14·81 per 1000.

Defective Drains.—At the Bristol County Court on March 18th a tenant claimed from the owner of a house £50 damages for alleged breach of warranty respecting the drains. The plaintiff stated that when he took the house from the defendant he was assured that the drains were in perfect condition. After a few months members of the family were constantly ill and one child died from diphtheria. Eventually the plaintiff communicated with the sanitary authority and the drains were found to be defective. The defendant stated that he gave no warranty; all he said was that to the best of his belief the drains were all right. Judgment was given for the plaintiff for £25, with costs.

Cheltenham General Hospital.—The annual meeting of the subscribers to this institution was held on March 18th under the presidency of Colonel Croker-King. The medical report stated that 896 in-patients had been admitted during 1901, against 871 in 1900, and there had been 8867 out-patients treated compared with 7936 in the preceding year. The financial statement showed that there was a small increase in church collections and Hospital Saturday collections and the legacies received amounted to £2250, but the excess of expenditure over income nevertheless amounted to £2419. Colonel Croker-King was re-elected president.

Torbay Hospital, Torquay.—There is some difficulty at Torbay Hospital with respect to a rule which was adopted by the committee last year providing for the annual election of the honorary medical staff. At the recent election two of the physicians, who were originally appointed for life, were not re-elected although they were thanked for their past services. The board of management then advertised for two gentlemen to fill the vacancies. The members of the profession in Torquay at a meeting agreed that none of their number should apply for the appointments and consequently no applications were received. The honorary medical staff of the hospital feel strongly on the subject of the rule alluded to and six influential governors have requisitioned a special meeting with the object of getting the rule altered.

Winsley Sanatorium.—A public meeting in aid of the proposed sanatorium for consumptives for Somerset, Wilts, Gloucestershire, and Bristol was held at Bath on March 13th under the presidency of the Mayor (Mr E. E. Phillips, L R C P. Edin., M R C.S Eng.). Dr. L. Weatherly mentioned that the members of His Majesty's Advisory Board who recently visited the Winsley Sanatorium, although they regarded it as an admirable spot for such an institution, found that the space would be too small for the erection of the King's Sanatorium for which Sir E Cassell had given £200.000. It was stated that £20,000 would be needed for the erection of the proposed sanatorium; £5000 had only been received at present, and it has been resolved that the foundation-stone shall not be laid until one half of the required sum has been raised.

Birmingham General Hospital.—The report of this institution for 1901 states that the old hospital which was sold to the corporation has now been pulled down and a building which for 130 years did so much for the relief of the sick and suffering passes away in all but memory. The demand on the beds, though great in previous years, has been even greater during the past year, the list of cases awaiting admission often exceeding 200 and it has rarely dropped to 100. The number of in-patients was 5170, a decrease of 41 as compared with the previous year. The daily average of patients in the hospital was 278, against 281½ in 1900. Of the in-patients admitted 902 were children under 12 years of age, of whom 138 were under the age of two years. The out-patients numbered 62,643, or 1778 more than in the previous year. The amount accruing from subscriptions, &c., was £7747 17*s.* 8*d.*, or £469 3*s.* 8*d.* more than in the previous year. Donations amounted to £582 0*s.* 5*d* and special congregational collections to £52 0*s.* 5*d.* £2973 6*s* 8*d.* were placed to the credit of the current account as the moiety of legacies received during the year. The ordinary expenditure was £24,411 9*s.* 11*d.* and the extraordinary expenses amounted to £812 17*s.* 2*d.*, while the sum of £276 8*s.* 5*d.* was transferred to the Jaffray branch account to meet the deficit at that institution. An adverse balance of £5110 19*s.* 1*d.* remained at the end of the year, the surplus of £1180 5*s.* 10*d.* shown on the year's working being applied to the reduction of the deficit of £6291 4*s.* 11*d.* brought over from last year.

Health of Launceston.—Dr. C. G. Gibson, the medical officer of health of Launceston (Cornwall), in his annual report for 1901 states that during the year the births numbered 59 and the deaths 48. The birth-rate was 14·5 per 1000 and the death-rate was 11·84 per 1000. Dr. Gibson urged the town council to provide an isolation hospital for small-pox cases.

Dorset County Hospital, Dorchester.—The sixty-first annual report of this institution which has just been issued states that 299 in-patients were admitted during 1901, against 311 in 1900. The out-patients numbered 961 compared with 996 in the previous year. The average daily number of in-patients was 33; the average cost per patient weekly amounted to £1 0*s.* 2*d.* The financial statement shows that the receipts for the year amounted to £2165 and the expenditure to £2284. The deficit balance at the end of 1900 amounted to £18 and this has now been increased to £137. During the present year it is hoped to provide the hospital with a new operation room, and owing to munificent donations from the Earl of Eldon and the Earl of Ilchester the committee hope that the work will be completed without any call being made on the general funds of the institution.

# Parliamentary Intelligence.

## NOTES ON CURRENT TOPICS.

### *Midwives Bill.*

In anticipation of the report stage of the Midwives Bill several amendments have been prepared and put down on the notice paper of the House of Commons. Mr. Griffith Boscawen and Mr. Robert Ambrose propose to raise once more the question of the scope of the legislation by moving amendments to make it apply to all women who habitually and for gain attend midwifery cases, while Mr. George Harwood has put down a notice to strike out the subsection inserted at the instance of Sir John Batty Tuke in the Grand Committee which proposes that no woman shall be entitled to recover fees in the courts unless she is certified under the Act. In Clause 2 Mr. T. P. O'Connor will move to strike out the words which give special recognition to the certificates in midwifery of the Royal College of Physicians of Ireland and the Obstetrical Society of London. Several amendments appear in the notice paper with reference to Clause 3, the clause dealing with the constitution and duties of the Central Midwives Board. Mr. Patrick White proposes that the General Medical Council and not the Lord President of the Privy Council shall take the steps for the formation of the Board; Mr. McGovern that the four registered medical practitioners shall be appointed by the General Medical Council instead of by the Royal College of Physicians of London, the Royal College of Surgeons of England, the Society of Apothecaries, and the Incorporated Midwives Institute; and Mr. Griffith-Boscawen that the Royal British Nurses Association shall have a nominee on the Board. With this substantial body of amendments on the notice paper the Bill cannot be taken as unopposed business after midnight. In all probability, therefore, it will have to wait its turn with other private Members' Bills for consideration on a Wednesday after Whitsuntide, unless, of course, the Government arranges to give special facilities.

## HOUSE OF COMMONS

*Tuesday, March 18th.*

### *Vaccination in Government Departments.*

Mr. Channing asked the Vice-President of the Committee of Counc on Education whether he was aware that on Feb. 19th a general orde was issued on behalf of the Board of Education and signed by S William Abney inviting the officers of the department at Sout Kensington to submit themselves for vaccination and revaccinatio by the public vaccinator on Feb. 25th and 26th, and desirin those who did not wish to do so to send in their names t the heads of their sections; whether there had been issue since then a further minute, signed by Sir William Abney, invitin officers who still remained unwilling to reconsider the matter befo the Board proceeded to decide what further steps should be taken whether any similar action had been taken on the elementary side a Whitehall and in other Government departments; whether the orde and minute were issued by Sir William Abney with the sanction c the Lord President and Sir George Kekewich; and, if so, under wha powers, statutory or by regulation, any further steps to compel th officers to be vaccinated or revaccinated could be taken.—Mr. Gran Lawson, replying for Sir John Gorst, said: Notices relating to th vaccination of persons in the employ of the Board of Education hav by the authority of the Board been issued both at Whitehall and Sout Kensington. Similar notices have, I am informed, been issued b other Government departments. No person can be compelled by th Board of Education to be vaccinated or revaccinated.

measles modifies rather than accentuates the vaccinal process? My own interpretation of the phenomenon was that it was either herpes or due to some other irritant producing dilatation of the capillaries of the cutis causing the superficial layers of the epithelium to be raised from the deeper in the form of a bleb.

I am, Sirs, yours faithfully,
March 24th, 1902. J. MACKENZIE.

## BEEF-WORM IN THE ORBITAL CAVITY.

*To the Editors of* THE LANCET.

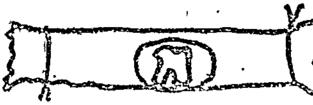
SIRS,—In connexion with my article "Beef-worm in the Orbital Cavity," published in THE LANCET of Jan 4th, 1902, p. 19, I have received the following suggestions from Mr. Ernest Austen who has charge of the collections of diptera in the British Museum. The so-called beef-worm, he thinks, is the larva of a species of dermatobia, probably *Dermatobia cyaniventris*, a dipterous fly belonging to the family œstridæ I stated that the egg had been laid by the parent fly *beneath* the human skin or mucous membrane, but Mr. Austen suggests—and no doubt rightly—that the egg was laid *upon* the skin and that the larva, on hatching, burrowed beneath the surface in the subcutaneous tissue, which would account quite satisfactorily for the extraordinary position in which it was found. I stated that in the full-grown worm the bristles encircling the middle two-thirds of the body attained a length of half an inch. This statement had never been verified by personal experience, as the longest bristles I have seen on the creature have never exceeded one-twelfth of an inch, but I considered my authority reliable. Mr. Austen, however, informs me that the bristles *never* reach a length of half an inch in *any* dipterous larva.

I am, Sirs, yours faithfully,
Corozal, British Honduras, March 4th, 1902. THOMAS GANN.

## INTESTINAL OBSTRUCTION CAUSED BY A TOOTH.

*To the Editors of* THE LANCET.

SIRS,—On Sunday, Feb. 9th, I was called to see a dentist in this neighbourhood and on arrival found him dead. He was taken suddenly ill the night before with colic but I was not sent for till too late. I performed a necropsy and found all the organs normal. However, about midway between the duodenum and large intestine I found an obstruction in the shape of a hard foreign body. I removed the piece of intestine and on examination found a molar tooth encysted in a membrane which had become attached to the inner wall of the gut thus.



It was a natural tooth and had evidently been there for a long period.

I am, Sirs, yours faithfully,
GODFREY WARNES.
Great College street, N.W., March 23rd, 1902.

## CANCER IN INDIA AND IN CHINA.

*To the Editors of* THE LANCET.

SIRS,—In THE LANCET of to-day (March 22nd) Lieutenant-Colonel Maitland, I.M.S., writes that, "To say, as Mr Keetley does, that I [i.e, Lieutenant-Colonel Maitland] alone am responsible for all the medical and surgical wants of 30,000,000 Hindoos in Southern India is as absurd as it would be to say that Mr. Keetley was responsible for the whole population of London." This seems to be Lieutenant-Colonel Maitland's idea of a fair description of the following sentence in my letter in THE LANCET of Jan. 18th (p 193) · "Captain Donovan says that Colonel Maitland speaks for the Madras General Hospital where cases from all over the Madras Presidency come for operation." I see nothing absurd in this statement of Captain Donovan.

Every London surgeon who once gets "known" does draw his cases from among the 5,000,000 of Londoners and from far beyond; but his position differs from Lieutenant-Colonel Maitland's in this: that there are 50 other surgeons as well known as himself practising in the same city with the Londoner, while the professor of surgery's position is unique at Madras. Therefore, the fact that the latter "almost always has one or two" Hindoo patients suffering from cancer is no proof of their suffering from it as much as Europeans.

I am greatly obliged to Lieutenant-Colonel George Ranking, I.M.S., for his valuable letter.

I am, Sirs, yours faithfully,
Grosvenor-street, W., March 22nd, 1902. C. B. KEETLEY.

## LOCAL OPTION IN VACCINATION.

*To the Editors of* THE LANCET.

SIRS,—I see that the town council of Hastings on March 21st passed a resolution to request Parliament in this session to abolish the conscientious objector clause and also to make revaccination compulsory. Seeing the difficulty of legislation now would it not be well to allow towns or counties who prefer it, say by a two-thirds majority, to adopt such regulations at once? Surely a short Act to that effect might be got through Parliament. The result of a few years' experience would then be convincing.

I am, Sirs, yours faithfully,
GEORGE HENDERSON, M.D., F.L.S.
Bushey, March 22nd, 1902

## DIPHTHERIA OF THE CONJUNCTIVA.

*To the Editors of* THE LANCET.

SIRS,—One or two small errors have crept into the report published in THE LANCET of March 22nd, p. 818, of a paper on Diphtheria of the Conjunctiva read before the Ophthalmological Society on March 14th. The report represents me as insisting upon the practical value of an immediate examination of "smears" of the discharge, "stained in methyl-eosine, and the acid reaction *of gelatin cultures*." What I actually did was to insist upon the value attaching to the staining of cover-glass preparations by Neisser's plan and to the acid reaction of bouillon cultures.

I am, Sirs, yours faithfully,
Welbeck-street, W., March 23rd, 1902. SYDNEY STEPHENSON.

## THE DIPLOMA OF THE SPECTACLE-MAKERS' COMPANY.

*To the Editors of* THE LANCET.

SIRS,—Sir W. Hart Dyke's letter in THE LANCET of March 15th, p. 774, does not meet the case. He says the Company "do not examine in sight-testing." This is evading the question, as the greater part of the examination deals with visual optics and spectacle-fitting, and the Company's official instructor is a gentleman who teaches visual optics only; his printed circulars and advertisements are issued *by the Company* with the particulars and syllabus of the examination, and in one of these circulars he undertakes for a substantial fee to coach for the examination, partly by correspondence and partly by personal tuition at a class held in London during the two weeks immediately preceding the examination. In fact, the worshipful Company provides the examination for a substantial fee and thoughtfully circulates the advertisements of its official instructor who will for another substantial fee endeavour to cram sufficient information into the competitor to enable him to pass, and further thoughtfully provides that if the candidate cannot pass it all at once he may do so by instalments at successive examinations.

I am not raising the question as to whether opticians should or should not test sight but I do say that the intention of the original optical committee is not being carried out, that the present methods are calculated to do serious harm, because, though the examination is no proof of anything beyond the fact that the diploma holder possesses a certain amount of optical knowledge, the diplomas are being used for the purpose of inducing the public to believe that they have been granted for proficiency in knowledge particularly connected with the fitting and adapting of spectacles to correct defective eyesight and are used for advertising purposes to draw trade in the shape of the sale of spectacles. This is shown by the fact that some of the holders attach the letters F.S.M.C. to their names in their

### *The Water-supply at Darenth.*

Dr. FARQUHARSON asked the President of the Local Government Board (1) whether he was aware that the Kent Waterworks Company had nearly completed a large pumping station in the parish of Darenth in the Darenth valley, within 1100 yards of the inclosure at Gore Farm in which the Metropolitan Asylums Board had also nearly completed small-pox hospitals to hold a total of 2500 cases; and that the pumping station was at a lower level than any part of this inclosure; and (2) seeing that these small-pox hospitals and the other establishments belonging to the Metropolitan Asylums Board at Gore Farm had no means of drainage for liquids other than soakage into the porous gravels and sands overlying the chalk strata from which the Kent Waterworks derive their supply, whether he would institute an inquiry into the effect on the quality of the water supply from this drainage, including that from the burial-ground belonging to the Metropolitan Asylums Board at Gore Farm, in which between 1500 and 1600 interments of small-pox and scarlet fever patients had been made, this burial-ground being situated 160 feet higher than, and 1700 yards distant from, the Kent Waterworks Company's pumping station.—Mr. GRANT LAWSON replied for Mr. LONG, saying: I am aware of the facts mentioned in the first paragraph of the question. The well was approved by me in December last as a source of supply after an investigation by an inspector and after samples of the water had been examined by experts and found to be of great organic purity. I am informed that there is no danger of the well being polluted by surface drainage as it is lined with closely fitting iron cylinders to a depth of 92 feet from the surface, the lower 60 feet being in the solid chalk. Moreover, I understand that Gore Farm drains into a subsidiary valley of the Darenth, which enters the main valley fully half a mile below the site of the well, and it is therefore impossible for surface drainage from the hospital lands to reach the vicinity of the well.—Dr. FARQUHARSON asked whether the Local Government Board would send down an inspector in order to relieve the local anxiety on this subject.—Mr. GRANT LAWSON: An inspector was there as recently as last November. He made a close inspection and, as I have said, the water was then submitted to analysis, I do not think it is necessary to do it again.

## THURSDAY, MARCH 20TH.

### *Vaccination Questions.*

Mr. ROUND asked the President of the Local Government Board if his attention had been called to the danger of infection in schools from children who had not been vaccinated; and if he would take steps, if necessary by legislation, to empower school authorities to exclude such children from attendance at school.—Mr. LONG replied: I am aware of the danger referred to where small-pox is prevalent but it mainly affects children who are not protected by vaccination. I may, however, point out that under Article 88 of the Code of Regulations made by the Board of Education, the managers of any public elementary school must comply with a notice of the sanitary authority of the district or of two members acting on the advice of the medical officer of health, requiring them for a specified time with a view to preventing the spread of disease to exclude any scholars from attendance. There is a right of appeal to the Board of Education if the notice is considered unreasonable. I understand that in one case unvaccinated children have been excluded under the article.

Mr. CORRIE GRANT asked the President of the Local Government Board whether he was aware that Dr. S. M. Copeman inoculated monkeys with small-pox material obtained from cases under observation during outbreaks of the disease, that he inoculated calves from the vesicles so produced on the monkeys, and inoculated a considerable number of children from the vesicles so produced on the calves, as described by himself in a paper read before the Royal Medical and Chirurgical Society on Dec. 10th, 1901; whether these experiments were conducted with the knowledge of the parents or with the knowledge or sanction or at the expense of his department; and whether Dr. Copeman was now or had been in the employment of the Government.—Mr. LONG, in reply, said: The answer to the first two points is in the affirmative. I am informed that a considerable number of children were vaccinated with the lymph obtained from the calves referred to but none of the vaccinations were performed by Dr. Copeman. I have no information as to whether the experiments were conducted with the knowledge of the parents of the children vaccinated but they were not performed with the knowledge or sanction or at the expense of the Local Government Board. Dr. Copeman is one of the medical inspectors of the department.

## FRIDAY, MARCH 21ST.

### *Enteric Fever among the Troops in South Africa.*

Sir WALTER FOSTER asked the Secretary of State for War if he could state the names of the special sanitary officers who had been sent to South Africa to inquire into the origin and spread of enteric fever and other preventable diseases among the troops, with the dates of their appointments, the length of time spent in South Africa on these duties, and the duties on which they were now engaged.—Mr BRODRICK replied: Three gentlemen were specially employed in August, 1900, to inquire into the subjects mentioned—Dr. Simpson, Colonel J. L. Notter, R.A.M.C., and Major Bruce. Dr. Simpson served until November, 1901, with an interval of five months, when he was employed on plague duties. He has now gone to Hong-Kong to investigate the recurrence of plague there. Colonel Notter served till October, 1901, when he returned to England. He is now acting as principal medical officer at Aldershot. Major Bruce served till October, 1901. He is now serving on the Advisory Board for Medical Services. Captain Beveridge and Colonel Cooper, R.A.M.C., who were already in South Africa, were also employed in the same work. The recommendations of these gentlemen are being carefully carried out by the responsible medical officers on the spot.

While the House was in Committee of Supply discussing the vote for the salaries and expenses of the War Office Sir WALTER FOSTER made a speech on this subject. He argued that the wastage among the troops from enteric fever was not taken sufficiently seriously. During the months of January and February of the present year there had been 800 deaths among the soldiers—a mortality heavy in itself and representing a large amount of disability through sickness. This drain on the forces, he submitted, was not creditable to the administration. He had been told by the Secretary of State that he was advised by civilian medical men in the best practice in London, but what he stood in need of were the guidance and advice of special experts in sanitary matters—leading medical officers of health or experienced inspectors under the Local Government Board. There were no fewer than 60 places where the mortality from enteric fever was excessive. The disease was preventable and he thought special pains should be taken to protect the soldiers from it. He would like to know whether anything was being done in the way of providing the columns with the means of boiling water.—Mr. BRODRICK said that he agreed with the hon. Member as to the seriousness of the wastage from this disease, but he would remind him of the difficulty there was in enforcing any regulations or precautions that might be prescribed. Regulations might be enforced in a civil community, but the case was entirely different with a moving army scattered over so wide a region as South Africa. Soldiers tired and thirsty would drink water whenever they came across it. A column arrived at a place and while food was being prepared the men in defiance of regulations made off to the river and drank the water. In this way the very best precautions were rendered of no avail. At the same time he fully appreciated the force of the hon. Member's speech and he assured him that the matter would have his best efforts and attention.

### *Medical Staff of the Refugee Camps.*

Mr. LAMBERT asked the Secretary of State for the Colonies whether any of the medical staff of the refugee camps had complained of their treatment by the chief superintendent, and whether the same had been dismissed by him without notice or reason assigned.—Mr. CHAMBERLAIN said: No, sir; I have not received any complaints, but I think that I ought to add that I have absolute confidence in Sir William Maxwell, the superintendent of the concentration camps and the military governor of the district, and that I should not think of interfering with his discretion in dealing with his subordinates.

## TUESDAY, MARCH 25TH.

### *Colonel's Pay in the Royal Army Medical Corps.*

Captain NORTON asked the Secretary of State for War if he could state the total pay and allowances of a colonel on the general staff, a colonel on the staff of the Royal Engineers, and a colonel of the Royal Army Medical Corps respectively, and whether any increase of total emoluments for the last-mentioned officer had been arranged for in the forthcoming warrant for the Royal Army Medical Corps.—Lord STANLEY replied for Mr. BRODRICK: The pay and allowances are as follows: Colonel on the staff, £880 and forage; Colonel on the staff (R.E.), £1063 and forage; Colonel of the R.A.M.C., £880 and forage. The recent Committee on the Reorganisation of the Army Medical Service did not recommend any increase to the emoluments of colonels of the Royal Army Medical Corps and no increase is therefore provided for officers of this rank in the forthcoming warrant.

### *Small-pox Statistics.*

Mr. CORRIE GRANT asked the President of the Local Government Board, having regard to the fact that the system of classification of small-pox deaths, according to a footnote in the weekly return of the Registrar-General, excluded from the classes of vaccinated and not vaccinated all cases not so certified by registered medical men and that cases were put under the heading "no statement" not only when the medical practitioner was unable to certify whether there had been vaccination or not but when the practitioner had failed to make any mention of vaccination, whether he would direct the Registrar-General to secure a stricter classification of the small-pox deaths.—Mr. GRANT LAWSON, for Mr. LONG, replied: I have communicated with the Registrar-General who states that he does at present secure a classification of small-pox deaths which is sufficiently accurate for statistical purposes. Frequently it is not practicable to obtain full information concerning particular cases in time for publication in the current weekly returns but from time to time the information is supplemented with the help of facts subsequently obtained. The Registrar-General will, however, consider whether any alteration shall be made as regards the publication of vaccination statistics in connexion with deaths from small-pox.

### *Bubonic Plague in Hong-Kong.*

Mr. WEIR asked the Secretary of State for the Colonies if he would state the percentage of the bubonic plague cases in Hong-Kong for each month since August last inclusive; and, in view of the fact that the plague was largely attributed by the Legislative Council of Hong-Kong to the prevalence of rats, would he say whether effect had been given to the council's proposals to employ an English rat-catcher; and, if so, with what result.—Mr. CHAMBERLAIN replied: The number of plague cases in Hong Kong was—for August, 20; for September, 22; for October 3; and one case occurred in each of the three months, December, January, and February. I have urged upon the Colonial Government the necessity of destroying rats and very large numbers have been killed, but no such proposal as that referred to by the hon. Member has been brought to my notice.

### *Typhoid Fever Epidemic in Ireland.*

Mr. TULLY asked the Chief Secretary to the Lord Lieutenant of Ireland if he could say what was the nature of the report of Dr. McWeeney as to the outbreak of typhoid fever in Boyle Union in connexion with a local creamery; and could he state why no steps were taken to act on this report and to close the creamery during the epidemic. —Mr. WYNDHAM said in reply: The report was unfavourable. The creamery was closed for some days, during which the structural defects were remedied. The Local Government Board inspector considers the creamery may now be worked without danger to the public health.

# BOOKS, ETC., RECEIVED.

BAILLIÈRE, J. B., ET FILS, 19, Rue Hautefeuille, Paris.

Les Oxydations de l'Organisme (Oxydases). Par E. Enriquez, Médecin des Hôpitaux de Paris, et J. A. Sicard, Chef de Clinique à la Faculté de Médecine de Paris. ("Actualités Médicales" Series.) Price 1 fr. 50c.

HIRSCHFELD BROTHERS, 13, Furnival-street, Holborn, E.C.

Plant Relations: a First Book of Botany. Plant Structures: a Second Book of Botany. By John M. Coulter, A.M., Ph.D., Head Professor of Botany, University of Chicago. Second edition, revised. Price 6s. net.

business advertisements, presumably to imply a professional qualification and also advertise themselves as "qualified by examination." Many of these men have scarcely any practical knowledge of the trade at all and do not even profess to understand anything but spectacles.

I may mention that I and eight of my assistants have passed this examination but refrain from making any public use of the fact.

I am, Sirs, yours faithfully,
JAMES AITCHISON,
Citizen and Spectaclemaker; Member of the Original Optical Committee of the Worshipful Company of Spectaclemakers.
Strand, W.C., March 18th, 1902.

## SIR JAMES PAGET'S LECTURES.

*To the Editors of* THE LANCET.

SIRS,—Old students of Sir James Paget and the many who enjoy and profit by his few preserved lectures may be glad to be directed to your first volume for 1869. There they will find three lectures which have never been republished as well as that on the Treatment of Carbuncle which is included in the volume edited by Mr. Howard Marsh. The other lectures were on "Diseased Joints of the Foot," Jan. 30th; "Treatment of Fracture," Feb. 27th; and "Aneurysm of the Femoral Artery," April 7th and 24th. The last is of special interest. As the headings show, they were all reported for THE LANCET at the request of the Editor, being revised by Sir James Paget. To THE LANCET belongs the credit of their preservation. This is a greater service than it might seem because they are perhaps the only hospital lectures of Sir James Paget preserved as delivered. He went through the reports but hardly altered a sentence. The lectures were given without a note and present perfectly his extempore style.

I am, Sirs, yours faithfully,
March 25th, 1902. THE REPORTER OF THE LECTURES.

## NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

*Plague Riot in Patiala.—Further Increase of the Epidemic.—Samaritan Funds for Indian Hospitals.—Cholera Inoculations.—Researches in Malaria.*

ON Feb. 19th a somewhat serious disturbance took place in Patiala which is said to have been occasioned by the compulsory segregation of two cases of plague. Major H. Hendley, I.M.S., medical adviser to the State, and Dr. Nathu Mau, the civil surgeon, were attacked by a large mob with sticks and bricks and in consequence of being wounded had to take refuge in the branch dispensary. This was then wrecked and set fire to but the troops arrived in time and the officers were able to effect their escape. The plague camp near the railway-station was also set on fire. According to another account Major Hendley was fastened down by a door, was pelted, and was then carried off and thrust into a mass of filth. He was wounded in nine places—most seriously on the head and on the right leg. These disturbances are not common now but their recurrence serves to show that the dangers to which plague workers are subject are very real.

The plague mortality for the whole of India has again increased. During the past week there have been 14,946 deaths, as against 12,695 for the previous seven days. There were 5922 deaths in the Punjab (an increase of 1809), 4373 in the Bombay Presidency (an increase of 543), 1351 in the North-West Provinces, and 863 in Bengal (an increase of 125). In Bombay city and in Calcutta the disease is growing apace. Bombay had a plague mortality of 701, the general mortality being 1635, equal to a rate of over 105 per mille. Calcutta had 176 plague deaths, an increase of 56, and later figures show a very rapid development. Karachi records 47 deaths, the Madras Presidency 543, Mysore State 507, and Kashmir 317. The old idea that plague is favoured by cold weather is not quite extinct but the continued development with a rising temperature in such places as Bombay and Calcutta ought to correct this fallacy. During the corresponding week of last year there were only 6307 deaths, so that the present serious increase of the disease should be noted.

There are not many hospitals in India which have Samaritan funds, so that the recent gift of Rs. 10,000 by Messrs. Ralli Brothers to the Medical College and Mayo Hospitals in Calcutta is particularly happy. It is intended to be used for clothing and the distribution of small sums for temporary assistance to poor native convalescents—Hindoos, Mahomedans, and Parsees.

Some interesting observations have been made by Major Buchanan and Captain Lamb on the effects of cholera inoculations which may be thus summarised: (1) a preliminary injection of a dead vaccine a few days before the living material is inoculated has the effect of increasing the subsequent constitutional disturbance (the larger the dose of the former the greater the subsequent reaction); (2) a slight increase in the amount of living material greatly increases the constitutional disturbance; and (3) a previous attack of cholera (within one month) decidedly lessens the reaction of a "living" inoculation. The chief inoculations for cholera are now at Goalundo, where the coolies for the tea-gardens pass through, but the returns for cholera are optional on the employers so that the information available is scanty.

Other interesting observations which are shortly to be published refer to researches on malaria fevers by the commissioners. The amount of infection of children is a trustworthy index of the general prevalence of malaria and the "endemic index" is determined by the proportion of children and of anopheles found to be infected. What is true for Africa seems to be true also for India. The endemic index was found to range very widely, from *nil* in Calcutta to 72 in the Duars. In Calcutta not one of the children examined had parasites and not one of the anopheletes dissected was infected. The commissioners, however, recognise malarial disease accompanied by parasites and a form without it. The latter is common in Calcutta, is grave in type, and passes into a true malarial cachexia with a large increase in the mononuclear leucocytes. The actual number of anopheletes present in a district is no criterion of the prevalence of malaria. In the Duars anopheletes are comparatively difficult to capture. All species of anopheletes are evidently not equally dangerous and it is thought that anopheles Rosii, a very prevalent species, is hostile or immune to the parasite. Other observations made are that while in the cold weather zygotes would not develop beyond a certain stage they progressed to sporozoites when the infected mosquitoes were warmed by means of an incubator.

Feb. 28th.

## MAIDSTONE AFTER THE EPIDEMIC.

(BY OUR SPECIAL SANITARY COMMISSIONER.)

*(Concluded from p. 701.)*

*The Diphtheria Epidemic.—The Good Effect of Sewer Ventilating Shafts.—The Sewage Disposal and Drainage Schemes.—Other Measures.—Dangerous Street Hydrants.*

WHEN insisting on the necessity of looking to the sewers and domestic drainage of Maidstone, instead of considering only the water-supply, it was pointed out that typhoid fever was not the only disease that seriously menaced the health of the town. Indeed, except for the great typhoid fever epidemic of 1897, diphtheria was doing more damage. During the six years previous to this epidemic there had been 498 cases of diphtheria notified and only 116 cases of typhoid fever. Then when, in 1897, typhoid fever assumed an epidemic form diphtheria did the same, but the typhoid fever epidemic exhausted itself in a few weeks while the diphtheria epidemic lasted three years. There were 211 cases notified in 1897; this increased to 240 in 1898, to 213 in 1899, and ceased only in 1900, when, however, there were still 50 cases. During these three years there were only 35, 23, and 28 cases of typhoid fever respectively. If we take the 10 years from 1891 to 1900 there were in all 2082 cases of typhoid fever notified, and this includes the great epidemic. But though there has been no such great epidemic of diphtheria it will be found that during these same 10 years no less than 1212 cases of that disease were notified. Consequently, if something is not done to check the prevalence of diphtheria it is possible that in the course of years the cases of diphtheria will exceed in number even those of typhoid fever. This danger is so serious that the Local Government Board held an inquiry on the subject in 1899. It was then shown that the schools had served as a

Kimpton, Henry, 13, Furnival-street, Holborn, E.C.

The Principles of Pathological Histology. By Harvey R. Gaylord, M.D., of Buffalo, N.Y., and Ludwig Aschoff, M.D., of Göttingen. With an Introductory Note by William H. Welch, M.D., of Baltimore, Md. Price 31*s.* 6*d.* net.

The Ready Reference Handbook of Diseases of the Skin. By George Thomas Jackson, M.D. (Col.), Chief of Clinic and Instructor in Dermatology, College of Physicians and Surgeons, New York. Fourth edition, thoroughly revised. Price 12*s.* 6*d.* net.

A Treatise on Pharmacy for Students and Pharmacists. By Charles Caspari, Jr.Ph.G., Professor of the Theory and Practice of Pharmacy in the Maryland College of Pharmacy. Second edition, revised and enlarged. Price 19*s.* net.

Naud, C., 3, Rue Racine, Paris.

Traité de Bactériologie Pure et Appliquée à la Médecine et à l'Hygiène. Par MM. P. Miquel et R. Cambier, Directeur et Sous-directeur du Laboratoire de la Ville de Paris. Price 45 francs.

Cliniques Médicales Iconographiques. Par MM. P. Haushalter, G. Etienne, L. Spillmann, Agrégés à la Faculté de Médecine de Nancy, and Ch. Thiry, Ancien Interne des Hôpitaux de Nancy. Price not stated.

New Sydenham Society, London.

Volume 174. The Clinical Pathology of the Blood. By Dr. Rud R. v. Limbeck of Vienna. Translated from the Second German Edition by Arthur Latham, M.A (Oxon. et Cantab.), M.R.C.P. Lond., and John Nachbar, M.A., M.D. Cantab. Price not stated.

Pentland, Young J., Edinburgh and London.

Handbook of Obstetric Nursing. By Francis W. N. Haultain, M.D., F.R.C.P. Ed., and James Haig Ferguson, M.D., F.R.C.P. Ed., M.R.C.S. Eng. Fourth edition, revised and enlarged. Price not stated.

Spottiswoode and Co., Limited, 54, Gracechurch-street, E.C.

The Dentists' Register. Printed and published under the direction of the General Council of Medical Education and Registration of the United Kingdom. 1902. Price 3*s.* 4*d.*

## Appointments.

*Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to* The Lancet *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

Adams, Harold Cotterell, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Paignton and Marldon Districts by the Totnes Board of Guardians, vice Dr. J. Hamilton Ward.

Allan, Hector, M.B., C M. Aberd., has been appointed Medical Officer of Health to the Whalley Bridge Urban District Council.

Barnes, Arthur Stanley, M.D., M.R.C.P Lond., B.Sc., has been appointed Senior House Physician to the National Hospital for the Paralysed and Epileptic, vice Dr. Singer, resigned.

Beattie, R., M.D. R.U.I., has been re-appointed Medical Officer of Health to the Soothill Upper Urban District Councils.

Behrendt, M. R J., L.R.C.P., L.R.C.S. Edin., has been re appointed Medical Officer of Health to the Scunthorpe and to the Brumby and Frodingham Urban District Councils.

Breton, Lancelot M., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer and Public Vaccinator to No. 3 District of the South Stonham Union.

Bullmore, Charles Cecil, L.R.C.P., L.R.C.S, Edin., L F.P S. Glasg , has been appointed Medical Officer for the Falmouth and Truro Port Sanitary Authority, vice Dr. W. King Bullmore, resigned.

Buzzard, E. Farquhar, M.A., M.B., M.R.C.P. Lond., has been appointed Assistant Physician to the Belgrave Hospital for Children.

Forbes, R., M.D. Glasg., has been re-appointed Medical Officer of Health to the Eastwood Urban District Council.

Forsyth, R., M.D Glasg., has been re-appointed Medical Officer of Health to the Drighlington Urban District Council.

Hamilton, John, M.D. Durh., F.R.C.S. Edin., has been re-appointed Medical Officer of Health to the Swadlincote Urban District Council.

Jones, Helena G., M.B. Lond., has been appointed Assistant Medical Officer to the District Asylum, Mullingar.

Parsons, Francis John Crane, L.R.C.P. Lond., M.R.C.S., L.S.A., J.P., has been re-appointed Medical Officer of Health for the Bridgwater Urban District.

Phillips, G. G., M.R.C.S., L.S.A., has been appointed Medical Officer of Health to the Tickhill Urban District Council.

Phillips, Hubert C., M.R.C.S. Eng., M. & L.S.A. Lond., has been appointed Anæsthetist to the Female Lock Hospital, Harrow-road, W.

Soltau, Grace, L.R.C.P. & S. Edin., has been appointed House Surgeon to the Belgrave Hospital for Children.

Stewart, Thomas Grainger, M.B., Ch.B. Edin., has been appointed Junior House Physician to the National Hospital for the Paralysed and Epileptic, vice Dr. Barnes.

Turner, Dawson, B.A., M.D. Edin., has been appointed Examiner in Experimental Physics to Edinburgh University.

Vernon Ethel M., M.D., B.S. Lond., L.S.A., has been appointed Pathologist to the New Hospital for Women, Euston-road.

Wolfe, James Francis, M.B., C.M. Edin., has been appointed Medical Officer to the Heavitree (Exeter) Isolation Hospital.

Worger, Richard George, L.R.C.P. Lond., M.R.C.S., L.S.A., has been re-appointed Medical Officer and Public Vaccinator for the Kilmersdon District by the Frome (Somerset) Board of Guardians.

## Vacancies.

*For further information regarding each vacancy reference should made to the advertisement (see Index).*

Bedford County Hospital.—House Physician. Salary £60 pe annum, with board, lodging, and washing. Also Senior Hou Surgeon. Salary £100 a year, with apartments, board, an washing.

Birmingham Workhouse Infirmary.—Assistant Resident Medic Officer. Salary £100 per annum, with apartments, rations, &c.

Brentford Union Infirmary and Workhouse.—Assistant Medic Superintendent, unmarried. The person appointed will be requir to devote his whole time to the service of the guardians. Salar £120 per annum, with apartments, rations, washing, &c.

Bridgwater Infirmary.—House Surgeon. Salary £80 a year, wit board and residence.

Central London Ophthalmic Hospital, Gray's Inn-road, W.C. Refraction Assistant. Salary at rate of £50 per annum.

Chelsea Hospital for Women, Fulham-road, S.W.—Pathologist.

City of London Union Infirmary.—Assistant Medical Superi tendent, single, or widower without children. Salary £150 p annum, with apartments, rations, and washing.

Durham County Hospital.—House Surgeon, also Assistant Hou Surgeon. Salary of Senior £100, Junior £65, with board and lodgi in each case.

Essex and Colchester General Hospital.—House Surgeon. Sala £100 a year, with board, washing, and residence.

Guy's Hospital.—Demonstrator of Bacteriology and Bacteriologis Salary about £180, rising to £200 per annum.

Hospital for Consumption and Diseases of the Chest, Brompto —Resident House Physicians for six months. Honorarium £25.

Leeds General Infirmary.—Honorary Dental Surgeon.

Leicester Infirmary.—Assistant House Surgeon. Salary £80 p annum, with board, apartments, and washing.

Lincoln Hospital for the Insane, The Lawn.—Assistant Medic Officer. Salary £100 a year.

Liverpool Royal Southern Hospital.—Junior House Surgeo Salary 60 guineas per annum.

Norfolk and Norwich Hospital.—House Surgeon, unmarrie Salary £80 per annum, with board, lodging, and washing.

North-Eastern Hospital for Children, Hackney-road, N.E.—Hou Physician for six months. Salary at rate of £60 per annum, wi board, residence, and laundry.

Northumberland House, Finsbury-park, N.—Assistant Medic Officer. Salary £120 per annum, with board, &c.

Nottingham General Dispensary.—Assistant Resident Surgeon, u married. Salary £160 per annum, increasing by £10 every yea with apartments, attendance, light, and fuel.

Oldham Infirmary.—Senior House Surgeon. Salary £100 per annu with board, residence, and washing.

Paddington Infirmary.—Clinical Assistant and Second Assista to the Medical Superintendent, unmarried, for six months. Hon rarium £36, with board, lodging, and washing.

Parish of St. Pancras, London.—Senior Assistant Medical Offic (Resident). Salary £135 per annum, with allowances.

Royal South Hants and Southampton Hospital.—Assista Physician.

Royal University of Ireland.—Examiners in Surgery, salary £5 Midwifery, salary £35; Pathology, salary £25; and Ophth mology, salary £20; in each case with travelling allowances.

St. Pancras and Northern Dispensary, 126, Euston-road.—Honora Surgeon.

Sheffield University College.—Demonstrator in Bacteriologic Laboratory. Salary £150, rising to £200 per annum.

South Lambeth, Stockwell, and North Brixton Dispensar Albert-square, Clapham-road.—Vacancy in Visiting Medical Staff.

Tottenham Hospital.—House Surgeon. Salary £50 per annum, wit board, residence, and laundry.

Tunbridge Wells General Hospital.—House Surgeon, unmarrie Salary £100 per annum, with board, apartments, gas, firing, an attendance.

Victoria Hospital, Folkestone.—House Surgeon. Salary £100 p annum, with board, residence, and laundry.

## Births, Marriages, and Deaths.

### BIRTHS.

Chambers.—On March 19th, at The Priory, Roehampton, the wife James Chambers, M.D. R.U.I., of a son.

Evans.—On March 23rd, at Upper Wimpole-street, the wife Willmott Evans, M.D., F.R C.S , of a son.

Fawssett.—On March 16th, at Stratford road, Sparkbrook, Birmin ham, Ethel, wife of Basil Fawssett, M.R.C.S., L.R.C.P. Lond., of son.

Hunnard.—On March 18th, at Mansfield, Notts, the wife of Arth Hunnard, M.B., B.S. Lond., prematurely, of a daughter.

Pearson.—On March 18th, at Aliceedale, South Africa, the wife Maurice Grey Pearson, M.B. Lond., of a son.

### DEATHS.

Caddy.—John Turner Caddy, M.D., died on March 21st at Charte house, Lion Gate-gardens, Richmond, Surrey, aged 80.

Phillips.—On March 19th, at Porchester-square, Francis Addis Phillips, M.R.C S., L.R.C.P. Lond., aged 30.

*N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

focus for the spread of the disease and that when the schools were closed by order and disinfected or adjourned for the holidays the prevalence of the disease abated.

Apart from the closing and disinfecting of schools Dr. Charles Pye Oliver, the present medical officer of health, attributes the gratifying reduction in the number of cases of diphtheria notified during the year 1900 to the construction of a number of ventilating shafts in connexion with the main sewers and to the more general and more efficient flushing of the house drains. As a consequence there has been, he states, a marked decrease in the number of complaints received concerning the offensive odours that used to issue from the street manholes. As already mentioned, four ventilating shafts were constructed in 1897. There were three more erected in 1898 and two in 1899. This was altogether insufficient, but there had been so much talk about the contamination of the water as the cause of disease that the authorities did not yet fully realise the absolute necessity of ample ventilation for the sewers. The fact, previously mentioned, that in the two years following upon the typhoid fever epidemic improvements in domestic drainage had been effected in 7776 cases, while this had been done in only 2794 cases during the previous two years, shows that the importance of this phase of sanitation had been appreciated. It was also understood that more sewers and better sewers had to be built, for the length of new pipes laid amounted to 37,714 feet during the two years following upon the epidemic; this contrasts favourably with the 9250 feet laid in the two previous years. But it does not seem to have been fully realised that though the construction and condition of both private drains and public sewers may be improved, still sewer air will force itself upon the population if the sewers are not efficiently ventilated. This danger is greatest at the high levels, and sewers going down a steep incline are apt to become ventilating shafts for the sewers which they join at a lower level. So long as the air can travel upwards it will do so in a straight line and without seeking side issues. But when stopped suddenly at the top end of the sewer the air will then expand and seek an issue at the nearest point. The pressure may be so great that the sewer air can then force its way even through a well-constructed syphon-trap and thus enter the houses that are on the higher levels. This may explain why by far the greater number—indeed, nearly all—the cases of typhoid fever occurred among those who lived 100 feet or more above the main collectors. Now, at last, this fact has been appreciated and during the year 1900 16 new ventilating shafts have been introduced at the termination or summit of the sewers, and thereupon the epidemic of diphtheria ceased. The figures for the year 1901 have not yet been published, but I am told that seven or eight more ventilating shafts were erected last year. Diphtheria still maintained its hold on the town and there were 82 cases notified in 1901; but this gives an annual average of 66·5 cases for the two years following upon the erection of numerous street sewer ventilators as opposed to an annual average of 221 3 cases during the three years preceding this improvement in sewer ventilation Of course, this incident taken by itself does not suffice to prove that inefficient sewer ventilation was the one cause of the widespread prevalence of diphtheria and of typhoid fever, but doubtless it contributed to render the population more susceptible. There is good reason to believe that diphtheria especially was spread by personal contact at the schools, where, for instance, some children drank by putting their mouths to the same tap instead of using glasses Nevertheless, it is obvious that means must be taken to prevent people breathing the air that comes from sewers, especially when, as is the case at Maidstone, these sewers are not all self-cleansing.

The question now arises as to what still remains to be done so that Maidstone shall no longer be exposed to the risk of yet another great epidemic. The two most difficult, because they are the most expensive, reforms needed relate to the disposal of its sewage and the reconstruction of its main collecting sewers so that they shall be self-cleansing. The wisest and the cheapest course would be to unite the two questions and to make the one scheme serve both purposes. Unfortunately, the condition of the sewers at present holds quite a secondary position. The inquiries made and the reports published deal mainly with the disposal of the sewage rather than with the sewers themselves. The first report was made by the borough surveyor, Mr Bunting, and by Mr. W. J. Dibdin and was presented to the town council in October, 1900 This report estimates the flow of sewage at 30 gallons per head, or 1,020,000 gallons per day, and states that the sewage is sometimes of an exceptionally bad quality in consequence of the admixture of refuse from manufactories. In the course of July, 1897, two bacteria beds, a coarse and a fine bed, were constructed for experimental purposes. They had been working satisfactorily for two years. The solid matter held in solution was completely removed. What was oxidisable in the sewage was extracted to the extent of 69 per cent., and the nitrogenous matter, as measured by albuminoid ammonia, to the extent of 75 per cent. The effluents steadily improved in quality when kept either in open or closed bottles; this, it is claimed, proves conclusively that under no circumstances could they injuriously affect the condition of any stream into which they might be discharged. The land actually disposable for the treatment of sewage amounts to nine and a half acres. According to the Local Government Board regulation, for a population such as that of Maidstone there should be at least 20 acres and the greater portion of the nine and a half acres available is unsuitable for the purpose. Therefore a new site must be secured. The first likely site is near at hand, but it could not be reached without pumping the sewage up to a height of 80 feet. The second site proposed would involve the extension of the outfall to a distance of 633 yards, and then what is qualified as very suitable land would be reached below Allington lock. In this case pumping is also necessary, but only to a height of 25 feet. There is, however, a serious objection. The water company has its pumping-station on the north side of the river Medway immediately opposite this area and has sunk a well near its engines. Then there is residential property in the neighbourhood and it is anticipated that the owners would raise objections. Finally, this land is occasionally flooded. A third outfall is suggested at Millhall and New Hythe, where the land would be cheaper, but it would be necessary to obtain a leave of way from the present outfall at Allington Lock and to pump up the sewage 25 feet. The beds might be cheaper, as they could be sunk in the ground and thus would save the cost of sustaining walls It will be seen that all these schemes are subject to serious objections, and under these circumstances it was only natural to seek further advice. Therefore Mr James Mansergh was selected to give an expert report on the question and this second report was published in September, 1901. It also presents a confusing variety of schemes, and there is no agreement as to the principle to be adopted. Shall the sewage be purified by land irrigation? shall such irrigation be preceded by bacterial treatment? or will the bacterial treatment alone suffice? Naturally the last proposal would be preferred if the Local Government Board gave its consent. In that case a much smaller site would suffice. The beds, four feet deep, would cover 7·494 acres, with an extra 1·264 acres for storm water, making a total of 8 758 acres. Then, according to the Local Government Board requirements, there ought to be 17 acres more for irrigation with the effluent. If, however, the bacterial treatment was absolutely perfect there would be no need for the 17 acres. Mr. James Mansergh argues that the proximity of tidal waters and the character of the sewage renders Maidstone a typical place for the application of the bacterial method. Otherwise the only really suitable site is at New Hythe or Lansford, and this is the farthest from the town and the most expensive. Here the outfall into the Medway would be considerably below and beyond the Forstal Well and the waterworks.

Without, however, attempting to give any definite opinion as to the respective merits of these different sites I am more concerned in urging the necessity of diverting the greater part of the sewage from the main collectors that follow the course of the river and are not self-cleansing. The schemes mentioned involve the necessity of pumping the sewage up to reach the site selected. Obviously, it would be preferable to construct a main intercepting collector at a higher level which would bring the sewage by gravitation to the site secured. The sewage of the small portion of the town situated below this high-level collector might continue to flow into the existing main collectors; but perhaps the amount of this sewage would be so reduced that pipe sewers placed inside the main collector would suffice to carry it away, and their cleanliness might be more easily maintained The larger sewer could be used for rain-water only. In other words, the separate system might be adopted for the lower levels, and the amount of the sewage that would have to be pumped up would thus be greatly

# Notes, Short Comments, and Answers to Correspondents.

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## SCOTTISH POOR LAW MEDICAL OFFICERS

If our readers will turn to THE LANCET of March 8th 1902 page 685 they will find an annotation under the above heading giving particulars of the differences between Dr G Nicoll, the medical officer of the parish of Clyne Sutherland and some of the ratepayers Since then another meeting of ratepayers has been held at Brora on Feb 28th in consequence of the Parish Council of Clyne not having acted upon the resolution of the ratepayers' meeting held on Feb 11th demanding the dismissal of Dr Nicoll Mr Andrew Ross a ratepayer and a member of the county council was elected chairman The reply from the clerk of the parish council addressed to this gentleman and dated Feb 13th was read It acknowledged the resolution passed on Feb 11th and stated that he had written to the chairman of the parish council (Mr Sharp) for instructions The chairman of the meeting said that he had heard nothing from that gentleman and thus they had met again Four motions were then put to the meeting and carried nem con The first resolution was to the effect that the ratepayers meeting was dissatisfied with the parish council in its still retaining the services of Dr Nicoll and dissatisfied with the chairman Mr Spark for his lack of immediate action The second resolution appointed a deputation of 12 ratepayers to wait upon the chairman of the council to learn his proposed action and requesting him to call an early special meeting of the council The third resolution determined that should the parish council not take immediate action the matter be brought before the Local Government Board and the Medical Board The fourth embodied the finding of the meeting that the officer should be dismissed instantly with payment of three months salary in advance. Several councillors spoke at the meeting and it appeared that six months ago a motion was brought forward in the council to dismiss Dr Nicoll, that five voted for it and five against and that the chairman gave his casting vote in favour of keeping him It is hardly necessary to add that the most prominent speakers at the ratepayers meeting were some of the five who voted against the motion in council This seems to have been the *primum mobile* of the matter The chairman stated that the result of the deputation would be communicated to the ratepayers at a subsequent meeting A deputation was then appointed which met the chairman of the parish council on March 3rd He is reported to have replied that as the letter accompanying the resolutions was addressed to the council as a body he declined to take any action

An interesting correspondance has been running in the pages of the *Northern Times* on this subject One of the malcontents states that the parochial board of 12 years ago took steps to have a medical officer for its own parish and paid him £47 beyond the regular salary for attending paupers so that it could have a medical man nearer and at a cheaper rate to attend the other parishioners 'Lex Terræ' in reply says he does not believe that the statement is correct, he states that such an arrangement is illegal and refers to the thirty first annual report (1876) of the Board of Supervision whose decision in a similar case was that it was illegal to expend the funds raised for the relief of the poor in order to provide cheaper or more convenient medical attendance for persons who are not paupers He refers also to the second annual report of the Local Government Board (1896) where it is pointed out that the inhabitants of a parish might make such arrangements as they saw fit to induce a medical man to settle in the parish but these conditions could not enter into the contract between the parish council and its medical officer

It seems to us that after being so narrowly defeated at the council meeting the minority have raised an agitation amongst the ratepayers starting with the assumption that their medical man is a sort of club doctor to the parish whom they have forced to accept a composition of a part of his proper fees and in consequence that he is like the parochial fireman always at the beck and call *nolens volens* of any parishioner especially an obtrusive ratepayer

## GREEK FOUNDLING CHILDREN IN CONSTANTINOPLE

THE LANCET of April 6th 1901 p 1020 we reviewed a work by Dr Spiridion C Zavitziano of Constantinople in which that gentleman gave a very favourable account of the methods adopted by the Greek community in Pera for the rescue of foundlings a system which has been in operation for about 12 years Two or three months ago the Œcumenical Patriarch appointed a commission to consider whether the same system of caring for foundlings could be extended to the other suburbs of the Turkish capital, and this commission recommended the establishment of a maternity hospital with a view to the discouragement of abortion and infanticide A serious difficulty has however, now arisen because since the report of the commission has been printed the Turkish Government has issued an order to the police by which all the foundlings of Constantinople whether they are of the Christian religion or not must be sent to the poor asylum where, up to this date, the results have not been at all encouraging For instance out of 112 children admitted there only eight are now alive whereas among the foundlings of Pera taken care of by the Greek community the death rate is only 4 per cent or less Among about 80 of these last mentioned children only two died during the month of January and none during the month of February. Under these circumstances it seems to be hardly possible to justify the new regulation made by the Turkish Government

## FLUORIDES IN MEDICINE

*To the Editors of* THE LANCET

SIRS —I shall be very much obliged if any of your readers can give me any information in connexion with the medicinal or other use of hydrofluoric acid and its compounds and as to any injurious effects which may have resulted from their administration I find that there is an increasing tendency to use them as food preservatives I have noted references with regard to their use in Martindale and Westcott s Extra Pharmacopœia ninth edition

I am, Sirs yours faithfully,
A L P

March 18th 1902

## MR RAWKINS REDIVIVUS

At the Plymouth County Court on March 12th Mr William O T. Annesley L S A Lond brought an action against Mr H O Lambart L R C P, L R C S Edin for £5 balance of fees for acting as locum tenent in April May, and June, 1900 during which time plaintiff took charge of defendant s surgery at a salary of £2 2s a week Letters were read in court from defendant stating The surgery to pay expenses must make at least £4 per week so charge them more and put in second bottles and plasters ointments and lotions whenever you get the chance I saw you had given a six ounce bottle to a child five years old and the dose marked on it was one teaspoonful three times a day Now you will see we shall never make a fortune at that rate Kindly remedy this Give to a child of that age a one and a half ounce bottle charge 1s and order a teaspoonful every two or three hours so that they may come back next day The defence was that plaintiff did not perform his duties satisfactorily His Honour Judge Lush Wilson K C gave judgment for plaintiff for £2 18s 11*d* and costs

Does anyone we wonder, ever read nowadays a novel by Albert Smith called The Adventures of Mr Ledbury ? If so he will remember the scene when Johnson announced that Mrs Stokes wanted four more draughts and would call for them by and by

> ' Very good replied Mr Rawkins Suppose you make it six. The bread bill will be heavy this week and I shall want some ground bait on Friday The extra three shillings will cover it
>
> Bob shouted Mr Prodgers Where are the clean phials?
>
> "There ain t none answered Bob ' I hadn t time to shot em
>
> We can send a mixture instead said Johnson I can wash out this Reading Sauce bottle in a minute
>
> No no by no means returned Rawkins don t put her up to it The minute people find that a three shilling mixture holds more than four eighteen penny phials they put the skid on the draughts, wait for the little bottles

So does history repeat itself but it is the kind of history which needs no repetition Mr Lambart s situation was made to wear as undignified an appearance as possible but he has his own letters to thank for this It is an unfortunate fact that the medical man can always obtain thanks and sometimes payment for medicine while his undiluted advice is very generally rewarded by neither This attitude of the public which is tantamount to a demand for a constant supply of drugs compels medical men occasionally to order medicine so as to ensure their instructions being followed It may also be here and there responsible for a revival of the policy of Mr Rawkins, but we repudiate utterly any suggestion that such unworthy tactics are often resorted to by members of our great and philanthropic profession

## STERILISED DRESSINGS IN PACKETS

Messrs Maw, Son and Thompson have sent us a specimen packet of sterilised dressings The specimen submitted to us contains Lister s cyanide wool It is carefully packed in three papers the outer being merely a covering layer Within this is a layer of parchment paper carefully sealed with paraffin wax and within this again another layer of thin paper It is stated that the wool and the two inner coverings are carefully sterilised before putting up and it is evident that the strict observance of all precautions will enable the surgeon to carry with him enough dressing for one case or so in a handy form

## RARE MEDICAL LITERATURE

Two rare old quasi medical works were included in the sale of Lord Mexborough s library at Sotheby s auction rooms Wellington street W C recently The first consisted of eight leaves printed in a bold Gothic letter 24 letters to a full page and believed to have been issued by W de Machlinia of London in the year 1483 The title runs Here begynneth a litill boke necessarye and behoveful ayenst the Pestilence" and the introduction states The Bisshop (Ramicus) of Arusiens in the royame of Denmarke doctour of Phisike will write by the moost experte and famous doctours reduced and an economy would be effected. The point is to cut in two the long branch sewers which, going down from the highest latitudes to the river bank, act as ventilating shafts to the big collector built at the water side. The high-level intercepting collector, being built on high ground, could be given a sufficient fall to be self-cleansing. Thus the adoption of a new system for the disposal of the sewage should be made to coincide with the introduction of a better system for the drainage of the whole of the town. This would entail a greater outlay, but it is always cheaper in the long run to do what has to be done once for all and thoroughly.

By the side of vast schemes of this description, which are of no productive value, there is a good opening for smaller enterprises at Maidstone, such as the building of a municipal common lodging-house and artisans' cottages which might be made a source of municipal revenue. Also, there are many complaints as to the collection of household refuse and this likewise might be undertaken by the municipality and done more efficaciously. It should be possible in an agricultural centre like Maidstone to sell some portion of the refuse at a remunerative price. Then there are private courts and alleys where the scavenging is very inefficient. As these are not public thoroughfares it is not the business of the municipality to keep them clean and in such places decaying organic matter is apt to accumulate. The owners should see to its removal, but the fact remains that they neglect to do so; and as in such places gratuities are not forthcoming the refuse collectors are also liable to be forgetful. But if the refuse was collected by municipal servants and was a source of municipal revenue such negligence would be less likely to occur. There is yet another point which is a matter of detail but might lead to serious consequences if neglected. The system for closing the street hydrants cannot be qualified otherwise than as dangerous. In the vertical pipe that rises from the main to reach the surface of the street there is an enlargement forming a little chamber big enough to hold a gallon of water. Here is placed a vulcanite ball which is forced up to close the upper aperture by the pressure from the main below. To open the hydrant a key is introduced which presses this ball out of place and then the water surges up into the street. This is all very well so long as the main is full and the pressure is strong enough to hold up the ball in its place. But the effecting of repairs, or intermittent supply during dry seasons, or other causes may reduce this pressure, and then the ball falls from its position. Dirt and water from the street can then enter the space where the ball is kept and thence can reach the main to mix with the water which the inhabitants drink. There are 279 such hydrants in Maidstone, and it is not to be expected that in all cases they should invariably remain in proper working order. This system was adopted some 40 years ago. It was then considered ingenious, but now it is quite obsolete and a safer apparatus should be employed. The medical officer of health in his last report describes a specimen of water which contained nematodes four inches long. He suggests that in its embryo stage the nematode burrows into certain insect larvæ which are swallowed by water-beetles and other aquatic insects. Here it becomes encysted and is discharged by the beetle into the water, where it develops into young and perfect nematodes. The pathogenic germ might, with equal facility, reach the water-supply through these defective hydrants. Seeing how much work has now been accomplished to improve the general sanitary condition of Maidstone it is not too much to hope that the remaining sanitary defects will soon be swept away. In this manner will the great typhoid fever epidemic have proved itself a blessing in disguise.

## MANCHESTER.

(From our own Correspondent.)

### *Jubilee of Owens College, Manchester.*

The Prince and Princess of Wales visited Manchester on March 12th in connexion with the jubilee of Owens College and the opening of Whitworth Hall, the latest addition to the collegiate buildings. They arrived at the Victoria station at 10.50 A.M., accompanied by their host and hostess, the Earl and Countess of Derby, and were met at the station by the Lord Mayor and other officers of the corporation of Manchester. They then proceeded to the college, where the Duke of Devonshire, the President of the college, and Principal Alfred Hopkinson received their Royal Highnesses. After a reception by the governors and senate in the Christie Library, a procession was formed which included the teaching staff and lecturers. Several distinguished Members of Parliament, notable professors, and eminent ecclesiastics were present, including Earl Spencer, Chancellor of the Victoria University. Thus escorted into the hall the Prince and Princess took their seats on the right of the Duke of Devonshire, the audience rising and singing "God Save the King." The Duke of Devonshire thanked the Prince and Princess for their presence at the celebrations and said that the idea of the founder was to provide in that great centre a university to supply higher education in such branches of learning and science as were usually taught in English universities. It was laid down as a fundamental and immutable rule that the governors, teachers, and students should be subject to no religious tests. The address of welcome from the college authorities was then read by the Principal. Afterwards Alderman Thompson presented to His Royal Highness on behalf of the council a gold key of the hall. The Prince expressed the pleasure of himself and the Princess at being there that day to join in the celebrations and to open the beautiful hall. He regretted the absence of the architect (Mr. Alfred Waterhouse) and of Dr. A. W. Ward and Sir Henry Roscoe through illness. He said also that a college which after five years of its existence was reduced to 33 students and yet could persevere in the path which had been originally marked out, and which could now boast of 32 professors and over 1000 students, had indeed earned a just right to celebrate with pride and satisfaction its first jubilee. He also made sympathetic reference to the names of Owens, Beyer, Christie, Whitworth, and other benefactors of the college, and paid compliments to the great teachers and students who had by their genius and force of intellect maintained in the college a high standard of learning, and added that the presence there that day of the governing body and the representatives of the municipalities of Manchester and the neighbouring towns should serve to strengthen the mutual sympathy and guide the college in its work. He called attention to the special effort recently made to raise a fund to pay the amount of the indebtedness of the college, which was very considerable, and to provide against an annual deficit, and said that the fund had now reached £100,000, which, however, was only enough to carry on the extended work of the college without making additions to the staff and appliances which it was desirable should be made. He was sure that Manchester men would not allow this institution in any way to suffer from want of funds. He then declared the Whitworth Hall open. The meeting was addressed by Sir R. C. Jebb who took the place of Dr. Ward as "representative of literature" and by Professor Rücker as "representative of science." Thanks for their addresses were voted on the motion of Sir F. Adam. The Prince subsequently at the town hall received an address of welcome from the corporation of Manchester and made a suitable reply; he said that had it been practicable to include in that day's proceedings the opening of the new school of technology he would gladly have taken part in that ceremony. The Prince and Princess, with about 300 other guests, were entertained to luncheon in the principal room of the hall. The Prince referred to the recent tour of the Princess and himself and also said that he was sure that they were all happy to see present amongst them so many distinguished representatives of foreign and colonial universities, who had come to take part in the proceedings. On the way to the Victoria station the Royal procession halted at the west porch of the cathedral for the unveiling of a statue of Queen Victoria, the work and gift of Princess Louise, Duchess of Argyll. The Royal departure for Knowsley took place a few minutes after 4 P.M. Several of the tradespeople who occupy premises along the line of the route of the Royal procession offered to give to the hospitals the money received from letting their windows to sight-seers. The Lord Mayor approved the idea and mentioned that as regards subscriptions Manchester compared unfavourably with other large cities. It is to be hoped that the hospitals will benefit considerably by this generous offer.

### *Manchester and Salford Sanitary Association: Jubilee Conference.*

The committee of this association has decided to hold a Conference on Sanitary Reform in commemoration of auctorised in Phisike somme thinges of the infirmyte of pestilence which dayly enfecteth and sone suffreth us to departe oute of this lyfe." This was sold for £160, the purchaser being Mr. Quaritch. The other work referred to was of the date 1652, the author being George Fidge, and the title "The Great Eater of Grayes-Inne, or the Life of Mr. Marriot the Cormorant, Wherein is set forth all the Exploits and Actions by him performed; with many pleasant Stories of his *Travells into* Kent *and* other places. Also a rare Physicall Dispensatory, being the manner how he makes his Cordiall Broaths, Pills, Purgations, Julips, and Vomits to keep his Body in temper and free from Surfeits." This realised £11 5*s*.

## A QUESTION OF FEES.

*To the Editors of* THE LANCET.

SIRS,—When attending a club patient with a *dangerous* aneurysm I at his request called in and conferred with my medical neighbours. Since the decease of the patient I find that the widow expects the club to pay the consultation fees, also my fee for meeting them in consultation. I have always made a rule of charging club patients a fee when I meet any medical man in consultation, and I think I am within my rights in so doing. Will you kindly express your view on the matter

I am, Sirs, yours faithfully,

March 25th, 1902. CONSTANT READER.

⁂ We think that such extra services rendered by the club medical officer as attending at a consultation should be paid by the patient or his representatives and not by the club. The patient or his representatives should also pay the consultation fees of the medical gentlemen called in to consider the case with the club medical officer.—ED. L.

## WANTED—A HOME.

*To the Editors of* THE LANCET.

SIRS,—Can any reader kindly recommend a comfortable home, in London or suburbs, where a lady, aged 76 years, would be well cared for? She is bedridden from right hemiplegia with contractures (no aphasia), and cannot pay more than £2 a week.

I am, Sirs, yours faithfully,

Teignmouth, Devon. F. CECIL H. PIGGOTT, M.D. Cantab.

## A WARNING.

*To the Editors of* THE LANCET.

SIRS,—A canvasser for a trade directory is calling at the houses of medical men at an hour when they are probably out and interviews their wives or housekeepers. He represents that the name of the medical man was in the last edition of his trade directory and asks sometimes 2*s*., sometimes 3*s*., for a re-insertion. His manner is plausible and he generally gets the money.—I am, Sirs, yours faithfully,

Romford-road, Forest Gate, March 21st, 1902. STEPHEN SMITH.

## COUNTRY HOUSE SEWAGE DISPOSAL.

*To the Editors of* THE LANCET.

SIRS,—I should be obliged if any of your readers would tell me the best way of dealing with the sewage of a country house having about one acre of ground. At present the sewage is conveyed into an underground covered tank made of unmortared walls, so that the liquid drains into the surrounding gravelly soil, the surface being thickly planted with trees. In wet weather the overflow comes to the surface and is at times offensive. The present system has been in operation or 12 years without causing any trouble, but now the soil is becoming "sick" and is a nuisance. The house is built on the slope and the soil is stony and porous. I am, Sirs, yours faithfully,

March 22nd, 1902. M.D.

## A CAUTION WITH RESPECT TO SAMPLES.

*To the Editors of* THE LANCET.

SIRS,—A tin box containing Bipalatinoids No. 581, forwarded by Messrs. Oppenheimer, Son, and Co., Limited, was incautiously opened and one of the bipalatinoids fell on the floor. My favourite cat played with it and ate it. In about half an hour after it was reported in a fit and when I saw it it was dead. It had micturated and its limbs were contracted. I referred to the prescription on the box and found inscribed —Ferrous carbonate (pil. Blaud), aloin, strychnia, ac arseniosi, āā gr. $\frac{1}{30}$, pulv. capsici, gr. $\frac{1}{4}$. Dose, one after meals. Strychnia gr. $\frac{1}{30}$ was the amount taken by the cat which caused its death by poisoning. If animals are about one should not be satisfied until such samples are burnt in the fire, as no other disposal is safe. I hope this may be a warning to others. I am, Sirs, yours faithfully,

F. A. PURCELL, M.D. R.U.I.

Manchester-square, W., March 24th, 1902.

## HOW DISEASE IS SPREAD.

TWO persons were fined 40*s*. each at the Glasgow Sheriff Court on March 20th for concealing cases of small-pox which had occurred in their respective houses. In the first case the defendant pleaded that the patient refused to see a medical man because he feared being sent to a hospital. The case was not discovered until after the patient's death. In the second case an Irishman was the accused. The first intimation which the sanitary authorities received was through the police who had been informed by neighbours. When the medical officer called and asked to see the patient who was sa to be suffering from small-pox he was shown an elder sister and w told that she was the only girl in the house. On going into t kitchen, however, he found a young girl lying in bed, hidden l bedclothes, who was suffering from small-pox. The school boa officer had been told that the girl was staying with some friends i Ireland. The elder sister was the only member of the household w had been revaccinated and she was nursing the patient notwit standing the fact that she was employed at home by a firm dressmakers in the city. In reporting these cases the *Belfast W* states that the sheriff regretted exceedingly that legislation o provided a fine of 40*s*. for so gross a crime against the pu interest. In the second case no comment seems to have b made and no doubt the sheriff felt the impossibility of doing so temperate language. In both instances the house was occupied several people. We share the sheriff's regret that the fine which Legislature has thought sufficient in these cases is so ridiculou inadequate and we have called attention to the matter on sev occasions, but until the law is altered and the penalty is m greater the public will still be exposed to the danger of infec through the criminal action of selfish or ignorant people.

THE writer of an account of a Case of Eclampsia, the manuscript which bears no title or author's name, is requested to communi with us.

THE writer of a letter signed "G.P." and dated Feb. 17th is also quested to communicate with us.

◆

*Neurin.*—Our correspondent is recommended to apply to Profe Adamkiewicz himself. His address is IV Wiedner Hauptstrasse Vienna, Austria.

*J. B.* should consult his medical man. We do not give medical adv

# Medical Diary for the ensuing Week

## OPERATIONS.

### METROPOLITAN HOSPITALS.

**MONDAY** (31st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P. Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P. Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-sq (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P. Gt. Northern Central (2.30 P.M.) West London (2.30 P.M.), Lon Throat (2 P.M.).

**TUESDAY** (1st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), W minster (2 P.M.), West London (2.30 P.M.), University Col (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Ma (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Th (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

**WEDNESDAY** (2nd).—St. Bartholomew's (1.30 P.M.), University Col (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-c (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's Col (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P. National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samar (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Nort Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P. London Throat (2 P.M.), Cancer (2 P.M.), Throat, Golden-sq (9.30 A.M.).

**THURSDAY** (3rd).—St. Bartholomew's (1.30 P.M.), St. Thom (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middl (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-W London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gyn logical, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P. St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Thr Golden-square (9.30 A.M.).

**FRIDAY** (4th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Chari cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Ma (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Northern Central (2.30 P.M.). West London (2.30 P.M.), Lon Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P. Throat, Golden-square, (9.30 A.M.), City Orthopædic (2.30 P.M.).

**SATURDAY** (5th).—Royal Free (9 A.M. and 2 P.M.), London (2 P Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University Col (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Ma (10 P.M.), London Throat (2 P.M.), Throat, Golden-square (9.30 A.

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthal (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and Central London Ophthalmic *Hospitals operations are performed dail* the fiftieth anniversary of the formation of the association. This conference will take place in the Town Hall, Manchester, on April 24th and 25th next. On April 24th the Bishop of Manchester, who is the President of the association and of the general conference committee, will deliver an inaugural address. Dr. Arthur Ransome, F.R.S., will then relate the interesting history of the Manchester and Salford Sanitary Association, and Sir James Crichton Browne, F.R.S., will follow with an address on Light and Sanitation. On April 25th Mrs. H. J. Tennant will speak on Women's Work in Sanitary Reform; Dr. Arthur Newsholme of Brighton will discourse on Vital Statistics and their Relation to Sanitary Reform; Mr. T. C. Horsfall, a local authority, will read a paper on the Housing Question; Sir William H. Broadbent will give an address on the Prevention of Tuberculosis; Dr. A. Bostock Hill of Birmingham will deal with the Relationship of Voluntary Effort to Constituted Authority in promoting Sanitary Reform; the Earl of Meath will speak on Physical Training; and Dr. J. Niven of Manchester will deal with the Economics of Health. Amongst others who will preside at meetings are Professor J. Dixon Mann, M.D. (the present chairman of the association), Sir William H. Houldsworth, Bart., M.P., Mrs. Moorhouse, Dr. Henry Simpson (a former chairman of the committee), Alderman Walton Smith, J.P. (chairman of the Sanitary Committee, Manchester), Mr. W. J. Crossley, J.P., C.C., Mr. A. Hopkinson, K.C., (Principal of Owens College), the Mayor of Salford, Sir J. T. Hibbert, K.C.B., and Councillor W. Huddart (chairman of the Salford Health Committee). Many municipalities, urban district councils, and other public bodies have appointed delegates or intimated that they will be otherwise represented. All local institutions having aims in common with the association are represented on the conference committee. The proceedings of the conference will be eventually printed and published.

### *Flannelette Test.*

At an inquest held at Southport on March 22nd, on a child who died from burns through its flannelette clothing catching fire, the coroner read a letter from a Manchester manufacturer protesting against the opinions of coroners on flannelette and inclosing a sample for testing. On putting a lighted match to it the sample would have been consumed quickly if the coroner had not blown it out, and he said: "With all due respect to the manufacturer I think it would be better not to continue the test."

March 24th.

## WALES AND WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

### *The Notification of Tuberculosis.*

IN some towns where phthisis is notified to the medical officers of health there appears to be a little doubt as to what subsequent action should be taken by the sanitary authority, and at a recent meeting of the South Wales branch of the Association for the Prevention of Tuberculosis the medical officer of health of Cardiff (Dr. E. Walford) suggested that female health visitors might very profitably be employed in this connexion, and it was decided to solicit the coöperation of nursing institutions and of voluntary workers.

### *A Medical Slander Action.*

At the Glamorganshire Assizes held at Cardiff on March 17th a medical man practising in Barry was the defendant in an action for slander and was ordered to pay £10 damages. The case arose out of the death of one of the defendant's patients who had been struck some time prior to his death by the plaintiff. The defendant attributed his patient's death to this blow and was said to have remarked to a friend when speaking of the affair, "It is a brutal murder." His own version of the expression used was, "It is a brutal matter." The smallness of the damages awarded makes it apparent that the jury were not very much impressed with the gravity of the slander.

### *Cardiff and County Public Health Laboratory.*

The Cardiff and County Public Health Laboratory was established about three years ago by the Glamorganshire County Council, and for the past two years has been under the joint control of the Cardiff Corporation and the county council. The second report of the bacteriologist (Dr. W. G. Savage) reveals the immense value such an institution must be to the sanitary authorities in the county. The water-supplies of Cardiff are now examined monthly and of many parts of the administrative county at fixed intervals. Altogether, 558 samples were examined during 1901. It is noticeable that there were 575 specimens for suspected diphtheria, tubercle, &c., from Cardiff examined bacteriologically and only 395 from the county, although the population of the latter is 600,000 and of Cardiff only 170,000. This disparity can hardly be due to the absence of material in the county, for diphtheria was excessively prevalent during the whole year in the large centres of population such as Merthyr and the Rhondda. In connexion with the laboratory, classes in bacteriology, chemistry, and practical outdoor sanitary work are held and were attended during 1901 by some half-dozen students.

### *Depopulation of Rural Districts.*

Most of those who have given the subject any serious consideration are agreed that the cramped and often dilapidated condition of the cottages in rural districts accounts in a great measure for the decrease in the population in those districts. The medical officer of health of the Gower peninsula in South Wales (Mr. H. E. Rawlings) in his annual report states that in his opinion if more cottages with small holdings were established it is practically certain that a large number of those who had emigrated to the towns in search of employment would return to the country to pursue a more healthy and congenial industry.

March 24th.

## SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

### *The John Usher Institute of Public Health, Edinburgh.—Arrangements for the Examination of Pathological Products for the City.*

THE John Usher Institute of Public Health, which is now almost completed, will probably be opened within the next three months. The chair of public health in Edinburgh University was founded in 1898—the necessary endowment having been provided by a legacy of £5000 from the late Mr. A. L. Bruce, supplemented by over £2000 from Mrs. A. L. Bruce and others, together with £8000 given by Sir John Usher of Norton. The Public Health Department in the new university did not, however, possess adequate laboratory accommodation for the new chair. Sir John Usher then most generously offered to build and to equip an Institute of Public Health, and it is this institute which is now nearing completion. It was at first intended that the building should occupy ground lying between the Music Class room and the Students' Union but this site had to be abandoned as the supply of light was deficient. A site in Warrender Park-road was then adopted, where the conditions as regards light-supply are all that could be desired. The institute lies on the south side of the road and faces north. It is rectangular in form and covers an area of 133 feet by 48 feet The exterior of the building is treated simply in classic Renaissance style. On the lintel of the main doorway three shields are to be cut, the centre one representing the Scottish Lion and the lateral shields showing the coat-of-arms of the donor, Sir John Usher, and of the Chancellor of the university, the Right Honourable A. J. Balfour. The coat-of-arms of the university will be carved on the pediment above the entrance. On the west front of the building the following inscription will be carved:—

University of Edinburgh.
The
John Usher Institute of Public Health,
Presented to the University of Edinburgh
by
Sir John Usher of Norton and Wells, Baronet.
May, MDCCCCII.

The ground floor contains entrance-hall, staircase, museum, research room, gas analysis and micro-photographic room, three laboratory workrooms designed for carrying on the bacteriological work in connexion with the public health administration of the city, two subsidiary workrooms, and caretaker's house. The first floor contains a chemical laboratory, balance room, optical room with adjoining dark room, students' reading room, water analysis room, research

## SOCIETIES

DNESDAY (2nd).—OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Specimens will be shown by Dr. Fairbairn, Dr. Williamson, Dr. Berkeley, Dr. M. Kerr, and Dr. A. Routh, Paper.—Dr. Lewers: A Case of Primary Tuberculosis of the Cervix simulating Cancer and treated by Vaginal Hysterectomy.

HURSDAY (3rd).—RÖNTGEN SOCIETY (20, Hanover-square, W.).—8 30 P.M. Paper forwarded by Dr. Ch. Leonard (Philadelphia): X ray Diagnosis of Renal Calculus.

HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Titchborne-street, Edgware-road, W.).—8 30 P.M. Paper:—Dr. R. Bowles: The Practical Treatment of Functional Vasomotor Disturbances.—Mr. R. Johnson: Some Points in the Treatment of Tuberculous Disease of the Knee.

DAY (4th).—WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary, Greenwich-road, S.E.).—8 45 P.M. Discussion on Anæsthetics (introduced by Dr. B Gardiner).

ITISH ELECTRO-THERAPEUTIC SOCIETY (11, Chandos-street, Cavendish square, W).—8 30 P.M. Papers:—Dr. H. Walsham: The Diagnosis of Thoracic Aneurysm by the X-rays (illustrated by the lantern).—Dr. Sequeira: The Finsen Treatment of Lupus, Rodent Ulcer, &c. (illustrative cases will be in attendance at 8.15 P.M.).

EST LONDON MEDICO-CHIRURGICAL SOCIETY (Society's Rooms).—.30 P.M. Papers:—Dr. J. Allan: The Treatment of Malignant Disease by Electrical Currents of High Potential Frequency (with notes of cases).—Dr. A. Whitfield: A Case of Peculiar Intolerance of the External Application of Mercury.—Dr. J. D. Mortimer: Remarks on 1000 Anæsthetisations.

## LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

URSDAY (3rd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.).—4 P.M. Mr. Hutchinson: Clinique (Surgical.)

DAY (4th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. H. Tilley: Clinique. (Throat.)

## EDITORIAL NOTICES.

t is most important that communications relating to the torial business of THE LANCET should be addressed *usively* "TO THE EDITORS," and not in any case to any tleman who may be supposed to be connected with the orial staff. It is urgently necessary that attention be n to this notice.

*especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to his Office.*

*tures, original articles, and reports should be written on ne side of the paper only,* AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

*ers, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.*

*cannot prescribe or recommend practitioners.*

*al papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."*

*ers relating to the publication, sale, and advertising departments of* THE LANCET *should be addressed "To the Manager."*

*annot undertake to return MSS. not used.*

## MANAGER'S NOTICES.

### THE INDEX TO THE LANCET.

E Index to Vol. II. of 1901, which was completed with issue of Dec. 28th, and the Title-page to the Volume, given in THE LANCET of Jan 4th.

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## METEOROLOGICAL READINGS.

*(Taken daily at 8.20 a.m. by Steward's Instruments.)*

THE LANCET Office, March 26th, 1902.

| Date | Barometer reduced to Sea Level and 32° F | Direction of Wind | Rain-fall | Solar Radia in Vacuo | Maximum Temp Shade | Min Temp | Wet Bulb | Dry Bulb | Remarks at 8.30 a.m. |
|---|---|---|---|---|---|---|---|---|---|
| Mar 20 | 29 39 | S W. | .. | 65 | 49 | 43 | 46 | 48 | Stormy |
| " 21 | 29 26 | S W | 0 27 | 93 | 62 | 39 | 40 | 42 | Fine |
| " 22 | 29 24 | S W | 0 10 | 77 | 46 | 39 | 41 | 43 | Cloudy |
| " 23 | 29 35 | S W | 0 10 | 85 | 48 | 38 | 39 | 39 | Cloudy |
| " 24 | 29 57 | S W | 0 05 | 81 | 48 | 36 | 37 | 39 | Cloudy |
| " 25 | 29 42 | W.N.W. | 0 13 | 84 | 51 | 38 | 40 | 43 | Cloudy |
| " 26 | 29 94 | N W. | . | 82 | 51 | 35 | 38 | 40 | Cloudy |

**During the week marked copies of the following newspapers have been received:**—*Eastern Evening News, Army and Navy Gazette, Clinical Journal, Nursing Record, Sanitary Record, The Rock, Nordiskt Medicinskt Arkiv, Wolverhampton and Coventry News, Middlesboro Daily Gazette, Warwick and Warwickshire Advertiser, Wynberg Times, Reading Mercury and Oxford Gazette, Western Morning News, Echo, Glasgow Evening News, Surrey Herald, Manchester Guardian, Morning Leader, Star, South Wales Daily News, Standard, Freeman's Journal, Birmingham Post, South Wales Echo, Birmingham Mail, Hartlepool Mail, City Press, Tunbridge Wells Advertiser, &c.*

room, cloak room, and lecture theatre, with adjoining preparation room. Under the staging of the lecture theatre are store-rooms for apparatus, &c. On the second floor there are a bacteriological laboratory, research room, observation room, disinfection room, two incubation rooms, small lecture room for advanced class, professor's laboratory, retiring room, and library and assistant's room. In the upper storey are placed the extraction ventilation chambers and on the roof provision has been made for carrying out experiments in the open air. In the basement floor there are a refrigerating room, an incinerating room, a room containing a large centrifugal machine with electric motor, and a room for air and water pressure apparatus. Needless to say, the internal arrangements and fittings of the museum and of the various laboratories are of the most approved and up-to-date description. In giving the institute to the university Sir John Usher made the request that the University Court should provide accommodation for carrying out scientific work in connexion with the public health administration of the city. The committee of the institute accordingly set apart the three rooms above-mentioned on the ground floor of the institute for that purpose, and since 1898 has been carrying on negotiations with the town council in connexion with the matter. The Public Health Committee of the town council was not in favour of handing over the bacteriological work of the city to the Usher Institute, and a fortnight ago reported to the town council on the subject, recommending that the work should not in the meantime be taken from the laboratory of the Royal College of Physicians of Edinburgh, where it was being done in a perfectly satisfactory manner. The town council, however, refused to adopt this report and accepted the proposals of the committee of the Usher Institute. Put as briefly as possible those proposals are: 1. That the three rooms above-mentioned be entirely set apart for the city's work. 2. That a qualified assistant be appointed who shall attend exclusively to the city's work and that the services of an attendant be available. 3. That the whole work be done under the supervision of the professor of public health who shall alone be responsible to the city for the work. 4. The scope of the work to be as follows: (1) bacteriological examinations required by the medical officer of health in the daily work of dealing with infectious disease; (2) bacteriological examinations required by the sanitary inspector (these would include examinations of water, milk, food-stuffs, and flesh, and would also include examination for anthrax and glanders), and (3) bacteriological examinations of specimens in cases of diphtheria, typhoid fever, and tuberculous disease which may be sent by medical practitioners in the city for diagnostic purposes. 5 That the university agrees to perform the whole work for the outlay incurred. The committee estimates that for the investigation of 1000 specimens the cost will be about £360 per annum, this being founded on the experience of cities where a similar arrangement prevails. Of the three rooms mentioned two will be fitted with laboratories, while the third will be used for clerical work. In this third room the samples for examination will be received, the result of the examination recorded, and the reports of the results sent to the medical officer of health or to the practitioner, as the case may be. It is expected that the institute will be opened in May by the Chancellor of the university, the Right Hon A. J. Balfour, M.P.

### *Aberdeen University.*

The Aberdeen University Court met on March 11th. The secretary read a letter from the Baroness de Gurbs, intimating her desire to place a stained-glass window in King's College Chapel as a memorial of her late husband, Stephen Baron de Gurbs, a former student of Aberdeen University. It was agreed that the offer should be accepted.—It was agreed to appoint Mr. Charles Murray, M.A., M.B. Aberd., to the post of university assistant in physiology, vacant through a resignation.

March 24th.

## IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

### *Public Health of Dublin.*

THE fortnightly meeting of the Public Health Committee was held in the Municipal Buildings on March 18th, when Sir Charles Cameron reported that the death-rate from all causes in the city for the week ending March 15th was 22·2 per 10,000 persons living. This rate, he observed, was unprecedentedly low for this time of the year, the mean for the last 10 years being 34·1. The zymotic death-rate for the suburbs proved to be unusually high—namely, three per 1000, or six times that of the city.

### *Surgeon-Captain Crean, V.C.*

The Royal College of Surgeons in Ireland has decided to confer the honorary Fellowship on Surgeon Captain T. J. Crean, V.C., in recognition of his distinguished services in South Africa. He commenced his medical studies in the College School and obtained the Licence of the College in 1895. Since the institution of the reward for "conspicuous valour in the presence of the enemy" five Irish surgeons have been awarded the Victoria Cross. Of these, one belongs to the University of Dublin, while the other four are Licentiates of the Royal College of Surgeons in Ireland.

### *An Isolation Hospital for Kingstown.*

A special meeting of the Kingstown Urban District Council was held on March 21st in the Town Hall, Kingstown, to deal with the question of a proposed isolation hospital for the township. After a lively discussion the matter was practically shelved. Mr. D. Edgar Flinn, the medical inspector of the Local Government Board, who was present, intervened, and addressing the council said that in postponing this question it had incurred a very serious responsibility by taking no steps in reference to the treatment of infectious diseases. He pointed out that the council was the custodian of the public health of the most important watering-place in Ireland, in touch with the other side of the Channel where small-pox was now epidemic. He stated that he was there at the request of the Local Government Board to convey to the council their desire that arrangements should be made for the treatment of infective diseases and to state that a temporary isolation hospital could be erected in a fortnight. Rathmines and Pembroke districts were constructing a temporary isolation hospital and such buildings were being erected all over the three kingdoms. If a case of small-pox occurred where was it to be sent? None of the Dublin institutions would admit the patient. This postponement, he said, might mean a very serious matter for the council and the responsibility was on its shoulders and not on those of the Local Government Board. At the conclusion of the meeting it was arranged that Mr. Flinn should attend the proposed meeting of the Sanitary Committee of the council.

March 24th.

## PARIS.

(FROM OUR OWN CORRESPONDENT.)

### *The Plague.*

I HAVE on previous occasions[1] given your readers information about sundry cases of plague which occurred last year on board the *Sénégal* and about the complaints made concerning the Frioul lazaretto. The Academy of Medicine which was very anxious to find the best means of prophylaxis against the plague appointed a committee of inquiry with a view to the reform of the French sanitary service. Dr. Vallin, the secretary, made a minute investigation of the Frioul lazaretto on behalf of the committee and his report thereon was submitted to the Academy of Medicine at the meeting held on March 11th Dr. Vallin insists on the reorganisation of the lazaretto at Frioul. There should be a medical director serving immediately under the Minister of the Interior and a sanitary station ought to be erected at the north-east point of the island of Pomègues which should be independent of the lazaretto. Quarantine for passengers should be given up but they should be compelled to be inoculated with anti-plague serum. The report suggests that the Minister of Marine should be asked to make the carriage of anti-plague serum and the instruments necessary for its administration obligatory on all merchant ships which take long voyages. The inspection of ships' medicine chests and dispensaries should be much more strict and such should be passed by the port sanitary authorities. All rats on board a ship coming from an infected port should be destroyed. Facilities should be given to

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[1] THE LANCET, July 20th (p. 163), August 17th (p. 493), and Oct. 19th (p 1087), 1901.

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medical men who may be candidates for employment in the maritime sanitary service for study at a port school of medicine so that they could acquire special professional knowledge which should be tested by examination. Finally, medical men in the service of steamship companies should be given an independent position, so that they should no longer, as is the case at present, be in the position of having to make the performance of their duty stand out in opposition to their chances of security of tenure.

### *The Inability of Medical Men to Inherit from Patients.*

It is well known that neither medical men nor pharmaceutical chemists in France have any legal right to receive a legacy from their patients or customers. Dr. Delarue brought before the Chamber of Deputies on Feb. 21st a proposed alteration in the law which ran as follows: "The incapacity laid down by Article 909 of the Civil Code is henceforward abrogated as far as concerns physicians, surgeons, and apothecaries." It is extremely improbable that the Chamber will pass this alteration in the law, despite the very serious reasons which exist in favour of such alteration and which were put forward by Dr. Delarue. Very often, he said, the medical man was exposed to the risk of serious illness or even of death and had to be contented with very poor pay, and, in fact, more often than not the only reward he gained by his profession was the consciousness of duty done. His devotion was always being appealed to and such appeal was never unheard. If the medical man were always to demand remuneration for his work it would be impossible to make certain that the hospital service should be carried on or that the regulations of the Assistance Publique should be duly complied with. Official salaries were increasing and also retiring pensions but there was nothing to help an old physician who had devoted perhaps 40 years of his life in the service of his equals. Moreover, the law as it existed at present did the medical men the injustice of apparently suspecting every medical man to be capable of abusing the power which he possessed over his patients for the purpose of getting hold of their money and of making them carry out their last wills and testaments in opposition to their own wishes. Why did not the law inflict the same disabilities on other professional men, such as barristers or solicitors who had just as much influence over their clients as medical men had over their patients. There was no good explanation why medical men should be thus treated. As for apothecaries, they had nothing to do with the treatment of patients, for their only duty was to send in medicine prescribed by the medical man.

### *Photo-therapy and the Iron Electric Arc.*

On March 3rd M. A. Broca and M. Chatin laid before the Academy of Sciences the results of their attempt to utilise an iron electric arc in photo-therapy. They have managed to obtain a perfectly steady arc which takes a current of from 10 to 30 ampères. This arc is very rich in actinic rays which are alone of use. Exposure to it for five seconds reduces ordinary silver photographic paper to a deep red-violet colour. Moreover, it gives hardly any heat rays and so the patient can be placed within 10 centimetres of the apparatus, while the need for a cooling jacket is done away with. The simplification of the apparatus allows of much more exact compression of the affected region being employed than has hitherto been the case with other apparatus, and M. Broca and M. Chatin have used the process at the St. Louis Hospital in nine cases of lupus with excellent results. The arc is covered by a metallic sleeve with a hole of three centimetres in diameter opposite the patient, so that the assistants are completely protected. With an iron arc taking from 15 to 18 ampères and an exposure of from 19 to 25 minutes very remarkable cutaneous reactions were produced in all the patients. They appeared from some 24 to 48 hours after the exposure. Phlyctenulæ comparable to those seen after the use of the Finsen and similar apparatus were noticed, but the light rays appeared to exercise a selective influence on the lupus nodules which were profoundly affected, although the periphery of the ulcer and the healthy skin only showed a slight raising of the epidermis. These results would seem to foreshadow a great future for this method which in addition to giving rays of increased actinic power enables photo-therapy to be carried out without the use of the cooling apparatus which, besides being very complicated, absorbs a certain amount of light rays.

### *Action against the Director of a Lazaretto.*

A curious case is now before the courts. Last year a ship arrived from Brazil at Bordeaux on board of which was a young woman far advanced in pregnancy whom the medical officer of the lazaretto compelled to disembark as he suspected that she was suffering from yellow fever. Within a few hours she died and was hurriedly buried. The husband hastened to the spot and, having obtained an exhumation order, found not only the body of his wife but also that of an infant lying between her legs. Now he has haled the medical officer before the courts, declaring that his wife was not suffering from yellow fever but only from troubles incidental to pregnancy. He further declares that she was buried alive and that the birth of the child followed spontaneously on the burial. So, then, this case raises a curious point in obstetrics as well as the question of the responsibility of medical officers of lazarettos.

March 24th.

## BERLIN.

(FROM OUR OWN CORRESPONDENT.)

### *Bacilli in the Seminal Fluid in Syphilis.*

AT the last meeting of the Berlin Medical Society Dr. Joseph and Dr. Piorkowsky showed specimens of bacilli discovered by them in cases of syphilis. They examined the semen of syphilitic persons, because in many instances a man without manifest symptoms of syphilis has been known to communicate the virus to a healthy woman by way of the placenta, the effect being that she does not exhibit evidence of the disease until she becomes pregnant. They described their procedure as follows. Semen was obtained from 22 men who had contracted syphilis at different periods varying from five weeks to two years previously and was placed in contact with sterilised pieces of placenta, on which as a nutrient medium there was an abundant bacterial growth, containing after 12 hours long bacilli with clubbed ends resembling those of diphtheria. Cultures transferred from the pieces of placenta could be grown upon agar and blood serum, but direct inoculation of the semen upon agar without previous use of placenta gave no result. The colonies growing on agar developed very quickly but soon showed signs of degeneration which could be made to disappear by reinoculation of the cultures on placenta. The bacilli were stained by Gram's method and could be agglutinated by serum. In five cases of syphilis which had lasted for periods varying from three to 10 years the results were negative. The bacilli were not present either in normal semen or in cases of azoöspermia occurring in syphilitic men. Inoculation into animals gave no decided result. A pig after inoculation developed a peculiar exanthem on the genital organs together with a swelling of the lymphatic glands, but as it died six days later from an epizoic malady these symptoms might perhaps have been due to the latter cause. Dr. Joseph was of opinion that the bacilli discovered by him were specific for syphilis but further investigation on a larger scale was necessary. In the ensuing discussion Professor Jürgens of the Pathological Institute said that similar bacilli had already been described by Dr. Von Nissen. He pointed out that in one of the specimens there were no bacilli but there were spores, so that a mixed infection had perhaps occurred. He recommended that cases of congenital syphilis should be included in the observations, because in them it was possible to avoid mixed infections. Dr. Aronson said that chronic diseases were usually of slow development and considering the rapid growth of Dr. Joseph's bacilli it was unlikely that they were the cause of so chronic a disease as syphilis. Dr. Joseph, in his reply, said that as regards the bacterial origin of syphilis he had been careful to speak with all reserve but he thought it right to mention that the bacilli in question had never been found in normal semen.

### *Medical Experts in the Law Courts.*

The trial of Professor Dührssen, of which an account appeared in THE LANCET of March 15th, 1902, p. 779, has directed attention to the state of the law relative to medical evidence given before courts of justice. As a general rule the medical officer of health of the district is *ex officio* medical expert in the courts but in some of the larger towns special medical officers have been appointed for this duty. In cases of considerable importance and in appeal cases recourse is had to the provincial board which exists in each province (Provincial Medicinal-Collegium) composed of professors of the university of the province together with Government medical officers and others, and to a central board in Berlin (Wissenschaftliche Deputation für das

Medicinalwesen) composed of professors of Berlin University only. The professional opinions given by the authority last named have a great influence on the decisions of the courts, for the judges believe that no expert is more competent in medical questions than this board and its opinion is very seldom disregarded. Since the Dührssen trial, however, some medical journals have pointed out that although the board is composed of the leading medical men of Berlin its formally expressed opinions nevertheless do not possess the weight and importance with which they are usually credited When in a given case the opinion of the board is asked by a public prosecutor or by a court of justice the president of the board, as a rule, entrusts the matter to a member who is a specialist in that department. If, for instance, a surgical case is under consideration it is one of the surgeons or if it is a gynæcological case it is the gynæcologist who draws up the report. There is no discussion of the matter by the whole board; when the report is prepared it is signed by the other members but in reality the opinion of the board is only the opinion of one member whose views may sometimes be out of date and who is by no means superior to other specialists who may be called by the other side. Moreover, the opinion of the board or of the member who acts in its name has to be based on written statements, for the patient is very seldom examined with a view to the preparation of the report. It is also quite unusual for members of the boards to attend a court as witnesses or to undergo cross-examination; a member of the provincial board was present at the trial of Professor Dührssen but the central board was not represented at all. Some medical journals now propose that this system should be altered by abolishing the boards and that in cases of considerable importance the opinions of the most competent men in the respective branches of medicine should be asked, as they would be required to appear in court and after being sworn as experts might be cross-examined like other witnesses.

### *The Congress of Naturalists and Medical Men.*

The seventy-fourth congress of the German Association of Naturalists and Medical Men will this year be held beyond the borders of the German Empire—namely, in Carlsbad, the famous mineral water resort in the Austrian province of Bohemia. The congress will meet in two principal sections—a medical one with 17 subdivisions and a scientific one with 11 subdivisions. The medical subdivisions are as follows: (1) anatomy, histology, and physiology; (2) general pathology and pathological anatomy; (3) clinical medicine, pharmacology, balneology, and hydrotherapeutics; (4) history of medicine; (5) surgery; (6) obstetrics and diseases of women; (7) diseases of children; (8) nervous and mental diseases; (9) ophthalmology; (10) diseases of the larynx, nose, and ear; (11) dermatology and syphilis; (12) odontology; (13) military medicine; (14) forensic medicine; (15) hygiene; (16) veterinary medicine; and (17) pharmacy. In the medical section the official subject of discussion will be physiological albuminuria and in the scientific section it will be the circulation of nitrogen.

### *"Christian Science."*

The fantastic doctrines known by the name of "Christian science," with which the name of Mrs. Eddy is associated, continue to occupy the attention of the public, and it is said that they have made more progress, especially among females, than is generally supposed. Believers abound in Potsdam, where the Emperor's summer residence is situated, and many of the nobility and court officials engage in the exercises prescribed by Mrs. Eddy. The Emperor has expressed strong disapproval of these proceedings, and has caused it to be announced that persons who attend the meetings or in any other way encourage the new system will not be admitted to Court.

March 24th.

**THE EXAMINER IN PHYSICS AT EDINBURGH UNIVERSITY.**—The Edinburgh University Court, which met on March 17th, appointed Mr. Dawson F. D. Turner, M.D., F.R C.P. Edin., examiner in Experimental Physics to the University. We believe that this university is the first to have recognised the importance of having an examiner who has received a medical training to examine medical students in physics.

# Obituary.

## WILLIAM TOWLSON KAY, M.R.C.S. ENG., L.R.C.P. EDIN.

THE death is announced of Mr. W. Towlson Kay, late of Gateshead, which occurred at Eastbourne on March 9th. Mr. Kay was born in 1849 and was a student at the Newcastle-on-Tyne College of Medicine, where he had a distinguished career. After securing his diplomas he was appointed medical tutor to his college for a time when he joined the late Dr. Dixon of Gateshead in partnership. Later he practised on his own account and soon secured a large and good practice. He was appointed surgeon to the Gateshead police, a post which he held for 25 years. Three or four years ago his health began to fail and in October, 1900, he retired from practice and went to live at Eastbourne. For a time his health improved but in the autumn of last year he had a relapse which ended fatally on March 9th. Mr. Kay was a great favourite with his patients owing to his genial manner and assiduous attention to them. He took no part in public life but was a member of the local medical societies. He leaves a widow but no children.

## JOHN BARCLAY, M.D., C.M. ABERD.

DR. BARCLAY of Banff died at his residence there on March 11th, after a lingering illness. He received his medical education at the University of Aberdeen, where he graduated in 1862, and was then appointed assistant professor of materia medica and medical jurisprudence. 30 years ago he commenced practice in Banff and built up one of the largest medical practices in the county of that name. He held many public and official appointments in Banff. Dr. Barclay acted as an examiner at Aberdeen University from 1880 to 1883. His wife, who was a daughter of the late Provost Coutts of Banff, predeceased him several years ago. He leaves two sons and two daughters.

## HUGH FRASER, M.B., C.M. ABERD.

A CABLEGRAM was received in Aberdeen on March 11th stating that Dr. Hugh Fraser had died from enteric fever at Bethulie, South Africa, on March 4th. After graduating at Aberdeen University Dr. Fraser came to England, and some four years ago he proceeded to King Williamstown, Cape Colony, where he was stationed until a few months ago, when he accepted the position of medical officer in the camp at Bethulie. Dr. Fraser was the youngest son of the late Dr. George Innes Fraser of Aberdeen. The deepest sympathy is felt for Dr. Fraser's mother in her sudden and unexpected bereavement.

# Medical News.

**SOCIETY OF APOTHECARIES OF LONDON.**—In March the following candidates passed in the subjects indicated:—

*Surgery.*—C. R. Bradley (Section I.), St. George's Hospital; S. J. H. M. Eastwick Field, Royal Free Hospital; J. W. Elliott (Section I.), St. Mary's Hospital; H. S. French (Sections I. and II.), Oxford and Guy's Hospital; E. O. Libbey, Leeds; K. Heanley (Section I.), Royal Free Hospital; and S. C. Wilkinson (Sections I. and II.), Leeds.

*Medicine.*—F. G. Bennett (Section II.), University College Hospital; W. T. Colyer, Cambridge; H. S. French (Sections I. and II.), Oxford and Guy's Hospital; R. Gauld (Sections I. and II.), London Hospital; K. Heanley (Section I.), Royal Free Hospital; W. St. A. F Hubbard (Sections I. and II.), Charing Cross Hospital; O. Millauro (Section I.), Westminster Hospital; H. H. Sloane (Section II.), St. Bartholomew's Hospital; W. P. Taylor, Sheffield and Bristol; J. E. Turle (Section I.), University College Hospital; and A. F. Van Dijk (Sections I. and II.), St. Bartholomew's Hospital.

*Forensic Medicine.*—H. S. French, Oxford and Guy's Hospital; W. St. A. F. Hubbard, Charing Cross Hospital; W. P. Taylor, Sheffield and Bristol; J. E. Turle, University College Hospital; A. F. Van Dijk, St. Bartholomew's Hospital; and J. H. Williams, London Hospital.

the much longer time which contracture takes to develop in this disease.

3 Little's disease which is also known as "congenital spastic paraplegia." The involvement of the lower extremities and the etiology of the two diseases are sufficient for a diagnosis, which must be obvious to anyone.

4. Functional disease. I saw one case of Volkmann's contracture diagnosed as "functional." No doubt the mistake arose as it generally does: if we see any disease which we cannot diagnose the temptation is to call it functional. The absence of any serious injury, the greater age of the patient, while the hand will possibly be contracted as well as the fingers atypically form the points of diagnosis. The complete reduction of the contracture under an anæsthetic will be proof positive of functional disease. The electrical reactions in each case will be normal. There are a few other cases which are certainly worth recording here (1) In the case of a patient under the care of the late Mr. William Anderson[25] who was bitten in the forearm by an adder the injury was followed by pain and swelling accompanied by a painful contraction of the fingers which lasted nearly three months; it was ultimately relieved by massage and active and passive movements. In giving the pathology of this condition Mr. Anderson remarks that it was "due to diffuse inflammation of the inter-muscular planes and perimysial connective tissue; that it may occur as a result of poisoned wounds and other injuries, sometimes leading to a deformity in the fingers, as is met with in ischæmic paralysis." (2) König (quoted by Anderson) describes a case of flexion of the hand and fingers in a newly-born child caused by a tearing of the flexor muscles at the moment of disengagement of the arms in the course of delivery. Lastly, Dr. Turney tells me of a case which he saw in consultation where there was no contraction of the hand and fingers but great wasting of the muscles of the forearm. At first sight, when he saw the case, he thought that it was due to nerve injury, but he found the electrical reaction quite normal and the flexor muscle of the forearm firm and hard. Two scars showing past pressure sores were also present. The reason of the absence of deformity was due to the fact that the patient had always worn a splint reaching to the tip of the fingers.

*Prognosis.*—Volkmann makes this statement: "The prognosis is bad, especially in cases where the hand and fingers are affected; here it is practically hopeless. It is better in the lower limbs, for here tenotomy may be practised; slighter cases may be improved with massage." In 1891, or about 10 years after Volkmann's paper, Mr. Anderson gave a prognosis absolutely contradictory to Volkmann. He says: "The lesion—i.e., ischæmic myositis—is seldom of a permanent character and the function may generally be restored by systematic active and passive movements with massage and, if necessary, the galvanic current." He gives no cases to substantiate his statement and there is certainly nothing in the literature that I can find so completely to oppose Volkmann's gloomy prognosis. When, however, one refers to the cases which I have published it will be seen that the prognosis given by Mr. Anderson is exactly in accordance with these results. I think that I am right in stating that the patients in Table I., when they left St. Thomas's Hospital with complete deformity of the hand and forearm, were not expected in two or three years to obtain a normal arm, but such is the case. When I received letters replying to my question from two different patients stating that they had completely recovered I could not understand it, but it was quite obvious when I saw the cases. Surgical methods of lengthening tendons, shortening bones, &c., cannot produce with the very best results possible a better condition of affairs than I now publish. Of course, one cannot be absolutely certain that so happy a result would always ensue, but still these are not selected cases, but those which Dr. Turney had seen in the hospital and which had been diagnosed by him as ischæmic myositis. I cannot say whether the fact of having normal electrical reaction—as all the cases I reported had and have—may be such an advantage as to give recovery by simple massage, &c.

*Treatment.*—In his Hunterian Lecture of 1891 the late Mr. William Anderson stated that "ischæmic paralysis is a reproach to surgery, since a careful observation of the hand and fingers during the use of splints will always give due warning of the danger." The only objection to this statement is when the deformity arises from other causes than bad treatment, as it undoubtedly may do, Mr. Littlewood holds the view that splint pressure has nothing to do with the production of the deformity. This statement is going to the other extreme and is certainly incorrect in many cases. There is no better illustration than Case 4 of my series, where there was a severe injury with a large amount of swelling. "Plaster splints" were applied to the forearm; this was followed in 24 hours by swelling and duskiness of the fingers, paralysis, and contracture, with a pressure sore besides. This is one example out of many. Therefore in a severe injury to the bones of the forearm and lower end of the humerus it seems obvious that anterior and posterior splints should not be applied, or at any rate not in these cases when there is much swelling, and several surgeons, notably Mr. Page, disagree with the use of splints. When the contracture has occurred and is of recent origin Volkmann recommends the extension of the muscles under an anæsthetic. This treatment alone has proved to be valueless, and the extension of the muscles is no easy matter; the contracture still continues till it reaches a maximum even under extension. There seem to be two methods of treatment, medical and surgical. The former consists of massage to the forearm twice daily for 10 minutes or more (as long as there is no pain) and passive movements of the fingers. The galvanic current can be given, but I do not think it would make any difference. This treatment must, no doubt, be carried on without any long interim for about two years to have the complete results here shown, as it took quite that time in both my cases to effect complete cure. The results of this treatment have already been discussed and show what great value it has. Massage in each case was performed by the friends and has given as good a result as any professional expert could possibly obtain, and with this advantage for hospital patients especially—it was performed free of charge.

As to surgical treatment and the time of operation, as many of the cases slowly continue to contract for some time after the accident it seems possible that it would be better to delay operation for three or four months. The different operations which have been performed are numerous. Mr Davies-Colley cut through the flexor muscles of the forearm themselves, and at a second operation, a month after, cut through all the flexor tendons. The deformity is certainly cured by such treatment, but no hope of flexion of the fingers can ever be entertained. Mr. Raymond Johnson excised a short piece of bone from the middle of the shaft of the radius and ulna. The effect on the contracted wrist and fingers was satisfactory, but the divided bones only united by fibrous tissue and the child had to wear a leather splint. This case was shown at a meeting of the Harveian Society of London on March 3rd, 1898. Mr. Edmund Owen who discussed the treatment of such cases advised resection of bone, but stated that surgeons must be prepared for the result of non-union of the divided bone, but he gave no proof for such a statement. Tendon lengthening, first advised in these cases by Mr. Page,[26] has since been carried out by Mr. Littlewood,[27] Mr. Barnard,[28] and others. It simply consists in splitting longitudinally the flexor tendons of the fingers or cutting them in a Z-shaped fashion, then when full extension has been applied suturing the lengthened ends. The after-treatment consists of keeping the hand and fingers on a splint for about a fortnight, then gradually applying massage, the galvanic current, and finally by active and passive movements of the fingers, hand, and forearm. Lastly, in cases where the presence of a lump situated at the lower end of the humerus after an injury to the bone interferes with flexion and extension of the forearm this bony mass can be excised. This was done in Case 2 by the late Mr. Pollock with excellent results.

In conclusion, my best thanks are due to Dr. Turney for allowing me to use the cases which have been, or are at present, under his care in the electrical department at St. Thomas's Hospital, and also for much valuable advice in the study of this interesting deformity. I have also to thank Mr. Clutton and Mr. Pitts, as the cases which I report had originally been under their care.

St. Thomas's Hospital.

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[1] Krankheiten der Bewegungsorgane, 1875, p. 846. [2] A case brought forward by Mr. Raymond Johnson at a meeting of the Harveian Society of London on March 3rd, 1898, and reported in THE LANCET of March 12th, 1898, p 722 [3] Guy's Hospital Gazette, Oct. 5th, 1898. [4] Orthopædic Surgery, 1899, p 49. [5] THE LANCET Jan. 13th, 1900, p. 83. [6] THE LANCET, Feb. 3rd, 1900, p. 291. [7] Ibid. [8] THE LANCET, April 20th, 1901, p. 1138 [9] Ibid. [10] The Practitioner, October, 1901, p. 429. [11] Wiener Klinische Wochenschrift, No 1, 1901, p. 25. [12] St. Thomas's Hospital Records, 1896; also Transactions of the Clinical Society of London, vol. xxix, p. 241. [13] Loc. cit. [14] THE LANCET, Feb. 3rd, 1900, p. 291. [15] Loc. cit

different observers and commence by giving that of the eminent German surgeon who first described the disease. Volkmann considers that the paralysis and contracture are dependent on the diminution of arterial blood to the muscles—i.e., are ischæmic in origin—(see Case 14) whilst the simultaneous venous congestion which often takes place hastens the onset of the paralysis; the muscle fibres, being deprived of their oxygen for some time, perish; and the contractile substance coagulates, breaks up, and disappears—that is to say, *rigor mortis*. The rigidity and contracture of the limbs are made worse by the material contracting, which was present for the process of repair. The degree of paralysis and contracture depend on the length of time the circulation of the blood has been arrested. If the anæmia has been very marked the most serious results may happen in 12 hours or less. A slight but prolonged constriction and pressure of a limb may cause symptoms of great severity, especially in fractures of the radius. The late Mr. Davies-Colley[17] believed that this deformity is due to splint pressure on the skin causing inflammation which spreads to the muscles; or suppuration of all the soft parts may be got, the resulting fibrous tissue which contracts and gives rise to the deformity being formed from the granulation tissue of the soft parts. Mr. Raymond Johnson[18] considers that the "paralysis" is dependent upon inflammation and subsequent fibrous degeneration of the muscles caused by the application of splints sufficiently tightly to interfere seriously with the circulation through the part. Mr. Wallis[19] describes how this deformity of muscle is produced by Esmarch's bandage: "There is after removal of the bandage excessive capillary hæmorrhage; it occurs not only in the skin but also in the muscles There is no actual blood extravasated, but a large quantity of serum, and with it fibrous tissue-forming elements which escape into and around the tissues Thus the muscular fibres all become infiltrated with fibro-blastic elements, and eventually the healthy contractile muscle becomes largely mixed with fibrous tissue, and according to the amount of this tissue so contraction occurs. Ziegler[20] describes a form of myositis due to the extension of inflammation from the skin or elsewhere manifested by infiltration of the perimysium with liquid and accumulation of round cells into the connective tissue. The muscle fibres often remain intact throughout; when they also suffer cloudy swelling, fatty degeneration, and coagulation necrosis make their appearance. The deformity has been likened by some writers to congenital hæmatoma of the sterno-mastoid producing wry neck. Mr. Clutton[21] says: "Violence is the main cause of tumour of the sterno-mastoid" Dr. Spencer, quoted by Mr. D'Arcy Power,[22] proves beyond doubt that the cause of the condition is injury resulting in rupture of the fibres of the sterno-mastoid, with effusion of blood into the connective tissue. In other cases there is no doubt that inflammation alone may cause the tumour of the muscle But while, on the one hand, contracture is the rule in ischæmic myositis, it is far less common in congenital hæmatoma of the sterno-mastoid. Mr. D'Arcy Power gives 30 cases, traced by Mr. Clutton, himself, and others, of congenital hæmatoma, of which 11 eventually had wry-neck, but in two of these the deformity was very slight; it will thus be seen that there is a great difference between the injury and its result in the two deformities in question. Kraske[23] has shown that long-continued and severe cold may produce this deformity. Lastly, it seems to me that possibly, as so many of these cases commence as injuries in the region of the elbow-joint, the synovial membrane might be lacerated and the escape of the contained fluid with possibly some blood around the seat of the injury might help, or even entirely produce, this deformity in some cases. While discussing the pathology of this deformity I will add the condition of the muscles when examined by surgeons at operations. There are five reports in all, and every observer agrees that the muscles are wasted, pale, firm, and dry, and that they seem to be chiefly composed of fibrous tissue.

*Diagnosis.*—The diagnosis is usually easy, but still there are difficulties at times, chiefly in finding out whether the case is purely ischæmic myositis or whether it is this disease together with injuries of the peripheral nerves. In looking through the literature of the subject I find a large number of deformities which have entered into the diagnosis at some time or other. I think it therefore advisable to mention these and their diagnostic features. A case of Volkmann's contracture gives the history of a severe injury usually in the region of the elbow-joint or forearm accompanied by a large amount of swelling of the soft parts. The patient is usually a child (every patient in Table I. and in Table II. was under the age of 10 years, except in three instances, and two of these could hardly be included, as in one it was due to Esmarch's bandage and in the other to thrombosis of the axillary artery, and therefore they did not present the usual history). Splints have generally been applied and the contracture of the fingers has come on rapidly. This point, Volkmann[24] lays great stress on and says: "The paralysis and contracture arise simultaneously, not as in paralysis of nervous origin, where contraction is a later phenomenon and of gradual onset" A child presenting such a history as this and with the deformity of the hand as described in the paragraph on the symptoms, as well as with normal electrical reactions, is diagnostic of Volkmann's contracture.

We must now consider what other conditions produce such a deformity. I find that the following is a list of nerve lesions which are given as offering points of diagnosis: (1) ulnar, median, or muscular spiral paralysis; (2) the contraction after acute anterior poliomyelitis; (3) Little's disease; and (4) functional disease. The peripheral nerve palsies are alone worth considering fully; in the others the diagnosis is so obvious that a brief account is sufficient

1. In ulnar paralysis the paralysis generally comes on rapidly after wounds of the arm. The fingers cannot be flexed at the first joint or extended at the other joints. Adduction of the thumb is lost and so are most movements of the little finger. Anæsthesia occurs in most cases, corresponding with the inner side of the hand, the little finger, and the inner half of the ring finger The reaction of degeneration in the wasted ulnar muscles is present, but no reaction to stimulation of the ulnar nerve with the faradic current After a long period the "claw hand" is developed. There will be no contraction of the wrist. The hypothenar eminence may disappear The palm is hollow and trophic changes may be present. Therefore the points of diagnosis are many and should not offer much difficulty. In median nerve palsy there is paralysis of pronation beyond the mid-position; the thumb is extended and adducted The fingers are not contracted. There is little power to flex the wrist. Electrical reactions show reaction of degeneration in the affected muscles. Anæsthesia corresponding to the radial side of the palm, the front of the thumb, the first two fingers and half the third, and in some cases the back of the last phalanx of the index and middle finger. Trophic lesions may be present. In this palsy it is quite obvious that there is little resemblance to Volkmann's contracture. In musculo-spiral palsy, although there is dropping of the wrist, it is due to paralysis of the extensor muscles, not due to contraction of the flexors, as in Volkmann's contracture. The fingers are frequently in the position pointed out by Sir William Gowers, the first finger being least and the fourth most affected, thus showing a simple gradation. A very large number of the musculo-spiral palsies which come to the electrical department at St. Thomas's Hospital show this feature. The palsy may be bilateral, as it is usually in lead. The involvement of the triceps and supinator longus in some cases, with the well-marked reaction of degeneration in the affected muscles and the loss of sensation which sometimes occurs, is sufficiently characteristic for a correct diagnosis. Although these points are sufficient for diagnosis between the deformity in question and peripheral nerve palsy, yet it is highly probable that the nerves are also affected in some of the cases of Volkmann's contracture. For instance, we see in some of the cases reported loss of sensation corresponding to definite nerve areas, while in others there have been trophic ulcers The reaction of degeneration in the affected muscles in four cases out of five in which it was examined for in Table II is very important, while in Table I. in no case was it present I think therefore that the electrical reactions show quite clearly that there is, on the one hand, pure ischæmic myositis, with normal reaction; and, on the other hand, ischæmic myositis plus peripheral nerve palsy, producing complete or partial reaction of degeneration.

2 The contracture after the acute anterior poliomyelitis. If any history can be obtained of the onset of the case in question it will be practically sufficient for a correct diagnosis, although acute anterior poliomyelitis may follow directly after an accident, such as a fall, but the injury in no way resembles that met with in Volkmann's contracture. Also the far greater frequency of the involvement of the upper extremity (I can find only one case of Volkmann's deformity in the leg), and the reaction of degeneration in the affected muscles. Perhaps the most diagnostic point is

experiment. There are certainly those who are so susceptible as to require revaccination after six or seven years. It is much to be desired that those who have the cause of vaccination at heart should record statistics of this kind, as there appears to me to be a dearth of accurate information on this important subject. This is my only excuse for recording the facts above.

St. Bartholomew's Hospital, E C.

# A HISTORY OF THE AFTER-PROGRESS OF FIVE CASES OF PARTIAL GASTRECTOMY FOR CANCER OF THE PYLORUS.[1]

BY J. RUTHERFORD MORISON, M.B. EDIN., F.R.C.S. ENG. AND EDIN.,
SURGEON TO THE ROYAL INFIRMARY, NEWCASTLE-ON-TYNE.

CASE 1.—The patient was a woman, aged 40 years. For five months previously to the operation she had pain after food and for two months she had vomiting. On her admission into the Newcastle Royal Infirmary she was confined to bed from weakness and was much emaciated. A freely moveable tumour of the size of a Tangerine orange was found under the umbilicus. Pylorectomy was performed on Oct. 21st, 1897.

From the time the patient left the hospital she was perfectly well until May, 1900. She was able to eat and to digest any ordinary food and worked regularly at her household duties. On Nov. 13th, 1897, she weighed six stones eight pounds and on Dec. 31st, seven stones nine pounds; on Feb. 11th, 1898, seven stones 13½ pounds; on Dec. 9th, 1898, eight stones three pounds; and on March 3rd, 1899, seven stones 13½ pounds. In May, 1900, the patient began to have uneasy sensations after food, with rumbling and water-brash, and she discovered a lump in her epigastrium. These symptoms gradually got worse until she was unable to take any solid food. She was readmitted into the infirmary on July 18th. Previously to this she had vomited three times. Her general condition was good. Under the abdominal scar there was a definite hard, nodular, and tender tumour about three inches across and two inches from above downwards. It was adherent to the anterior abdominal wall, but moved slightly with respiration. The stomach was dilated. There were no signs of dissemination. On the 24th her abdomen was opened. The scar was adherent to the stomach; there was a large tumour extending from the pyloric end of the stomach along the lesser curvature nearly to the œsophagus and along the greater curvature to within four inches of it. Near the duodenal end the growth was adherent to the liver, but did not appear to involve the latter. There were several enlarged glands in the lesser omentum. The abdomen was closed, nothing being done. The patient made a good recovery from this exploration. On August 7th her weight was reduced to six stones nine pounds. On Sept. 14th the patient was reported to be worse. She had frequent retching and was unable to take solid food. In October she was getting worse and was only kept comfortable by living upon liquid food and taking sedatives. In December, 1900, three years and two months after the first operation, she died at home. There was no necropsy.

CASE 2.—The patient was a male, aged 48 years. Two months before his admission into the Newcastle Royal Infirmary he felt a burning and discomfort after food, which gradually increased until he could take no solids. He had never vomited. He had become pale and weak, and had lost fully a stone in weight Beneath the upper end of the left rectus abdominis muscle immediately below the costal margin a hard nodulated tumour could be felt, ascending and descending with respiration. On turning the patient on to his right side the tumour moved over for two inches. Pylorectomy was performed on Sept. 12th, 1898.

After the operation the patient rapidly improved and went to work in December. On August 7th, 1899, he reported himself. He looked in good health, and was able to eat and to digest ordinary food. He weighed 10 stones which was his normal weight. He was working regularly from 6 A.M. to 5 P.M. and earning 8*s*. a day. On Sept. 28th he was well; on Feb. 5th, 1900, he complained of not feeling so well as before, and had lost seven pounds since the previous September. There were no stomach symptoms, but there was a small nodule in the skin of the abdominal wall immediately to the right of the scar. There were no other signs of recurrence or dissemination. On August 29th he returned with a large mass in the epigastrium, firmly adherent to the parietes. He complained of pains shooting to the shoulder. There was no vomiting or other stomach symptom. From this time he steadily got worse and died on Nov. 3rd, 1900, two years and two months after the operation. Dr. J. Ingram of Wallsend, under whose care the patient had been, was fortunate and enthusiastic enough to obtain a necropsy. There was no sign of growth in the stomach itself. The suture line formed a firm fibrous ring which just admitted two fingers. The glands surrounding this orifice were enlarged and infiltrated with growth, but they were quite easily separated from the stomach. The liver was studded throughout with large masses of growth.

CASE 3.—The patient was a woman, aged 41 years. Fourteen months previously she had gastric pain, vomiting commenced 10 months before, and latterly she had been unable to retain any solid food. Her stomach was much dilated. In the neighbourhood of the pylorus a hard, freely moveable tumour of the size of a walnut was found. She was very thin, weak, and anæmic, and weighed six stones 11 pounds. Pylorectomy was performed on Sept. 19th, 1898.

After the operation the patient quickly improved, and on March 24th, 1899, she weighed eight stones. She was very well, and able to work and to maintain her family until May, when she began to have stomach symptoms—burning in the epigastrium, with retching and loss of appetite. On July 13th she came to the infirmary. She looked very ill. Her stomach symptoms had increased and there was a large hard mass in the epigastrium which appeared to be a malignant growth. On August 10th she was much worse; the mass was larger and she had severe diarrhœa. She died in December, 1899, one year and three months after the operation. There was no necropsy.

CASE 4.—The patient was a male, aged 38 years. Six weeks before admission he commenced to vomit and had done so every day since. He had become pale and anæmic and had lost 22 pounds in weight A tumour of the size of a cocoanut, moving freely on respiration and on manipulation, was found in his epigastrium. During the few days of his stay in hospital previously to operation it was observed that the tumour was increasing in size. His weight was nine stones 11 pounds. Pylorectomy was performed on Oct. 18th, 1898.

On Sept. 15th, 1899, the patient returned to report himself. He appeared to be in perfect health and was able to take ordinary food, and had gained two stones six pounds in weight. In September, 1900, he wrote to say that he was perfectly well and had gained a further seven pounds. He sent his photograph and this made him look robust. In March, 1901, he was perfectly well and was able to eat anything. At this time he was working as a timekeeper for 12 days out of every fortnight. He had lost four pounds since September, 1900. At the latter end of this month he had a febrile attack, accompanied by much pain in the right side of the chest, said to be due to influenza and pleurisy. Convalescence from this illness was slow and incomplete, and he began to lose ground. By June he had lost another 16 pounds. On July 19th he returned to the infirmary. There were signs of a large local recurrence with deposits in the liver. He had lost other 12 pounds. On August 2nd he was readmitted into the infirmary; he was then extremely jaundiced, thin, and ill. The mass in the epigastrium had increased and the liver was much enlarged. There were a good deal of pain and frequent vomiting. On Sept. 19th, 1901, two years and 11 months after the operation, he died at home. There was no necropsy.

CASE 5.—The patient was a male, aged 41 years. He had been ill and vomited after food for five months; he had also vomited blood. He had lost three stones in weight since the commencement of his illness and was in a very feeble condition. His stomach was much dilated and he vomited sarcinous matter. A small tumour could occasionally be felt in the neighbourhood of the pylorus. He weighed six stones 10 pounds. Pylorectomy was performed on Feb. 9th, 1899.

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[1] This note is written in response to an editorial request for the *further history of these cases made in* THE LANCET *in which a report of* them was published (vide THE LANCET, April 1st, 1899, pp. 901 and 911). The cases were exhibited at the Clinical Society of London on March 24th, 1899, and published in vol. xxxii. of the Society's Transactions.

[16] Krasko: Centralblatt fur Chirurgie, 1879, No. 12. [17] Loc. cit. [18] Loc. cit. [19] Loc. cit. [20] Ziegler, p. 306, set 1-8. [21] St. Thomas's Hospital Reports, 1888. [22] Wry-neck and Congenital Hæmatoma of the Sterno-mastoid, Transactions of the Royal Medical and Chirurgical Society, vol. lxxvi., 1894. [23] Loc. cit. [24] Centralblatt fur Chirurgie, 1881, vol. viii., No. 51. [25] The Deformities of the Fingers and Toes, p. 66. [26] THE LANCET, Jan. 13th, 1900, p. 83. [27] THE LANCET, Feb. 3rd, 1900, p. 291. [28] THE LANCET, April 20th, 1901, p. 1138.

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# SOME FIGURES AS REGARDS SUSCEPTIBILITY TO REVACCINATION.

BY F. W. ANDREWES, M.D. OXON., F.R.C.P. LOND.

WITHIN the past three months it has fallen to my lot to revaccinate a large number of the female staff of St. Bartholomew's Hospital, including sisters, nurses, wardmaids, and servants. In all, I inoculated 171 persons, of whom 163 were vaccinated with lymph from the same source and, I believe, of very uniform potency. I kept a note of the results and have reduced the figures to tabular form. I am induced to record them for several reasons Statistics concerning vaccination deal chiefly with the incidence of small-pox upon vaccinated persons; very few figures are available to show the percentage of persons susceptible to revaccination in young adult life. Although the number of cases here recorded is comparatively small, yet the figures may be of use to someone collecting statistics on a larger scale and their publication may induce others to record their own results. The figures are quite in accordance with what might have been anticipated, but this seems no reason for refraining from publishing them. On the contrary, the lesson they teach is one which at the present moment is most urgently needed to emphasise the importance of revaccination.

The method of vaccination employed was uniform in every case. No antiseptic was employed at all. The arm was scrubbed well with warm water and soap and was then dried with a pad of clean absorbent wool. It was then scarified lightly with a scalpel in four places, each area treated being about one centimetre in diameter. The lymph was immediately expelled from the tube upon the scarified areas, well rubbed in with a sterilised glass rod, and allowed to dry. No secondary infection or other untoward result occurred in any case. The lymph used was that supplied by the Association for the Supply of Pure Vaccine Lymph, 12, Pall Mall East, London, W. It was a glycerinated lymph almost free from extraneous micro-organisms. Before I began to use it I tested a tube by bacteriological culture and found that very few colonies of bacteria grew. The different consignments of this lymph appeared uniformly active.

Of the 171 persons inoculated two were previously unvaccinated, leaving 169 cases of revaccination. Of these I exclude eight cases in which an inert lymph was used inadvertently, thus confining the figures to the cases in which one uniform and good lymph was employed. In three cases I was unable to ascertain the results, owing to the persons who were vaccinated leaving the hospital within a few days after the operation. The following figures relate to the 158 cases in which I can vouch for the results. I classify the results under three headings: (1) perfect vaccinia—i.e., large well-formed vesicles resembling those of primary vaccinia in all respects save that the process was often accelerated by a day or two; (2) imperfect vaccinia—i.e., the production of vesicles small, imperfect, and generally much accelerated; and (3) negative result—i.e., transitory redness without the formation of any vesicles at all.

The gross results of the 158 cases work out as follows: perfect vaccinia, 72 cases, or 45·57 per cent.; imperfect vaccinia, 65 cases, or 41·14 per cent.; and with a negative result, 21 cases, or 13·29 per cent.

If the cases are grouped the results are more striking. 55 of them were wardmaids and domestic servants employed about the hospital—young adults who for the most part had not been vaccinated since infancy. 88 were nurses who are obliged to be revaccinated before entering upon their hospital training. A few had managed to evade this regulation, while in some the revaccination had been unsuccessful, but the great majority of this class were already successfully revaccinated persons, some having been vaccinated several times. 15 of the cases were ward sisters or very senior nurses in whom the effects of the revaccination must to some extent have worn off.

Amongst the 55 cases of the servant class the results were as follows: perfect vaccinia, 42 cases, or 76·36 per cent.; imperfect vaccinia, 11 cases, or 20 per cent.; and with a negative result, 2 cases, or 3·64 per cent. Very different were the results amongst the 88 nurses. They were as follows: perfect vaccinia, 24 cases, or 27·27 per cent.; imperfect vaccinia, 48 cases, or 54·54 per cent.; and with a negative result, 16 cases, or 18·18 per cent. The sisters and senior nurses occupied an intermediate position. They showed: perfect vaccinia, 6 cases, or 40 per cent.; imperfect vaccinia, 6 cases, or 40 per cent.; and with a negative result, 3 cases, or 20 per cent.

The full value of the results is, however, seen when the date of the previous successful vaccination is taken into account. 61 of the cases were persons successfully vaccinated in infancy and not successfully vaccinated since. Of these 61 four were under 20 years of age, seven were aged over 30 years, and 50 were between 20 and 30 years old. The average age of the 61 persons was 23·6 years. The results were as follows: perfect vaccinia, 50 cases, or 81·96 per cent.; fair vesicles, eight cases, or 13·11 per cent.; feeble vesicles, one case, or 1·66 per cent.; and with a negative result, two cases, or 3·32 per cent.

In 41 of the remaining cases I was able to ascertain the date of the last asserted successful revaccination. In one case three years had elapsed and very feeble vesicles resulted. In four cases four years had elapsed; two yielded a negative result and two very feeble vesicles. In 11 cases five years had elapsed; five yielded negative results, four very feeble vesicles, two fair vesicles, but none typical vaccinia. In six cases six years had elapsed; two yielded negative results, one feeble vesicles, and three typical vaccinia. In one case seven years had elapsed; typical vaccinia was produced. In seven cases eight years had elapsed; three yielded negative results, two imperfect vaccinia, and two perfect vaccinia. In three cases nine years had elapsed, all yielded imperfect vaccinia. In four cases 10 years had elapsed, and all yielded imperfect vaccinia, but in two the vesicles were fair. In two cases 12 years had elapsed, both yielded imperfect vaccinia, but one with fair vesicles In one case 16 years and in another 18 years had elapsed; the one yielded fair vesicles and the other perfect vaccinia I may add that except for special reasons, such as known exposure to small-pox infection, I did not attempt to vaccinate any person who had been successfully revaccinated within five years.

As I have said, there is nothing in the above figures that might not confidently have been predicted. We are all aware that the immunity against small-pox which vaccination confers is by no means permanent. It is only the anti-vaccinationists who point with glee to the fact that in a given epidemic more vaccinated than unvaccinated persons are commonly attacked, heedless of the interval which has elapsed since vaccination, and seemingly impervious to the conclusion that this is not an argument against vaccination, but the strongest possible argument for efficient revaccination. It is, of course, an open question how far susceptibility to revaccination implies susceptibility to small-pox. Although it is possible that a person who takes fairly well when revaccinated might yet fail to take small-pox when exposed to infection, or take it very mildly, it is nevertheless true that revaccination is the only practical test at our command for determining susceptibility to small-pox, and that immunity against vaccinia is fair proof of immunity against small-pox One is constantly asked when small-pox is prevalent, "Ought I to be revaccinated?" The only answer is, "Be revaccinated and see. If you do not need it, it will not take, and you will suffer no inconvenience; if you need it, you will be well compensated for your inconvenience."

Of the figures which I have put forward above, those which appear to me to be of most importance are the ones dealing with persons never successfully revaccinated. They indicate that during the third decade of life some 80 per cent. of those vaccinated in infancy are most imperfectly protected against small-pox, and I imagine that it is this class which renders the number of attacks during an epidemic larger in the vaccinated than in the unvaccinated whatever the relative proportion of fatal cases may be. The figures which concern those already successfully revaccinated are of less importance. Individual susceptibility here plays an important part which can only be ascertained by actual position. Take the case of a knee. While the operator is doing his utmost to flex the joint the patient is meanwhile striving his utmost, by travelling on his hands, to get away from him. The operator forcibly flexes a little and is satisfied to come again the next day, to repeat the painful process, and so on *ad odium*.

I feel quite certain that to try to break down recent adhesions of a shoulder- or wrist-joint with the patient sitting or standing is fundamentally wrong; a large amount of pain is caused with comparatively little result, for the reason that the patient is in the best possible position for resisting. Anyone who may try my method on the normal shoulder-, elbow-, and finger-joints will, I think, satisfy himself as to its practical utility and as to the limited capacity for resistance which it allows the patient With regard to the knee-joint, owing to the great power possessed by the muscles to prevent flexion, the advantages of the method when tried on the undamaged joint will not be so manifest. Indeed, in such an attempt upon a boy of the age of 10 years who was prepared for what would happen it would be found that he could successfully resist a very large amount of force. This theoretical objection melts away in actual practice, the stiff knee of an adult after eight weeks of splints giving far less resistance than would that of a normal child. I now propose to describe the method as applied to the joints of the shoulder, the wrist, the finger, and the knee respectively.

*The shoulder-joint (right)*—For these manipulations the surgeon stands behind the patient's head. The patient lies flat on his back on a mattress and the surgeon's left hand being placed flat on the clavicle of the affected shoulder he pins the patient to the mattress or the table, preferably to the latter; the operator's free hand then grasping the elbow raises that joint quickly to a level with the shoulder-joint.

*The wrist-joint.*—The patient's forearm is placed on a table in the supine position. The surgeon's left hand pins down the forearm to the table whilst his right, grasping the patient's hand, quickly flexes it to a right angle.

*The finger-joint.*—This joint is treated in a similar way, the hand being placed on the table with its palmar surface upwards.

*The knee-joint.*—The patient lies *prone* on the bed. The surgeons left hand pins down the thigh, whilst his right, grasping the leg above the ankle, quickly flexes the knee.

The following case will serve as an illustration of the method of procedure.

A youth, aged 18 years, fairly well nourished, who was run over by the wheel of a cart, sustained a simple oblique fracture of the femur just above the condyles. The knee-joint was involved evidently and became greatly swollen, doubtless owing in great part to hæmorrhage. The temperature for the first three weeks ranged from 100° to 101° F. For certain reasons no effort was made to flex the knee until the end of the eighth week; it was then attempted with the patient lying on his back. The flexion caused by the passive movement on the first day was almost *nil* and I anticipated a limited movement only of the joint as a final result, but on the next day it occurred to me to turn him over to the *prone* position and pinning him down I brought his leg up to a right angle with the greatest ease, numerous adhesions evidently giving way in the process

There always must be pain when adhesions are broken down, but I claim for this method that the pain is almost momentary; that a large amount of joint movement is obtained at once by means of far less force than usual; that the resistance of the patient, a hitherto almost unconsidered factor, is reduced to a minimum; and finally, that there is great shortening of the period of passive movements owing to the unusually large amount of mobility caused by the surgeon's initial effort. In the knee case detailed above I had prevented adhesions of the patella by moving it from side to side at each visit and it seemed to me when I flexed the knee that this little point was not unimportant.

Richmond.

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**Stockport and its Health Department.**—Dr. Meredith Young, medical officer of health of the county borough of Stockport, has been granted a special honorarium of £60 in consideration of the extra work thrown upon him by Parliamentary Bills for the extension of the borough boundaries and the promotion of a large water scheme. The other chief officials and their staffs have been treated in a similar generous manner by the town council.

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# Clinical Notes:

## MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

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### SUCCESSFUL REMOVAL FROM AN INFANT OF AN OCCIPITAL MENINGOCELE LARGER THAN THE CHILD'S HEAD.

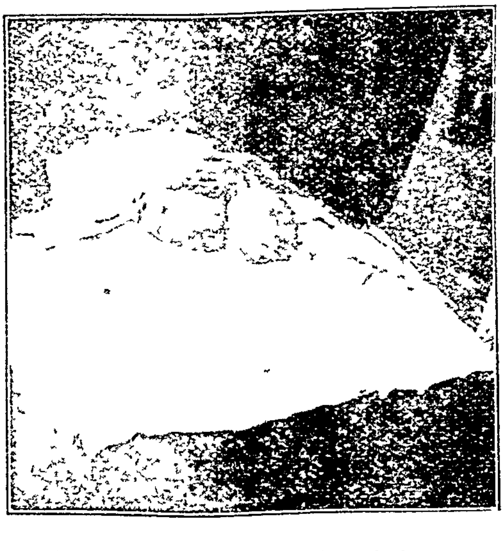
By J. Lynn Thomas, C.B., F.R C.S. Eng.,

SURGEON TO THE CARDIFF INFIRMARY; CONSULTING SURGEON TO THE HAMADRYAD HOSPITAL, TO PORTH HOSPITAL, AND TO CARDIFF PROVIDENT DISPENSARY.

The following case is, I think, worthy of record, as it has to do with one of the largest meningoceles that I have met with—one of the largest, as far as I know, that has been successfully removed. I think that the method adopted in operating upon this particular case is one which diminishes shock considerably, on account of there being no interference with the intracranial pressure during the time of the operation, and also by not having any antiseptics absorbed into the patient's system. There cannot be any doubt, I think, that long preparation of the skin before operation with poisons such as carbolic acid or perchloride of mercury, which are absorbed so easily by the skin, adds very seriously to the shock of a dangerous operation. Dr. W. G. Williams administered the chloroform, whilst my friend and colleague Mr. Cornelius Griffiths assisted me at the operation.

The patient was a male infant, aged four months, and the notes taken of the condition were as follows: "Since birth the child has had a tumour at the back of his head which has been getting gradually larger. It is attached to the skull by a pedicle over the posterior fontanelle, and is of the shape of a very large fœtal head. It is translucent and fluctuating, has been tapped several times, and has a number of large veins visible upon its surface where the skin is thin. The child has never been able from birth to move his head on account of the enormous size of the meningocele. Measurements: diameter of pedicle, three inches; from skull to summit of tumour, five inches; across greatest diameter, seven inches; greatest circumference, 17¾ inches; and occipito-frontal circumference, 15 inches. The tumour is two and three-quarter inches bigger than the largest circumference of the head."

The operation was proceeded with on Sept. 24th, 1901. In order to avoid shock no antiseptics were applied to the field of operation. The necessary preparation of the skin was done immediately before operating. Skin flaps were dissected off the meningocele, leaving the numerous veins untouched. The blood-vessels were under-run and divided between a series of two Kocher forceps and were then reflected back towards the skin. A pair of strong occlusion forceps, six inches long, were then applied to the pedicle and gradually



Shows the meningocele larger than the head.

On March 24th, 1899, he weighed seven stones 10½ pounds. He stated that he felt in good health, and that he could eat ordinary food. Shortly after this he became ill again with pain and vomiting. He gradually got worse and died at home, so far as we could learn, about six months after the operation. There was no necropsy.

Newcastle-on-Tyne.

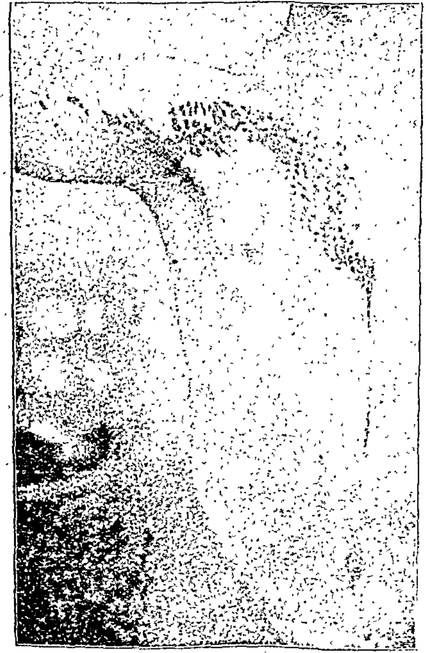
# NÆVUS VERRUCOSUS ASSOCIATED WITH CERTAIN ANOMALIES OF PIGMENT.

*BY H. TAYLOR, M.A. CANTAB., M.A., M.D. DUB.*

THE marked manner in which the lesions are rigorously limited to the right side of the patient, their distribution in the track of certain cutaneous nerves, the alternation of deeply pigmented papillomata with merely the presence of pigment in the skin, and finally the merging of this pigmented condition into decolourised patches, make, I venture to think, this case of nævus verrucosus worth recording.

The patient is a lad, some 19 years of age, well nourished and in good health, with no history of syphilis or tubercle, who displays on his right breast a fairly extensive nævus verrucosus. Over the right pectoral region there is a dense crop of pigmented, non-hairy warts extending into the axilla and, though somewhat thinning out, half-way down the inner aspect of the right arm. At about the level of the nipples the warts reach the median line of the body, but they gradually disappear and are replaced by a line of reddish-brown pigment which is continued down to the umbilicus where again a few growths appear. (See Fig. 1.)

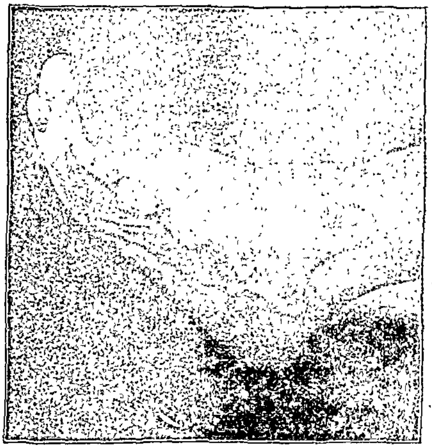
FIG 1.



Crop of pigmented non-hairy warts.

From the umbilicus to the pubes another faint brown line can be traced, unaccompanied by any warts, but on the right side of the scrotum and penis some can be found and with them a few reddish scars, the site of previous ones which the patient states have "dropped off." Similar scars can be seen on the right side of the forehead, nose, and chin, the result of treatment with the actual cautery. Down the inner side of the right leg, from the groin to the inner malleolus, is another faint line of pigment which becomes more marked behind the ankle and is apparently merged into five or six oval-shaped, raised, colourless patches of a leathery consistence, placed along the inner edge of the right foot ("white moles" of Hutchinson?). (See Fig. 2.)

FIG. 2.



Nævus verrucosus associated with certain anomalies of pigment.

There are no skin lesions of any description on the left side of the patient; all are confined absolutely to the right. The patient asserts that he sweats more freely over the affected side and that the principal inconvenience which he labours under arises from this hyperidrosis, with—in a not too cleanly person—the inevitable decomposition of the sweat and the consequent chafing of contiguous parts. The condition is congenital and the various patches have grown only proportionately with the individual. There is no history of any of his relatives having been similarly affected.

The warty growths over the pectoral region are well illustrated in Plate 35 of Mracek's "Hand Atlas of Skin Diseases."

# A NEW METHOD OF BREAKING DOWN RECENT ADHESIONS.

BY GEORGE W. ORD, L.R.C.P. LOND., M.R.C.S. ENG.

To break down adhesions *without an anæsthetic* in either hospital or private practice is, owing to various causes, often a matter of necessity. The passive motion which follows the breaking-down, always a painful proceeding, frequently takes the form of fine-drawn and repeated agony. In private cases the surgeon's individual reputation will suffer if a stiff joint should result, and passive movements, owing to the pain they cause, lead in too many cases to latent resentment, an apprehensive dread of the practitioner's visit, and sometimes to an absolute refusal to undergo the torture. Our policy is, therefore, to be sure and brief in our manipulations and to avoid making passive movement the prolonged tussle between practitioner and patient, or between masseur and patient, which has so far seemed to be inevitable.

The method which I am about to describe consists in fixing the part *above* the stiff joint, by means of the surgeon's left hand, to the bed or the table, as the case may be, and then quickly flexing or causing movement in the joint. Adhesions in the wrists, the shoulders, and the knees we, I contend, break down without first putting the patient into a proper the house. When the husband recovered his intelligence he stated that he had brought some of the powder from the pit and that his wife had used this to sprinkle the floor in order to kill cockroaches. This being mentioned to the wife was denied by her, and she suggested that her husband "must still be wandering." It was not until she was confronted by the police with a tin which still contained traces of powder that she admitted having mixed roburite with some insect destroyer and having sprinkled the beds therewith.

*Remarks by* Dr. R. PROSSER WHITE.—The above forms a typical clinical picture, with the exception of some of the more acute gastro-intestinal symptoms, of the conditions found in persons suffering from the absorption of small doses of dinitro-benzene. Dinitro-benzene is the active ingredient of many of the high explosives, roburite amongst the number. An interesting feature of these cases is the presence of the febrile movement, giving evidence, as it does, of active metabolism caused by ingestion of very small quantities of this poison. This metabolism appears to take place immediately in the blood tissue by the destruction of the blood corpuscles.

The Manchester correspondent of THE LANCET in the issue of Dec. 7th, 1901, p. 1613, unwittingly remarked that the poisonous effects were due to the roburite fumes. As a matter of fact, dinitro-benzene is not in the least volatile at the ordinary temperature of the body; but, on the other hand, this poison penetrates through the skin with remarkable facility.[1] The admixture of even a small quantity of roburite, which contains about 7 per cent. of pure dinitrobenzene, with a practically inert insect-powder such as is commonly used for killing fleas and bugs sprinkled over the bedclothes, and thus coming in contact with the skin, would be amply sufficient to produce the startling symptoms found both in this series of cases and in those occurring at Huyton. In this connexion it is interesting to note that the mother suffered less than the rest of the family. This is explained by the fact that she was out of bed during a considerable part of the night attending to the other members of the family as they were taken ill, thus being for a shorter time exposed to direct contact with the poison.

# Medical Societies.

## PATHOLOGICAL SOCIETY OF LONDON.

*The Experimental Production of the Osteo-arthritic Variety of Rheumatoid Arthritis.—On the Occurrence of Suprarenal "Rest" Tumours in the Pelvis.—Multiple Osteomata.—Specimen of Intestinal Obstruction from Gall-stones.—Congenital Malformation of the Heart.*

A MEETING of this society was held on Jan. 7th, Mr. WATSON CHEYNE, the President, being in the chair.

Dr. F. J. POYNTON and Dr. ALEXANDER PAINE communicated a paper on the results of an Experimental Investigation with a Diplococcus isolated after death from the Knee-joint of a man, aged 67 years, who had suffered from Chronic Arthritis. The cause of death had been carbolic acid taken by misadventure while engaged in his employment. Several joints were found much damaged by the arthritis, and the changes were such as were usually associated with the rheumatoid arthritis of later life. Thus the fluid in the joint was almost clear and was scanty in amount; there was a small foreign body formed probably by the organisation of inflammatory exudation. The cartilages were eroded and the bones were eburnated. The synovial membrane was much thickened. A diplococcus was demonstrated in the unincubated and incubated synovial membrane and was isolated and grown on blood agar. Injected intravenously into two rabbits, arthritis resulted in both instances without either valvulitis or suppuration in the viscera. One rabbit was killed on the fifteenth day. No erosion of cartilage or alteration in the bones forming the joints was found. The other developed a monarthritis of the right knee, with wasting of the muscles of the thigh and leg. The animal was killed in the tenth week and the specimen was shown to the society. The exudation was scanty, clear, and sterile. The cartilages were ulcerated in some places and in others had lost their gloss. The articular surfaces of the bones were slightly flattened, in places ulcerated, and their edges much thickened and lipped. The muscular atrophy was quite definite. The joint capsule and periarticular tissues were but little thickened, but the crucial ligaments were opaque and swollen. A condition of osteo-arthritis had resulted from the intravenous inoculation of a diplococcus isolated from a case of rheumatoid arthritis. Dr. Poynton and Dr. Paine pointed out that other investigators had isolated micro-organisms from the exudations in rheumatoid arthritis; for example, Max Schüller, Bannatyne, Wohlmann and Blaxall, and Chauffard and Raymond had isolated bacilli, and von Dungern and Schneider a minute diplococcus. Dr. Poynton and Dr. Paine emphasised the fact that the monarthritis in their investigation had been the result of an intravenous inoculation and not of a direct injection into the joint and summarised their conclusions as follows: 1. A diplococcus was present in the synovial membrane of the knee-joint of a man, aged 67 years, several of whose joints showed the chronic destructive changes of one type of rheumatoid arthritis. 2. This diplococcus had been isolated and cultivated. 3. Intravenous inoculation into rabbits had upon two occasions produced arthritis without cardiac lesions. 4. The organism had been isolated from the joint exudations. 5. In one instance an osteo-arthritis had resulted which was non-suppurative. This form of arthritis Dr. Poynton and Dr. Paine had not observed hitherto in animals inoculated with the diplococcus of rheumatic fever. 6. They considered this diplococcus to be the cause of the arthritis both in the case from which it was isolated and in the rabbit. Cultures of the diplococcus and sections showing it *in situ* in unincubated and incubated fragments of the synovial membrane were demonstrated. The diplococcus rheumaticus was also demonstrated in the synovial membrane from a case of early rheumatic arthritis. Macroscopic specimens of the arthritic changes were also shown with pipettes containing the fluid removed from the affected parts.—Dr. A. E. GARROD thought that chronic rheumatoid arthritis resulted, not from one cause, but from several different causes, and instanced its occurrence in hæmophilia and in Charcot's disease. He thought that the condition resulted from chronic inflammation of the joint long continued. He doubted if all the cases which were clinically grouped as cases of rheumatoid arthritis could be pathologically proved to be identical.—Dr. J. DRYSDALE asked if the experiment recorded was an isolated one or whether other animals had been inoculated.—Mr. S. G. SHATTOCK thought that a detailed history of the patient's past illnesses was very essential, for he might have suffered from rheumatic fever. He asked whether the articular cartilage showed the fibrillation which was characteristic of a rheumatoid arthritic joint.—Mr. W. G. SPENCER suggested the possibility of a gonorrhœal infection and thought that the organism did not differ very widely from the gonococcus.

Dr. A. EASTWOOD read a paper on the Occurrence in the Pelvis of Malignant Tumours Originating from Suprarenal "Rests." After referring to the frequency of aberrant suprarenal tissue along the course of the spermatic and ovarian veins and in the broad ligament he called attention to a case under Dr. F. H. Champneys' care which he had examined of a large malignant tumour attached to the fundus uteri, but separated from it by a capsule, which he considered to possess the typical feature of a suprarenal malignant growth. He had been unable to find any case previously recorded which could be considered comparable with it both in situation and in microscopic features. He arrived at his diagnosis by first excluding, mainly on histological grounds, other gynæcological possibilities, such as rare forms of sarcoma, endothelioma, the tumours originating from Wolffian remains as described by Recklinghausen, the mixed congenital tumour of Wilms, and then observing that all the features of the present case were not only consistent with, but were highly typical of, a suprarenal tumour. He referred in particular to the capsule, the grouping of the cells suggestive of zona glomerulosa, the close relation of the cells to the blood-vessels, the presence of coagulated material resembling the colloid of the thyroid, and the epithelioid character of the cells which contained yellow oil globules and sometimes pigment. He further supported his view by showing, for comparison, two other cases of Suprarenal "Rest" Tumours Growing in Connexion with the Kidney. He then briefly alluded to the light which suprarenal tumours threw on the question of the internal secretion of closed whilst the meningocele was tapped. The pedicle was rendered watertight by means of a Gely's suture and two rows of continuous sutures. The skin flaps were brought together and collodion dressings were applied. The recovery was uneventful.

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[1] Vide Dr. R. P. White and Dr. John Hay: "Some Recent Inquiries and Researches into the Poisonous Properties of Naphthalene and the Aromatic Compounds," THE LANCET, August 31st, 1901, p. 582.

The child at the present time (Nov 6th, 1901) can move his head about, seems to be much more intellectual than he was formerly, has put on flesh, and has greatly improved in general appearance. The bony boundaries of the opening in the occipital region are three and a half inches long by two and a half inches wide.

The illustration is from a photograph which was taken immediately before the operation was commenced, and it shows fairly well the size, shape, and characters of the meningocele.

*Cardiff.*

## AN UNUSUAL COMPLICATION OF INFLUENZA

BY J. G. CARRUTHERS, M.R.C.P. EDIN.

ON Nov. 11th, 1901, a case of typical influenza came under my notice. The subject was a healthy man, 34 years of age, of good physique and good habits. The disease progressed in the usual manner until Dec. 1st, when a quantity of venous blood was passed per rectum, each evacuation consisting of quite a pint. This continued at three-hour intervals for 36 hours, when it ceased. Acetate of lead and opium were administered. The immediate effects of the hæmorrhage were recovered from, but the patient died on Dec. 10th from exhaustion resulting from influenza. At the time of the hæmorrhage the idea of a perchloride injection occurred to me, but in default of localising any lesion it also occurred to me that general peritonitis might be set up by an injection, so I preferred the opium and lead

This is so unusual a complication that I shall be glad to hear of any explanation My own idea is that it was due to a passive congestion of the inferior hæmorrhoidal veins ; why or wherefore ? Someone may explain.

Selhurst road, S E.

# A Mirror

OF

# HOSPITAL PRACTICE,

## BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

## ROYAL ALBERT EDWARD INFIRMARY, WIGAN.

### REMARKABLE CASES OF ACUTE POISONING BY DINITRO-BENZENE.

(Under the care of Mr. E H. MONKS.)

THE poisonous symptoms of dinitro-benzene are very striking, and owing to the fact that it is at present extensively employed in the manufacture of several explosives it has produced a large number of cases of poisoning. Although at ordinary temperatures dinitro-benzene is not volatile, yet it will readily cause symptoms of poisoning if the temperature is at all raised. Huber[1] quotes a case of a student who prepared some of this substance, and although he was occupied with the work for only one and a half hours, yet his face became deep blue in colour. The urine is black in colour, and it has been shown by MacMunn[2] that this tint was due to a pigment belonging to the aromatic series. There seems to be in some people a well-marked idiosyncrasy to the poison, for all workmen are by no means equally affected. In the following cases of poisoning by this substance it is interesting to note that the person first affected was a small child. This is what might have been expected, as in these cases the poison was absorbed by the skin, and the smaller the body the greater area its skin has in proportion to the body-weight. It is thought[3] that one-tenth of a gramme per kilogramme of body-weight would prove fatal ; if this be so the fatal dose for a human being would be about eight grains. In most cases recovery follows rapidly. For the notes of the cases we are indebted to Dr. H. Holmes, house surgeon.

On Nov. 21st, 1901, the members of a family, consisting of the husband, aged 40 years ; the wife, aged 40 years ; and five children, aged respectively nine, seven, four, two and a half years, and two months, were admitted into the Royal Albert Edward Infirmary, Wigan. They were sent in by the police under the suspicion of having been poisoned. A note accompanied them from Mr. J. E. Parker of Ince who had attended them before admission, in which the following account was given. The man, a collier by occupation, had been out of employment for some time, but had obtained work a few days previously. For the last three days the family had subsisted on only one meal a day ; the last was partaken of at 9 P.M. on the previous evening and consisted of liver, bacon, and potatoes, with tea and bread-and-butter. Mr. Parker said that he was able to exclude ptomaine poisoning, but suspected that some irritant might have been introduced into the food.

On admission the mother was able to give the following account. She was awakened shortly before 3 A.M. by the child, aged four years, complaining of abdominal pain, followed by vomiting and diarrhœa. During the course of the next few hours the others were successively taken ill with headache, malaise, and pain in the stomach. This latter symptom was not observed in three of the cases. At 6 A.M. the father started to go to work, but had to return owing to being giddy and feeling generally ill. They were sent into hospital about 2 P.M. and all were found to be markedly cyanosed, with quickened and shallow respirations and fast and soft pulses The symptoms as observed in the man were as follows. The face, particularly the ears and lips, was almost livid. The skin over the whole body was dusky and the extremities were nearly as dark as the face. His mental condition was peculiar, he being drowsy and lethargic but very irritable when disturbed. He appeared to be unable to comprehend what was said to him His pulse was 120, of full volume but very compressible ; the respirations were 26 The temperature was 99 4° F The pupils were not dilated ; ophthalmoscopic examination showed that the veins were very dark in hue and swollen The urine was of a somewhat high colour and was free from albumin and sugar. The lividity appeared to increase during the first two hours after admission The temperature remained raised during the night, the highest point registered being 100 4°. At 10 A.M. next morning it was normal and was afterwards subnormal till the date of his discharge. During the course of the night the man's mental condition cleared and in the morning he complained of intense headache, "as if his skull would burst," and of pain in the hepatic region. On examination no tenderness or enlargement of the liver was discovered. The lividity was now much less, and in the course of the following day it entirely disappeared. This patient had neither vomiting nor diarrhœa. The other cases all showed symptoms similar to the above, the woman being least affected. In her case intense headache was the only symptom in addition to the cyanosis. In all the cases there was a slight rise of temperature, with pulses ranging from 100 to 140, and accelerated respirations. Two of the children vomited.

The treatment was as follows. The stomach pump was used in the case of the father and the mother. There was but little in the stomach, and the fluid obtained gave no indication of the cause of the trouble. Stimulants, strychnine, and inhalations of oxygen were given. It was noticed that each administration of oxygen relieved the breathing, though it made no appreciable difference in the colour.

All of the dangerous symptoms had passed away before the end of 24 hours, though lividity lasted in most cases two or three days longer, at the end of which time pallor was the only noticeable symptom The patients left the infirmary after six days all apparently in excellent health. From the first it was suspected that the trouble was due to dinitro-benzene or an allied poison, but the mother on being questioned emphatically denied that there had been roburite in removed the kidney. The specimen showed congenital stenosis of the ureter at its origin from the dilated renal pelvis.

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[1] Virchow's Archiv, 1891, vol cxxvi., p. 240.

[2] Brit. Med. Jour., March 3rd, 1894, p. 453.

[3] A. Wynter Blyth Poisons, their Effects and Detection. Third edition, p. 159.

Mr. Roughton also showed a man with Partial Rupture of the Brachial Plexus. An exploratory operation had shown that the seventh and eighth cervical nerves had been torn out of the inter-vertebral foramina.

Mr. Roughton then brought before the society a case of Internal Derangement of the Knee-joint. A loose transverse (inter-semilunar) ligament had been removed by operation with a successful result.

Dr. L. Guthrie showed a man, aged 24 years, who complained of difficulty in walking for 12 years and now exhibited the following symptoms of Friedreich's disease: ataxic reeling gait; unsteadiness on standing, especially with closed eyes; absence of knee-jerks; laboured, slurred, and indistinct speech; nystagmus on external deviation of the eyes; clumsiness and over-action in use of the upper extremities; and antero-posterior kyphosis of the dorsal vertebræ with lumbar lordosis. His discs were normal, his muscular development and power were good, choreic movements and lightning pains were absent, sensation was unaffected, and intelligence was unimpaired. There was no family history of the disease or of any other nervous affection and no parental consanguinity. His personal history was peculiar. In August, 1889, he fell from a bicycle and a few days later from a swinging gate, but appeared to have sustained only trifling injuries. A month later he complained of frontal headache and rapidly lost the use of his arms and legs and his speech, and feeding was difficult on account of spasmodic closure of the jaws. There were also twitchings of the eyelids, the mouth, and the hands, and jerking movements of the whole body and the head, but there was neither loss of consciousness nor sphincter trouble. Mr. W. T. Newton, under whose care he was, thought that the symptoms strongly resembled those of chorea. In November, 1889, he was admitted into St. Bartholomew's Hospital under the care of Sir Dyce Duckworth, when the only symptoms noted were weakness of the legs, spastic gait, loss of the knee-jerks, tenderness of the cervical and dorsal vertebræ, a drawling, monotonous voice, and a faint systolic mitral bruit. His condition had therefore not appreciably changed for 12 ears. The apparent onset of the disease might have been n attack of genuine chorea, but Friedreich's disease was ot uncommonly mistaken for chorea. It was, however, ost unusual for the choreic movements in Friedreich's isease to subside as in the present case.

Mr. Jaffrey showed a woman, aged 58 years, with ultiple Tumours on the Forearm. Several small swellings ere noticed 14 months ago and caused so much pain that he could not do her work as a charwoman. There was no istory of syphilis, but there was a strong family history of hthisis. On the outer side of the upper part of the right forerm were several small, very hard, prominent, subcutaneous umours, variable in size, moveable on the subjacent tissues, nd under the skin. The induration diminished under iodide f potassium. One of the tumours had been removed for icroscopical examination. The diagnosis, he thought, lay etween gummata, fibromata, and sarcomata. Bazin's disease ad been suggested.

The cases were discussed by the President, Dr. Ewart, r. Boyd Joll, Dr. Guthrie, Dr. C. S. Jaffé, Mr. Jaffrey, nd Dr. Cautley.

## ROYAL ACADEMY OF MEDICINE IN IRELAND.

### Section of Obstetrics.

*Cæsarean Section.—Ovarian Cystomata.*

A meeting of this section was held on Dec. 20th, 1901, r. W. J. Smyly, the President, being in the chair.

Dr. A. Horne read notes on a case of Cæsarean Section nd showed the patient, a married woman, 23 years of age nd four feet four inches in height. She was admitted into he National Maternity Hospital, Dublin, on July 21st, 1901, eing then in labour for the second time. Her first labour ook place in the Rotunda Hospital in October, 1898, and sted some 10 hours, a dead fœtus being extracted after a prolonged instrumental delivery. Dr. Horne found that the distance from the promontory of the sacrum to the lower angle of the symphysis pubis was two and three-quarter inches. The fœtal heart-sounds were audible. Cæsarean section was performed, the operation lasting about 40 minutes; the anæsthetic employed was chloroform at first and ether afterwards. An abdominal incision was made extending from three inches above the umbilicus to two inches above the symphysis pubis. The uterus was delivered through the abdominal wound, which was temporarily united behind it. An incision was made through the uterine wall, commencing high up at the fundus but avoiding the lower uterine segment. The placenta was in front and was rapidly cut through; bleeding was at once profuse. The child was seized by the buttocks and extracted, the head following without any difficulty. The child cried immediately and was found to weigh seven pounds. The assistant's hand grasped the uterine edges until Dr. Horne applied an elastic ligature. The placenta was detached without difficulty. The uterus contracted well, hot sterilised towels being applied; the wounded surfaces were brought together by means of six deep sutures and four superficial silk sutures. The abdomen was closed likewise, using silk for the deep sutures and silkworm gut for the superficial. The progress of the case was most satisfactory. Pain was experienced for only some four hours after operation, and this was relieved by one-sixth of a grain of morphia hypodermically. 30 hours after delivery the patient was given five grains of calomel. She was able to suckle her child. She sat up on the twenty-first day and left the hospital on the thirtieth day after operation.—Dr. J. H. R. Glenn said that he thought that a bold cut going right through the placenta, if it lay in the line of incision, was good surgery. The risk of soiling the peritoneum by the liquor amnii might be avoided by binding round the uterus; bringing out the womb through the abdominal incision added to the shock. For a living child he recommended the Cæsarean section, but if the child was dead he preferred Porro's operation.—The President said that pelvic deformities were not often met with in Ireland compared with other countries. During his seven years' term as master of the Rotunda Hospital he had only four Cæsarean sections and four symphysiotomies, yet from a letter he received from Glasgow he learnt that one of the surgeons of a maternity hospital there had nine Cæsarean sections in nine months

Mr. E. Hastings Tweedy exhibited two Ovarian Cystomata. During the examination of the patient prior to operation he had no difficulty in detecting the presence of the smaller tumour, but he utterly failed to recognise the larger, though it extended to the umbilicus and the patient was deeply anæsthetised. He advised an operation. When the patient was on the operating table and deeply anæsthetised she was again examined, but with no more satisfaction than at first. On opening the abdomen a great gush of ascitic fluid came, and he found a large cyst extending to the umbilicus, and all round a "bread-and-butter" mass, which he looked on as indicative of cancer. The term "bread-and-butter" would be found in American literature. Pulling down the peritoneum, he found cancerous masses connected with the loops of the intestines. The patient made an afebrile and uneventful recovery.

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Bradford Medico-Chirurgical Society.—A meeting of this society was held on Dec. 17th, 1901, Mr. P. E. Miall being in the chair.—The following cases and specimens were shown. Dr. T. Jason Wood: (1) Specimen of Bony Outgrowth from the Third Cervical Vertebra, with cast; (2) Calculus removed from the Common Bile-duct; and (3) a patient operated on 15 months before for Chronic Empyema by extensive removal of the ribs in whom there was no lateral deformity of the spine.—Dr. O. F. M. Althorp: (1) Uterus removed for Procidentia; (2) Ovarian Abscess; and (3) Two Growths from the Large Intestine.—Mr. J. B Hall: (1) Double Pyosalpinx; (2) Ovarian Tumour; (3) Calculus removed from the Ureter after previous Nephrectomy; and (4) Sections of an Umbilical Polypus.—Mr. W. Horrocks showed a Renal Calculus.—Dr. Wood read notes on Two Cases of Renal Calculus. In Case 1 the patient was a man, 29 years of age, who for four years had suffered from a dull aching pain in the right loin. The pain was aggravated by exertion and there had been a few slight attacks of hæmaturia. There was no renal colic. The patient had been long under medical treatment without relief and had up to the present refused surgical operation. The urine was clear and acid and showed a trace of albumin. On August 28th, 1900, the kidney was exposed by an incision five inches in length below the last rib. The kidney was the normal gland, the diagnosis of endotheliomata, and various theories of new growths. He dismissed Ribbert's theory in detail, pointing out the confusion which arose from a vague use of the term, "tissue tension." Mr J. H. TARGETT said that the structure of the tumour was typical of a growth originating from a suprarenal "rest." He had shown that these "rests" existed in the broad ligament and were to be found in still-born fœtuses, but he did not think that they were of common occurrence.—Mr. SHATTOCK said that he was heartily tired of all theories as to the growth of malignant tumour, and he thought that the "tissue tension" theory had even less value than others. He referred to the experiments of Dr. H. L Lack in which he apparently succeeded in producing new growth on a rabbit after injecting scrapings of the ovary into the peritoneum, but neither Dr. Lack nor he himself had been able to repeat the experiment which he regarded as a peculiar coincidence

Mr. L MCGAVIN read notes of a case of Multiple Cancellous Exostoses associated with Chondro-Sarcoma of the Ribs. He showed the bones of the left knee-joint from a patient who about five years ago developed a small hard mass on the right side of the chest-wall for which his medical attendant sent him to Leicester Infirmary. Here the tumour was explored and was found to consist of cartilage. It was thoroughly removed by scraping, but as the wound refused to heal he was re-admitted on two occasions and the same treatment was adopted. Three months ago the mass returned and was accompanied by a foul discharge The tumour was stated to be a chondroma of the ribs. On admission to Guy's Hospital the patient's knee-joints were seen to be in the pathological condition indicated; and he further had several masses about the lower ends of both tibiæ and fibulæ This condition he stated was present before the age of puberty. After his admission the mass, although again scraped, rapidly increased in size, and he died with all the signs of intra-thoracic growth At the necropsy the surface of the right chest between the second and the fifth ribs was occupied by a mass of solid growth, extending from the middle line in front to the post-axillary fold. In the centre of this was a cavity communicating with the thoracic cavity by an aperture nine cubic centimetres by six; the cavity was lined by irregular bony projections and had plates and spicules of bones projecting into it in all directions. The specimen was of interest, firstly, on account of the number and size of the bony masses, and secondly, on account of the association of chondro-sarcoma with epiphyseal ecchondroses or cancellous osteomata. Bland-Sutton quoted a case from Virchow's *Archiv*, reported by Otto Weber, of "multiple symmetrical exostoses, in which a chondro-sarcoma arose in the right hip bone and attained enormous proportions." In the records of Guy's Hospital for the last 12 years 82 cases of all varieties of osteomata were recorded. Of these, in only one was a chondroma of the ribs associated with osteoma of the long bones, excluding the case in question

Mr. H. L BARNARD showed specimens from three cases of Gall-stone Intestinal Obstruction. The first was a calculus removed from the ileum five feet above the ileo-cæcal valve of a woman, aged 37 years. It was two and a half inches long, one and a quarter inches in diameter, and weighed dry 294 grains. The second was the liver and calculi of a woman, aged 63 years. The former showed a fistula between the gall-bladder and the duodenum. The common bile-duct was not dilated. The gall-bladder was divided into four loculi separated from one another by fibrous septa These contained several calculi. The one which had caused obstruction was seven-eighths of an inch in diameter, one inch long, and weighed dry 103 grains. It was taken from the ileum five feet above the ileo-cæcal valve. The patient was a fat woman in whom obstruction had been present for five days The third was the liver and the gall-stone from a patient, aged 68 years. The stone was impacted 10 feet above the ileo-cæcal valve. The liver showed a fistula between the gall-bladder and duodenum through which the stone had passed. The cystic and common ducts were not dilated.

Dr. O. H. FENNELL showed a Heart with Subvalvular Pulmonary Stenosis which had a walnut-sized diverticulum from the sinus of the right ventricle, situated at the right end of the margo acutus. The muscular wall of the process was thicker than that of the rest of the sinus. The Thebesian valve formed a long, slender, hood-shaped process floating free in the auricular cavity.

# HARVEIAN SOCIETY OF LONDON.

## *Exhibition of Cases and Specimens.*

A MEETING of this society was held on Jan. 2nd, Dr. D. B. LEES, the President, being in the chair.

Mr. A. D. REID showed a girl, aged eight years, with Congenital Shortening of the Right Lower Extremity. She was the third child and the labour was normal and easy. There was no family history of importance and no history of injury. The shortening was noticed soon after birth. The present measurements from the anterior superior iliac spine to the internal malleolus showed one and a half inches shortening of the right side. The shortening was in the thigh. The tip of the great trochanter was on both sides in its normal relation to Nélaton's line. There were no wasting of the limb, no limitation of movement, no disability, and there had never been any pain Some compensatory lateral curvature of the spine had resulted Skiagrams showed that the neck of the right femur was set at a much less obtuse angle to the shaft than on the left side, thus accounting for the shortening

Mr. F. JAFFREY showed a boy, aged seven years, whom he had trephined for doubtful cerebral disease. The boy had been admitted into the Belgrave Hospital for Children on July 29th, 1901, under the care of Dr. Cautley, having been taken ill suddenly three days before with severe headache and screaming. There was a doubtful history of a blow on the head The weather was very hot but nothing in the history definitely suggested heat-stroke. On admission the boy was drowsy, irritable, and stupid, and he took little interest in anything The head was a little retracted and the knee-jerks were exaggerated. There was no optic neuritis or evidence of ear disease. On August 1st he developed severe convulsions which were most marked in the arm, the leg, and the face on the right side. The eyes were staring and consciousness was abolished. On the following morning Mr. Jaffrey trephined the skull over the middle of the Rolandic area. On dividing the dura mater it was seen that pulsation was absent and a considerable quantity of cerebro-spinal fluid escaped A grooved director was passed under the dura mater in all directions, and while the fluid was escaping the brain began to pulsate again He did not explore the brain A drainage tube was inserted and kept in for three days The fits ceased, but the boy made little progress for a fortnight, after which he improved so rapidly that at the beginning of September he was on the point of leaving the hospital when he had another attack of convulsions and again became unconscious He remained in this condition for three or four days and then recovered. Since then he had had no further attack, but the parents said that his memory was bad, and until this week he did not voluntarily use his right arm but always used his left.—Dr. CAUTLEY stated that the diagnosis was extremely indefinite and that on admission the boy seemed intensely stupid rather than really ill. The headache was not localised and there were no definite signs of cerebral abscess, tumour, meningitis, or heat-stroke When the fits developed he had suggested operation with a view to relieve pressure. The localisation of the fits more on the right side decided the site for operation, and he had suggested at the time that the case might possibly be due to a latent abscess. There appeared to be little doubt that the operation was of very great benefit and probably of vital importance. He could not suggest what was the exact nature of the cerebral mischief, and the recurrence of the attack a month later, with subsequent immunity, made the case still more puzzling.—Dr. W EWART thought that the causation of the symptoms by excessive intracranial pressure had been demonstrated by the operation itself and by the relief which followed The fact that on their second occurrence the same symptoms, presumably due to the same cause, disappeared spontaneously suggested the view that transient effusions might be thrown out within the meninges and soon re-absorbed again, as this had been shown to occur in the pericardium, the pleura, and the peritoneum. Alarming but not necessarily fatal symptoms might thus be set up in susceptible subjects, but some of the worst forms of effusion and that formerly known as "serous apoplexy" might not be recovered from without surgical relief.

Mr. E. W. ROUGHTON showed a boy, aged five years, who Ruptured a Congenital Hydronephrosis by a fall. He

Lawrence showed a case of Tuberculous Rhinitis in a man, aged 35 years, treated by exposure to the Roentgen rays. The case had made considerable improvement but was not yet cured.—Dr. G. C. Cathcart showed a case of complete loss of the internal framework of the nose in a woman, aged 22 years, and inquired whether it was a suitable case for the subcutaneous injection of paraffin with the object of improving the shape of the nose.—Dr. Scanes Spicer thought that it was a suitable case and he described the technique which he had employed in a case under his own care.—Mr. E. Waggett brought forward a case of Epithelioma of the Epiglottis in a middle-aged man involving the Cervical Glands. Operative measures were thought inadvisable.—Mr. C. A. Parker showed a case of Stenosis of the Pharynx in a woman, aged 37 years, which was said to be connected with an abscess in the neck which she had when she was 10 years old. The epiglottis was bound down to the posterior wall of the pharynx, leaving an opening not bigger than a threepenny-piece.—Cases were also shown by Mr. P. R. W. de Santi, Dr. W. H. Kelson, Dr. V. H. Wyatt Wingrave, Dr. StClair Thomson, Mr. E. W. Roughton, and Dr. H. Lambert Lack.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—The fourth meeting of the present session of this society was held on Jan. 3rd, Mr. Alfred Cooper, the President, being in the chair.—The adjourned discussion on Mr. T. R. Atkinson's paper on the Small-pox Epidemic was opened by Dr. Leonard Dobson with a paper on Glycerinated Calf-lymph.—A discussion followed.—Dr. Eddowes drew attention to the importance of the care of the vaccinated arm and Dr. S. D. Clippingdale commented on the especial necessity of tests on the part of those practising among the poor, including public vaccinators.—Dr. Reece spoke on the Government requirements in public vaccination with regard to the area of vaccination, the inspection and treatment of the arm after vaccination, and the inquiry into deaths following vaccination.—Mr. Garry Simpson related his experiences with regard to revaccination, and drew attention to the necessity of extreme care in the details of the act of vaccination itself as well as in the after-care of the arm.—Dr. Bevan spoke on the importance of using an active and trustworthy lymph.—Dr. Chambers pointed out that the degree of protection conferred by vaccination depended to a great extent upon the number of insertions and that the term "vaccination" without a statement as to the number of insertions was vague and rendered statistics illusionary.—Dr. Buttar spoke on the difficulty in defining what constituted efficient revaccination.—At the close of the meeting a proposal was carried with reference to the advisability of the exercise of Government control over the manufacture and sale of vaccine lymph.

CLINICAL SOCIETY OF MANCHESTER.—A meeting of this society was held on Dec. 17th, 1901, Dr. Herbert Lund being in the chair, in the new department of the Manchester and Salford Hospital for Skin Diseases which was opened last spring for treatment by the use of the Finsen Light apparatus and the Roentgen rays.—Dr. H. A. G. Brooke explained the theory and methods of the two treatments, and afterwards showed the Finsen and Lortet lamps and the Roentgen ray installations at work. All were in constant employment and 20 patients were thus treated each hour. A large number of patients were present to show the progress of the treatment in the different stages. The Finsen light and x rays both gave excellent results in lupus vulgaris and in lupus erythematosus, especially on limited foci. He was not satisfied that the Lortet lamp, though of great service and much more rapid, was as thorough in its action as was the Finsen instrument. The x rays had been used with very good effect also in rodent ulcer, varicose ulcers, old sycosis, and acne indurata with from 10-inch to 12-inch tubes at a minimum distance of eight inches from the patient and with sittings every second day. There had been no dermatitis. The rays had also acted beneficially in the treatment of lupus of the palate, gums, and interior nares. A demonstration was also given of the D'Arsonval-Oudin high frequency currents.

OTOLOGICAL SOCIETY OF THE UNITED KINGDOM.—The annual meeting of this society was held on Dec. 2nd, 1901. The office-bearers for the ensuing year were duly elected. Mr. A. H. Cheatle was appointed editor of the society's Transactions.—Mr. R. Lake showed a patient from whom he removed the Necrosed Labyrinth and had secured a very beautiful specimen of the Membranous Cochlea.—Dr. Milligan showed a patient upon whom the complete Mastoid Operation had been performed with Grafting of the Antro-tympanic Cavity. The result was good and the hearing power of the patient had materially improved.—Dr. J. Dundas Grant and Mr. C. A. Ballance showed a patient who had been operated upon for Temporo-sphenoidal Abscess with complete recovery.—Patients and specimens were also shown by Dr. Herbert Tilley, Mr. F. C. Abbott, Mr. Cheatle, Dr. A. Bronner, Dr. Urban Pritchard, and Mr. C. H. Fagge.

# Reviews and Notices of Books.

*Water and Water-supplies.* By JOHN C. THRESH, D.Sc. Lond., M.D. Vict., D.P.H. Cantab.; Honorary Diplomate in Public Health, Royal College of Physicians and Surgeons, Ireland; Medical Officer of Health of the Essex County Council; Lecturer on Public Health, London Hospital Medical College; Fellow of the Institute of Chemistry; Member of the Society of Public Analysts; Associate Member of the British Association of Waterworks; Engineer Examiner in Hygiene, London University, &c. Third edition, revised and enlarged. London: Rebman, Limited. 1901. Pp. 527. Price 7*s.* 6*d.*

DR. THRESH is well known as an authority on all matters pertaining to water-supply, and attention was recently called to the useful handbook which he lately issued on the supply of the county of Essex, of which he is medical officer of health. The excellent little book now before us is of general interest, and this, the third edition, contains additional information on the important subject of the protection of water-supplies.

It may be well to give an outline of the contents of the book. The first seven chapters are devoted to a consideration of the composition and properties of water as found in nature—that is to say, outside the chemical laboratory. The characteristics of rain, surface, subsoil, and deep-well and river waters are separately considered and a chapter is devoted to a description of natural or "mineral" springs, as they are usually called. This part of the subject is briefly treated, but the information given is ample for the purpose of the book which is chiefly designed to give the information requisite for forming an opinion as to whether any proposed source of supply can be justly considered sufficiently good in quality and abundant in quantity for the purpose for which it is wanted, and, further, to give the information necessary to form a judgment as to what the approximate cost should be of using such a supply.

A chapter is devoted to the quality of drinking water, and this is followed by one on impure water and its effect upon health. It is not quite easy to see the reason for the arrangement of the next few chapters. A chapter on the Pollution of Drinking Water is preceded by one on the Interpretation of Water Analysis and followed by one on the Self-purification of Rivers. The subjects next considered are the methods of purification of water on a large scale, domestic purification, the means adopted for softening hard water, the quantity of water required for domestic and other purposes, and the precautions to be used in the selection of sources of water-supply and the method of determining, or at any rate of estimating (which admittedly is not always the same thing), the amount available from a given source.

The protection of underground water-supplies and of surface water-supplies is dealt with in two new chapters which follow. The information brought together in this place deserves the most careful consideration by all those who are in any way responsible for the quality of public or private water-supplies. Had the book been entirely re-written by Dr. Thresh no doubt much of the matter contained in these chapters would have naturally appeared in brought up into the wound and incised on its convex border. A stone which had been felt before incision was removed. No further stone was found. The kidney wound was closed by catgut sutures through the kidney substance and the organ was replaced. A drainage-tube was inserted at the posterior extremity of the wound. The patient made a good recovery and there was no discharge of urine from the wound. In Case 2 a man, aged 30 years, had complained of pain in the right side of the abdomen for about four years. The pain was usually felt at a spot on the linea semilunaris, half an inch above the level of the umbilicus; it sometimes passed through to a corresponding spot on the back, and again was felt at times over the middle of the right iliac crest. The pain came on suddenly without any apparent cause and was not influenced by position, pressure, or movement; the patient said that it was just as likely to come on in bed as at any other time. No other symptoms were present; there were no shooting pains, no pain or frequency of micturition, and no colic, vomiting, diarrhœa, or jaundice. Examination showed the patient to be a fairly healthy-looking man who presented no physical signs of disease. The urine was acid, its specific gravity was 1014, and it contained a trace of albumin, but no blood or sugar. The deposit contained crystals of oxalate of lime and one or two doubtful casts. The total daily quantity was rather less than normal, being 38 ounces. Under ether the kidney was exposed and opened as in Case 1 and five oxalate of lime calculi weighing 60 grains were removed; a bougie was passed down the ureter which was found to be free. The kidney was then irrigated with hot water, closed with catgut sutures, and replaced. In this case the kidney was unusually high up and there was very little loin space, so before the organ could be drawn up into the wound it was found necessary to divide the last rib and to turn it up. The patient made a rapid recovery which was slightly delayed by an attack of acute dermatitis caused by the mercurial dressings. No inconvenience was caused by the divided rib which appeared to have united by the time he left the hospital. Dr. Wood remarked that Case 1 was a pretty straightforward one of renal calculus and the diagnosis presented no great difficulties. Case 2 was different and on the symptoms alone (the pain) the trouble might have been referable to the gall-bladder or to the appendix. The albuminuria and the nature of the deposit directed attention to the kidney as the affected organ. It was rather remarkable that the stones, which were very rough on the surface, should not have caused hæmaturia.—Dr. William Mitchell read notes on a case of Spontaneous Gangrene of Both Lower Extremities in a man, aged 36 years. A vague history of acquired syphilis was obtained from the patient and evidence of it was seen in his wife in the shape of a ham-coloured macular eruption on the face, arms, and chest during the puerperal period. The infant had "snuffles." The patient had been addicted to taking frequent alcoholic "pick-me-ups" during the day for a number of years, but had never been given to inebriety. During the last two years he had had a number of vague illnesses which had been diagnosed as influenza and on one of these occasions he had a slight attack of pleurisy with a persistent elevation of temperature of half a degree lasting for several weeks. The circulatory system, the kidneys, and the digestive organs appeared to be normal. There was present fine tremor of the hands and the tongue; otherwise the nervous system showed no sign of disease. The present illness commenced on Jan. 17th, 1901, with severe pain in the ball of the little toe on the left side, extending along the sole of the foot and a short distance up the back of the leg. The knee-jerks were normal and there was no excessive tenderness on deep pressure over the calf muscles. Tactile sensation was diminished over the little toe only. Pressure over the sole of the foot caused severe pain A diagnosis was made of rheumatism affecting the ligamentous structures of the foot, but no improvement resulted from appropriate treatment. He was sent to a watering place and was under the care of two medical men there who treated him with local hot-air baths and allowed a generous supply of alcohol. The baths caused excruciating pain in the limb, the muscles of which wasted very much, and the patient became very weak and ill. He was then seen by a consulting physician and by Dr. Mitchell, and a diagnosis of peripheral neuritis was arrived at. All alcohol and tobacco were cut off, but the patient still got worse and about the middle of May gangrene of the left foot had set in. As no pulse could be detected lower than the common femoral, amputation was performed seven inches above the centre of the knee-joint by the modified circular method. Nearly all the vessels cut through were thrombosed and there was very little bleeding. Shock was slight Before the operation the pulse was 120 and the temperature ranged between 102° and 104° F. In three days the pulse had fallen to 75 and the temperature to 97 4°. On the fifth day after the amputation gangrene became evident in the right foot, in which there had been vague pains for two or three days. No pulse could be felt in the popliteal space. Amputation was performed the same day six inches above the knee-joint. The shock was much greater than on the first occasion. The vessels were thrombosed and little blood was lost In five weeks both stumps were healed and the patient was able to sit up in a chair. In 10 weeks he went to the seaside and gained two stones in weight in nine weeks, and on his return he felt better and slept and ate better than he had done for years. Since a week after the second operation he had taken no alcohol and had given up the use of tobacco. Before the gangrene set in no symptoms of arterial disease were recognised as such by any of the medical men who saw him On examination of the amputated limbs, however, marked atheroma of the intima of all the main arteries was found in association with extensive calcareous degeneration of the media. These conditions were demonstrated by microscopic sections and by micro-photographs —Dr. J H. Bell gave a short account of a famous Bradford surgeon, William Garnett, to whom Mr. (afterwards Sir) Humphry Davy was at one time assistant.

SOCIETY OF ANÆSTHETISTS.—A meeting of this society was held on Dec. 6th, 1901, Mr. Walter Tyrrell, the President, being in the chair.—Mr. H. C. Crouch read a paper by himself and Mr. E. M. Corner, entitled "Is Chloroform more Dangerous than Ether? Consideration of Respiratory Troubles following Operations during 12 Months at a Large General Hospital" On account of the divergent views held by anæsthetists with regard to respiratory complications after ether inhalation Mr. Crouch and Mr. Corner examined every patient who had an anæsthetic in St. Thomas's Hospital during a certain period, in order to see (1) if ether was responsible for lung troubles at all, and (2), if it was, how it compared with chloroform. They included in their lists only patients in whom chest symptoms accompanied by fever arose within 24 hours. In all just over 3000 patients were examined; 2400 of these had ether, and 600 had chloroform. None of the latter, though they included many mouth cases, had any lung trouble, though 10 of the former had, and one of these died On analysing these 10 cases it was found that they occurred at all ages in persons the state of whose lungs was distinctly good, whereas there was no case in a patient with a previous history of winter cough The patients were all apparently in good general condition and gave no trouble to the anæsthetist; they did not become cyanosed, they did not secrete an excessive amount of mucus, neither did they require an unusual amount of ether; they were all trunk cases except one case of extensive varicose veins, and the operation in every case lasted a long time. Seven out of the 10 occurred in the summer; the respiratory complication was usually bronchitis, but in three of the cases it was broncho-pneumonia. They considered that this after-effect was due primarily to the ether and secondarily to the exposure and tight bandaging after the operation. It was also a question whether the previous administration of an unduly large amount of nitrous oxide had not had some share in it. They recommended that chloroform should be given in all cases where the operation either involved tight bandaging of the trunk or was prolonged When ether was given a loosely folded towel should be placed over the patient's mouth and nose until after removal to a ward with an equable temperature —A discussion followed, in which Mr. Alban Doran, Mr. Carter Braine, Dr. Bromfield, Dr. R. J. Probyn-Williams, Dr Dudley Buxton, and others took part

LARYNGOLOGICAL SOCIETY OF LONDON.—A meeting of this society was held on Dec. 6th, 1901, Mr. E. Cresswell Baber, the President, being in the chair.—Dr. E Furniss Potter showed a case of Perforation of the Left Faucial Pillar due to some ulcerative process and not congenital —Dr. W. Jobson Horne exhibited some specimens of Ulceration of the Larynx in cases of Hodgkin's and allied diseases and raised the question whether the local ulcer was the site of entrance of the infecting agent.—Mr. L. A.

phenomena suggested by the author, prove how rapidly and effectively a thorough examination may be completed if carried out according to a well-thought out and systematic method. The whole section on the Examination of the Nervous System occupies 70 pages and concludes with a summary of the various diagnostic points which bear upon the nature and location of cerebral and spinal lesions.

Turning now to Part II., under Diagnosis, Direct and Differential, of Diseases of the Nervous System, we find 60 pages devoted to the subject which is dealt with according to the following classification: Neuroses—(1) sensory, (2) motor, and (3) trophic; Diseases of the Peripheral Nervous System—(1) motor, and (2) sensory; Diseases of the Spinal Cord and Bulb; Systemic Cord Diseases; Inflammation of the Spinal Meninges; and Diseases of the Cerebral Substance. The illustrations in Part II. are necessarily fewer than in Part I., but in special cases where diagrams or illustrations can help the imagination they are supplied with excellent effect According to the above classification associated diseases are grouped together with their points of difference or similarity carefully emphasised. Having made a rough diagnosis by reference to Part I., the diagnosis is completed and substantiated by the confirmatory evidence supplied in Part II., which indicates under the heading of the disease all the important symptoms and diagnostic features.

We believe that we have now given a sufficiently full description of the method of writing and of the method of using this book. In a review of this kind it is impossible, however, to convey an adequate idea of the artistic merits and the scientific ingenuity of the diagrams and illustrations, or, indeed, of the effective manner in which so dry a subject as differential diagnosis is handled and simplified. The least satisfactory portions of the book are those which Dr. Butler did not undertake himself, and this criticism especially applies to the diagnosis of constitutional disease in Part II. The account of chronic rheumatism, diabetes, and gout is altogether inadequate, and the remarks on the subject of heat dissipation in pneumonia in the case of obese subjects are absolute nonsense. With these reservations, however, we may express the opinion that Dr. Butler's work on diagnosis is undoubtedly the best work of its kind.

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*Handbuch der Physikalischen Therapie (Text-book of Physical Therapeutics.)* Edited by Dr. A. GOLDSCHEIDER and Dr. PAUL JACOB. Part I. Vol. I. Leipsic: Georg *Thieme. 1901. Pp. 578.* With 62 Illustrations. Price 15 marks.

THIS publication is intended to present to the medical profession a complete and detailed account of the various methods of treatment included under the term "physical therapeutics." The modern plan has been adopted of securing a number of contributors who severally have had the opportunities of devoting special study to particular methods of treatment and of embracing all the communications in one publication under the supervision of competent editors. The various measures now adopted for the treatment of disease otherwise than by drugs, or to assist the action of such, have considerably increased during recent years. Much yet remains to be done, however, to establish these therapeutic methods on a true scientific basis, and consequently the appearance of such a work as the one now under consideration is of considerable value as representing fully the present knowledge on the subject.

The first subject considered is that of climate from a therapeutical point of view. The theory of the effects of climate on the human body is well sketched by Professor Rubner of Berlin, whilst the application of the principles to clinical work is given by Professor Nothnagel of Vienna. The two sections are well written and contain a vast amount of information.

The second chapter deals with High Altitudes, the theoretical, or "physiological," part being written by Dr. A. Loewy of Berlin and the clinical portion by Professor H. Eichhorst of Zürich. The latter describes the various high altitude resorts under three headings—namely, those in Germany, Austria, and Switzerland respectively, the last-named naturally receiving the largest amount of attention. Brief attention is also given to the high lands of other countries, such as America and South Africa.

A historical sketch is next given by Dr. Pagel of Berlin of the Therapeutics of Pneumatics and Inhalations. "Pneumatotherapy" is considered by Dr. R. du Bois-Reymond of Berlin and Dr. G. v. Liebig of Bad Reichenhall, the former giving a most valuable account of the physiological effects of rarefied and compressed air, whilst the latter describes the various forms of apparatus which have been devised for the application of such measures for the treatment of disease. The compressed air cabinet receives due consideration. In this country this contrivance has scarcely received the attention which it deserves. Frequent immersion in compressed air has proved most beneficial in the treatment of asthma. Inhalations of various medicaments are largely adopted in the treatment of affections of the throat and chest, and a good account is given by Dr. Julius Lazarus of Berlin of the principal forms now in use.

The fifth chapter is devoted to Balneology, the theoretical considerations being in the hands of Dr. Pagel of Berlin, while the practical application of baths is treated by Dr. J. Glax of Abbazia. The various forms of baths are described and numerous illustrations aid in the description. The remarks on the indications and contra-indications for the use of the baths are, however, scarcely up to the general standard of the work.

The sixth chapter is headed by a word which has not been extensively used in this country—namely, "Thalassotherapie." The meaning is sufficiently obvious, and its application is practically confined to a consideration of the therapeutical value of sea-air, sea-baths, and the benefits or otherwise which may be obtained by sea-voyages. Dr. A. Hiller of Berlin writes on the climatic conditions and on sanatoriums by the sea, whilst Sir Hermann Weber contributes valuable remarks on the clinical use of sea-baths and also of sea-voyages.

The subject of Hydro-therapy is dealt with by Professor Winternitz and Dr. Strasser, both of Vienna. The former is responsible for a long and instructive disquisition on the theory of hydro-therapeutics—the effects of the application of water at different temperatures and by different methods on the innervation of the body, on the muscles, on the circulation, and more particularly on the excretory organs. He points out that the chief effects produced do not depend upon the direct action of the methods employed, but upon the resistance of the organism to the mechanical effects—that is to say, to the reaction that ensues, and it is on the extent of this reaction that the beneficial results of this method of treatment depend.

The last chapter in this part is on Thermo-therapy. A "Historical Introduction" is by Dr. Julian Marcuse of Mannheim, the section on the theory of the subject being by Dr. A. Goldscheider of Berlin.

The publication promises to be an interesting one and we can recommend a study of the part now published to all those who are interested in the special branches of therapeutics with which it is concerned.

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*Mexico as I Saw It.* By MRS. ALEC TWEEDIE. With numerous Illustrations from Photographs by the Author. London: Hurst and Blackett. 1901. 8vo. Pp. 472.

MRS. TWEEDIE is an agreeable and lively guide. Many readers have enjoyed her society through Norway and through Finland, and they will find undiminished pleasure other parts of the work and it is probable that the force of the teaching conveyed by the scattered facts would thus in some measure have been lost. As it stands the information given is clear, the arrangement is consecutive, and the conclusions are beyond cavil. The following chapters deal with Wells and their Construction, Pumps and Pumping Machinery, and the Storage and Distribution of Water. Mr. John C. Freeman, clerk to the Maldon Rural District Council, is responsible for the revision of a chapter on that rather complicated subject, the Law Relating to Water-supplies. There is an excellent chapter on Rural and Village Supplies. This will be found of very great use to the members of county and rural district councils who in the future will undoubtedly have in this matter great power for good or for evil. Dr. Thresh has had unusual experience in the matter of rural water-supplies, and this book, unlike many more pretentious and less useful ones, deals not only with steam-pumps, but gives information as to oil engines which have been found in certain circumstances to be of great service. The concluding chapter is devoted to the question of water charges. There is a good general index and an index of proper names.

From what has been said it will be evident that Dr. Thresh's book treats of all the most important problems connected with water-supply. It is written clearly and in a way to be of practical use; it is not overladen with pages of useless statistics, and in most cases the results of the inquiries undertaken by other workers in the same field have been assimilated by the author and are reproduced by him with all due acknowledgment and in his own words. In this book slabs of other men's work are not hurled at the reader's head.

As an introduction to the study of the question of water-supply we know of no better book, but it is something more than an elementary work. A great many useful hints will be found scattered through the book. For example, on p. 26 the use of a rain-water separator is recommended; such an instrument proves a great boon in a country house. On the matter of wells in the chalk Dr. Thresh would perhaps have done a better service to his readers had he stated fully the known facts and left the theories to shift for themselves. A good deal of interesting information which will be new to many people is given on waters which possess peculiar odours. The subject has received much attention in the United States of America and Mr. G. W. Calkins has not only made a special study of the offensive odours found in water but has elaborated a scientific classification of them in a manner which would probably have given great satisfaction to the late Dr. J. Swift.

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*The Diagnostics of Internal Medicine.* By GLENTWORTH REEVE BUTLER, A.M., M.D. With Five Coloured Plates and 246 Illustrations. London: Henry Kimpton. 1901. Pp. 1059. Price 25*s.* net.

NUMEROUS as have been the attempts, both in this country and abroad, to compile a satisfactory work on medical diagnosis, all these attempts have, so far as we are aware, heretofore ended more or less in failure. The reason for this is not far to seek. On the conventional lines of medical authorship it is almost impossible to reconcile the necessities of systemisation with a literary style which can give any pleasure to the reader, consequently works on general medical diagnosis have either been presented in a form which is unwieldy and unpractical from a clinical point of view or excessively dull reading for the student who reads for the sake of learning. "The Diagnostics of Internal Medicine," like many other American works on medicine, is as original in method as it is successful in its execution. On the one hand, it is thoroughly practical and systematic in the arrangement, while on the other it avoids the reproach of dulness by the brightness of the style, the use of leaded and varied type, and by the remarkable excellence of the illustrations which even for an American work are extraordinarily numerous. Dr. Butler has defied the traditional and conservative routine of medical writing with which we are so familiar in this country and has embarked upon a new style of representing disease which cannot help appealing to his readers, whether they be young and inexperienced students or clinicians of experience and years. In character this book is essentially practical in form, and for the sake of variety and convenience it is divided into two parts which deal practically in the same order, but from different points of view, with the same medical subjects. The first part is concerned with the evidences of disease and the second part with the diagnosis, direct and differential—that is to say, the diagnosis of disease is approached in the first part from the point of view of the symptoms and in the second part it is treated as an entity. Part I. is subdivided into 44 sections or natural orders of symptoms, those, for instance, which are referable to diseases of the circulatory organs, of the lungs, of the digestive system, and so on. If we meet with, for instance, a symptom clearly due to abdominal disorder, we turn to the section which deals with the examination of the abdomen, and by a rapid perusal of the same we proceed to one of the following sections which treat of the digestive system, the urinary system, and the other abdominal organs. The systematic mental exercise thus inculcated is indubitably a very excellent training, and further than this it clearly can be applied to the purposes of establishing a diagnosis in actual practice.

In Part I., having discovered the presumable organ affected and the supposed nature of the lesion, we turn to Part II. for, as they are called in analytical chemistry, confirmatory tests. Here under the name of the disease are given the various signs and symptoms whereby the diagnosis can be confirmed. By means of this double-barreled reference the intense monotony of ordinary systematic works on diagnosis is avoided, and the student is trained to refer the symptom to the disease and to picture each disease-entity as a complex of many symptoms.

Having given a general description of the arrangement of Dr. Butler's "Diagnostics" by way of illustrating the ingenious method whereby the reader is assisted to form a diagnosis we propose to describe in greater detail a typical section in the first part and the complementary section in Part II. Selecting at random Section 37, which is concerned with the examination of the nervous system, we find a clear and concise account of the anatomy of the central and peripheral portions, with an excellent diagrammatic representation of the neuron. The motor and sensory paths in the brain, the spinal cord, and the peripheral nerves are illustrated beautifully with coloured diagrams, by means of which the difficulties of understanding this essential and complicated anatomical basis of neurology are reduced to a minimum. To give an idea of the liberality with which the illustrations are supplied we may mention that in the 26 pages devoted to anatomy there are no less than 20 illustrations, many of which are coloured and occupy an entire page. Most of them are original, though a few, such as those of Dr. Head, are copied from other works. Passing from the anatomy we come to the actual examination, which in the case of the nervous system entails consideration of temperament, diathesis, and degeneracy, and the testing of the motor and sensory functions, and includes the subjects of reflexes and muscular mobility. These points, according to their importance, are dismissed cursorily or described in detail. Wherever possible some diagrammatic scheme simplifies the understanding or assists the memory. The method of testing the muscles with reference to their nutrition, tone, and motor-power, as also the investigation of sensory the physico-chemical examination of the blood and of the various secretions and excretions of the body. The final chapter discusses in a brief but clear manner the subject of tissue metamorphosis.

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## JOURNALS AND MAGAZINES.

*The Practitioner.*—The December issue continues a discussion of Bright's Disease by various writers. A very valuable article on the treatment of the disease is contributed by Dr. W. Hale White who for purposes of treatment divides patients into those suffering from acute Bright's disease and from chronic tubal and chronic interstitial nephritis. While admitting the beneficial action of water in washing out the tubules of the kidney Dr. Hale White points out the danger of permitting too large an intake of liquid. He quotes Edsall in support of the contention that serious nitrogenous loss is entailed by a too free use of water. As much as a quarter of a pound weekly may be lost in weight in this way. Dr. Hale White has no particularly novel method or remedy to advance, but the details of treatment are carefully set out and their *rationale* is explained Egypt is the place most warmly recommended for sufferers from Bright's disease. Another valuable contribution also dealing with treatment is that of Dr. J. M. Groedel. The treatment of chronic nephritis by mineral drinking-waters and mineral baths is carefully considered and the classes of cases suited or unsuited to the Nauheim baths are differentiated. Cases of chronic parenchymatous disease are considered unsuitable, while interstitial cases in which there is as yet no great circulatory disturbance are found to benefit by the treatment. As to the ingestion of the waters, the author is guided chiefly in the amount which he permits by the condition of the pulse. In all cases he has the quantities taken and the quantity of urine passed during the treatment carefully measured daily. The treatment appears to be recommended more for its beneficial effect on the heart's action and the patient's subjective condition than for any direct influence on the renal state. Dr. F E Batten writes on Affections of the Nervous System in connexion with Bright's Disease and Dr. Henry Ashby writes on Nephritis in Children. The editor in another part of the magazine is mainly concerned with the election to the General Medical Council.

*The Journal of Obstetrics and Gynæcology of the British Empire.* Vol. I., No. 1. January, 1902 London: Baillière, Tindall, and Cox. Price 2*s* 6*d* net —With the new year the first number of this journal makes its appearance. The editors announce their intention to make the publication a complete and impartial record of British work, an exponent of British obstetrical and gynæcological practice, and a summary of contemporary thought and achievement in obstetrics and gynæcology throughout the world With the coöperation of the large number of distinguished collaborators drawn from all parts of the empire who have promised their assistance the journal should have no difficulty in fulfilling the purpose with which it appears, and it has our most hearty wishes for its success and prosperity in the future. The first article is one by Dr. C. J. Cullingworth and is entitled "An Analysis of 100 cases of Uterine Fibro-myoma," in which the conditions of the tumours and the complications to which they had given rise were verified by operation. The object of the paper is to assist us in obtaining a more accurate knowledge of the life-history of these tumours than we at present possess, and, as Dr. Cullingworth points out, it is only by accumulating such a body of evidence that we can safely allow our judgment to be guided in determining the very difficult questions which these cases continually present. Dr. Peter Horrocks contributes a very instructive paper upon Contraction and Retraction of Muscular Fibres with special Reference to the Uterus. One of the co-editors, Dr. Berry Hart, reviews the present state of obstetric medicine in a most suggestive essay entitled "Obstetrics at the Beginning of the Twentieth Century: an Attempt at an Appreciation." The more strictly clinical material of the number consists of a paper on a Case of Tubal Pregnancy of Six Months' Development without Rupture of the Tube, by Professor W. J. Sinclair, and a Case of Fœtation in the Rudimentary Horn of a Bicornate Uterus by Professor Murdoch Cameron. Dr. Arnold W. W. Lea contributes a very complete critical essay upon Anæsthesia by Subarachnoid Injection of Cocaine in the Lumbar Region: its Use in Gynæcology and Obstetrics. A review of current literature, reviews of books, and the reports of various societies conclude the number. The whole consists of some 120 pages, is of large and convenient size (royal octavo), and clearly printed upon good paper. We would like to suggest, however, that the table of contents should be printed upon the back of the cover and not amongst the advertisements, as is done at present The chief editor, Mr. Alban Doran, and his colleagues are to be congratulated upon the prospect of future success which the first number of this journal foreshadows.

*The Journal of Physiology.* Edited by Sir MICHAEL FOSTER, K.C.B, F.R S., and J. N. LANGLEY, Sc D., F.R S. Vol. XXVII., Nos. 4 and 5. London: C. J. Clay and Sons. Dec. 23rd, 1901. Price 10*s*.—The articles contained in this part are as follows. 1. Dr. H. M. Vernon: the Conditions of Conversion of Pancreatic Zymogens into Enzymes, with eight figures in the text. Dr. Vernon shows that extracts of fresh pancreatic glands as a rule exhibit no ferment activity for some days and then suddenly develop nearly their maximum power. When the extracts taken from the pancreatic glands of different animals are mixed the ferment activity begins to develop at once. The glycerine extracts are more active than either the alcoholic or the saline, both in regard to their tryptic and rennetic values. 2 Dr. Henry F. Bellamy: On the Agents Concerned in the Production of the Tryptic Ferment from its Zymogen. 3. Dr. J. A. MacWilliam: Rigor Mortis in the Heart and the State of the Cardiac Cavities after Death, with two figures in the text. Dr. MacWilliam finds, in accordance with the statements of Starling, Bayliss, and Brunner, that there is a slight positive pressure in the cavity of the ventricles after death amounting to about two or three millimetres of mercury; during the rigor mortis of the heart this may rise to 30 millimetres of mercury The various conditions of the heart in asphyxia are given. 4. Mr. H. H Dale, B.A.: Observations, chiefly by the Degeneration Method, on Possible Efferent Fibres in the Dorsal Nerve-Roots of the Toad and Frog. Mr. Dale concludes from his experiments that the evidence is complete showing that there are no fibres which have their trophic centre in the spinal cord, at least in those dorsal roots which have been examined. 5. Note on the Percentage Composition of Egg-yelk, by Dr. John Malcolm The experiments show that the percentages of proteid fat and phosphorus in the yelks of eggs from the same hen are in very close agreement, whilst there are considerable differences in eggs from different hens, even when of the same breed. 6 The Spinal Roots and Dissociative Anæsthesia in the Monkey, by Professor C. S Sherrington, with a plate. In these experiments, performed on macaque monkeys, one or more dorsal spinal nerve-roots were divided, and the effect on the animals' sensibility in regard to impressions of heat, pain, and touch were noted 7. An Experimental Research into the Relations of the Posterior Longitudinal Bundle and Deiters' Nucleus, by Dr. E. H. Fraser. This article is illustrated by many figures in the text and demonstrates that the posterior longitudinal bundle plays an important part in correlating in accompanying her to Mexico. Her adventures, if never heroic, are always entertaining, her acquaintance is wide and acceptable, and her pages are well printed and profusely illustrated. As might be expected of a daughter of the late Dr. George Harley, Mrs. Tweedie has an eye for matters of medical interest. "Pinto," that curious tropical skin disease, allied to ringworm, meets her in numerous examples at various parts of the country. "A number of men," she says, "I met, with strange white or blue patches on their brown skins due to pinto, that much-dreaded disease, called by the natives *Saltsayanolitzth*. It is supposed that mosquitoes carry it as they do yellow fever and the Indians use a particular plant named *Isteneztil* for its cure, though the remedy does not usually prove very successful. Dr. Patrick Manson tells me he considers pinto contagious and doubts the Mexican theory of mosquito transport. There are four kinds of pinto—red, blue, indigo, and white, the last being the worst, for that means losing the pigments of the skin. In its early stage pinto can be stopped sometimes by cauterisation, but later mercury is required. Unfortunately, once it begins it is almost impossible to eradicate, and it often increases with alarming rapidity. The disease is hideous, something like leprosy, which also exists in Mexico, where it is not 'separated,' unfortunately." Had she been medical by training as well as by parentage Mrs. Tweedie might have made interesting pathological discoveries of the effects of tobacco if she had pursued the remarkable evidences that she met with of its early use. The Mexican baby apparently scorns the homely comforter or the toothsome coral Mrs Tweedie was wont to meet him with a full-sized cigar in his baby mouth. "'Does he often smoke?' I asked the mother in amazement. '*Si, señora*, he smokes three or four cigars a day; all our children have done so at that age' 'Does he ever let it out?' I asked. 'No, never,' replied his fond mamma, 'he would consider that a disgrace. He lights it himself and smokes it through.' 'Adaptability of temperament to climate!'" sagely reflects Mrs. Tweedie, and thus quits the subject. There is more in the matter than climate probably and less in the baby's mouth than met the eye. A Mexican cigar in Mexico and a "Mexican" in London are objects of vastly different potentiality. Mrs. Tweedie saw more peculiar sights than a smoking baby, but space does not permit us to do more than to recommend the perusal of her Mexican journeying to any of our readers who take pleasure in skilfully told travellers' tales.

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*Anatomy in its Relations to Art.* By GEORGE MCCLELLAN, M.D. Philadelphia and London: W. B. Saunders and Co. 1901. Pp. 266, with 338 drawings and engravings. Price 42s

THE author of this sumptuous volume, who has had 12 years' experience as professor of anatomy in the Pennsylvania Academy of the Fine Arts, is entitled to speak with some authority on the requirements of art students, and on the whole we are in thorough agreement with him.

In his preface Dr. McClellan states that "only those parts are explained which would seem worth dwelling upon for art application." This is as it should be, yet the author hardly acts in accordance with his precepts, for throughout the book we find illustrations of the sphenoid bone, the base of the skull, mesial sections of the head and skull, together with diagrams of the prevertebral and scaleni muscles, as well as representations of the arrangement of the muscles of the suboccipital region.

Artistic anatomies, to use an expression applicable to all works of this class, are written either by anatomists with artistic tendencies or artists with anatomical sympathies. We naturally assume that Dr. McClellan belongs to the former category, and it is as an anatomist that we venture to criticise his work.

The author makes use of a large number of diagrams in illustration of the text. Now, a diagram, though of course it lays no claim to artistic merit, should at least be accurate. We regret to say that in many instances we have found these diagrams incorrect and in some cases absolutely misleading. To quote a few examples, we may mention Plate 20, where the parotid gland is represented as overlying the mastoid process and the insertion of the sterno-mastoid muscle; Plate 27, Fig 1, where there is a glaring error in regard to the insertion of the trapezius muscle; or Plate 40, Fig. 2, where the biceps is represented as lying on either side of the insertion of the deltoid muscle. We fail to see, also, what benefit the student is likely to derive from a study of Plate 24, Fig 2; from Plate 40; or from such figures as those represented on Plates 44 and 46 Nor is the text always satisfactory, despite the author's statement to the effect that the "matter relating to the bones and muscles is accurate though not exhaustive" It is hardly safe doctrine to teach an *art* student that the upper end of the radius does not play any part in the function of the elbow (p 22), nor can such a description of the origin of the infra-spinatus as this—"The infra-spinatus arises from the ridge on the scapula below the spinous process"—convey much to the mind of the student who will seek in vain for evidence of the existence of any such ridge. Surely, too, it was a mistake on the author's part to select for illustration, in such a work as this, a male skeleton displaying proportions in the upper limb akin to those of an ape.

To pass, however, from the purely technical to the applied aspects of the subject, we are glad to note a marked improvement in the character of the work. Dr. McClellan's chapters on the influence of the skeleton and muscles on the surface form, together with a brief account of attitude and posture on the "swing" of the figure, are interesting and instructive, the more so as they are abundantly illustrated by a valuable series of photographs of nude and draped models, admirably reproduced.

It is a happy idea on the author's part to represent side by side photographs of the model and the antique in similar poses, for such a device affords the student an admirable opportunity of comparing the one with the other and so enables him more readily to distinguish between the faults he should discard and the forms he must endeavour to realise.

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## LIBRARY TABLE

*L'Epilessia Eziologia, Patogenesi, e Cura.* By DR. PAOLO PINI. Milan · Ulrico Hoepli.—No special work devoted to the important subject of Idiopathic Epilepsy having appeared in Italian literature for some years, the editors of the well-known Hoepli manuals have supplied the want by this monograph, in which the author has collected the recent, and especially the Italian, literature on epilepsy, and discusses in detail the etiology, the pathology, and more particularly the various methods of treatment of that condition. The social aspects of the subject are also dealt with, as well as the philanthropic schemes which have been set on foot in different countries for the benefit of epileptics

*Chimica Clinica* By Dr. RAFFAELE SUPINO Milan: Ulrico Hoepli. 1902—This volume of the Hoepli manuals, devoted to the subject of Clinical Chemistry, owes its value to the fact that it is written by a practical man with a long experience, in the capacity of assistant to the General Medical Clinic of Pisa, of laboratory methods and of the chemical operations employed in connexion with medical investigations The opening chapter gives practical hints regarding the most essential of these and succeeding chapters describe the most approved methods for conducting

THE LANCET.

*LONDON: SATURDAY, JANUARY 11, 1902.*

## "The Islanders," and Some Considerations on Conscription.

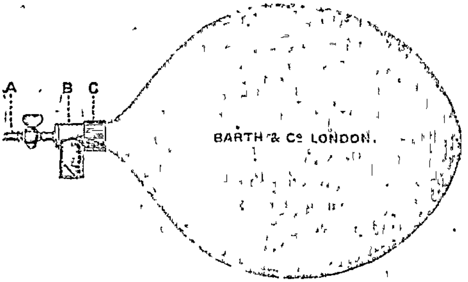
DURING the early period of the war in South Africa, when criticising the suggestion of conscription as a possible future means of increasing our army, we commended military training as an excellent thing, speaking from a strictly medical point of view. The young recruit learns discipline and self-sacrifice, and while, as a rule, he is well housed and well fed he is exercised so as best to develop his physical powers. These desirable ends are attained in no other calling, except of course in the navy, that is open to the youth of the humbler classes who has completed his school education. He may earn more money in other directions and will certainly enjoy more freedom, but the moral and physical benefits of a military training are undoubted. But conscription is a thing so foreign to the British cast of mind that its adoption in any rigid form is highly improbable. Various methods by which the strength of our army may be increased have been suggested and discussed since those dreary days when the ill-fortune of our arms in South Africa was so pronounced. And forms of conscription more or less modified are still freely talked of, but no political leader can hope to face the constituencies of the British Islands, and advocate even a modified measure for compulsory military service, with any expectation of success at the polls: so that it is vain to talk of conscription while it is practically certain that a majority of the voting members of the community will never be persuaded to sanction it. The Boer war began badly, had a second stage that was not by any means as successful as it promised to be, and has passed into a long and dreary struggle. No man worthy of the name of British citizen will forget that his country is engaged in this struggle and that lives are being daily laid down on the veldt; but as the ultimate issue is certain there is no reason why a panic of apprehension should change the national attitude towards a constitutional question. Moreover, the country is not unmindful that our powerful navy ensures us against effective invasion. Undoubtedly the nation is against compulsory military service.

There is, however, a form of compulsion that will direct young men towards military service while it is independent of Parliament; and this form may establish itself even among those to whom a system even distantly approaching that of France or Germany would be detestable—the compulsion of public opinion is meant. Public opinion is urging upon our young men the duty of training them- lves for the defence of their country, even though to do means to deny themselves other more pleasant diversions age when pleasure is most attractive. And with a view of arousing in this country some such spirit of patriotism, Mr. RUDYARD KIPLING has written, and the *Times* has published, his remarkably outspoken poem—"The Islanders." The author, however, seems greatly to have missed his mark and to be regarded by the public not only as a depreciator of manly pursuits but as a slanderer of his country. To our minds Mr. KIPLING'S poem constitutes a timely warning that without zeal strenuously exercised, and self-denial exhibited in a practical form, no European nation can hope to hold its own among its rivals. He has used unduly blunt language, and, in his desire to record the services of our colonies, has depreciated the mother of those colonies in a needless manner; but the admonishment was required—at least, we think so. The criticism evoked by "The Islanders" appears to deal with it largely as an attack upon sports in general and cricket and football in particular. Such criticism appears to us to be unfair. The two expressions "flanneled fools" and "muddied oafs" are to be regretted if only because they tend to obscure the real issue; but at the same time no man who has attained to years of reason and discretion will deny that cricket and football engross public attention to an absurd extent at the present day. We do not say that but for cricket and football a number of young men would have joined the South African army who have not done so, but certainly the ranks of our volunteers might well be recruited from among the devotees of athletic sports. To say, as certain of Mr. KIPLING'S critics have done, that some good cricketers, such as Major-General SPENS and Major POORE, have distinguished themselves in South Africa is beside the point. These are not men who have given up the best years of their lives to a game: they are men who have found leisure to play games while pursuing their profession. The bulk, however, of the most distinguished cricketers and football players of our public schools do not enter the army or any other profession that necessitates an early devotion to serious work. Some proceed to the universities, impelled by a school-boy enthusiasm to win further athletic distinction rather than by any desire for an academic career. Others, whether they go to the universities or not, handicap themselves for life through their desire to continue game-playing when they should be facing the manly task of earning a livelihood. But for the present exaggerated athletic craze, many of them might make good soldiers, or might, at any rate, devote some portion of their manhood, their strength, and their intelligence to the service of their country. As members of the regular army they would find themselves in the profession of all others in which bodily strength and activity, and the qualities developed by their school-boy pre-eminence at games, would aid them in the path to distinction. As volunteers they would find themselves compelled to forego some of the personal pleasures they now hold dear, and to substitute for games exercises which are at least equally healthy, and which might make them of greater use to their country. Their example would be of value in attracting to the opportunity for physical development offered by military training those who now find their principal amusement in watching the exertions of others, in calculating averages, and speculating upon the issue of cup-ties—a class ocular nuclei and anterior nerve-cells through Deiters' nucleus. 8. Caseinogen and its Salts, by Dr. W. A. Osborne, with one figure in the text. 9. The Respiratory Exchange during the Deposition of Fat, by Dr. M. S. Pembrey. The experiments were made on the marmot, which stores up much fat in its body in autumn and its respiratory quotient is then greater than unity. 10. A Contribution to the Chemistry of Proteids, by Dr. F. Gowland Hopkins and Mr. Sydney W. Cole. The part also contains the Proceedings of the Physiological Society for October.

# New Inventions.

## A PAPER BAG FOR CLOVER'S INHALER

THE use of the indiarubber bag in successive administrations of ether with Clover's inhaler as commonly practised is objectionable upon hygienic grounds. Apart from ordinary unwholesome conditions a patient might be suffering from tuberculosis or, as a possibility, even zymotic disease. Besides acting as a cage for microbes and bacteria the rubber bag, being a non-conductor, condenses moisture from the air breathed into it, and my impression is that if that moisture remained *in the air respired less irritation of* the respiratory organs would occur during, and as a result of, etherisation. In practice I have successfully substituted paper bags, a new one being used for each patient, for the indiarubber bag of Clover's ether inhaler. Paper bags may be used instead of rubber ones with other inhalers—e g., Ormsby's, or wherever rubber bags are used as respiratory bags associated with anæsthetics.



A, Tap for attachment of tube for supply of $N_2O$. B, Angle mount. C, Strong rubber band to hold the paper bag air-tight to the angle mount.

They will be *found more economical, especially to administrators* who may not have frequent use for anæsthetics and who often find the rubber perished when they require to use their apparatus after, it may be, a long interval. The practical advantages of the paper bag are: (1) hygienic excellence at small cost—about one penny; (2) moisture does not condense within it; (3) better preservation in any climate; (4) in use it maintains its position, whether empty or full, without tending to collapse completely; and (5) lightness and elegance—important considerations with a nervous patient. The bags should be kept dry and any accidental hole or tear may be readily patched with adhesive plaster. These bags are obtainable from *Messrs Barth and Co* of 54, Poland-street, W., who have been very obliging in the matter.

RICKARD W. LLOYD,
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SUGGESTED VACCINATION OF TRAMPS.—At the meeting of the Exeter Corporation of the Poor held on Dec. 31st, 1901, a guardian drew attention to the danger of small-pox being spread by tramps and suggested that the board should compel them to be vaccinated, but the clerk said that the board had no power to enforce the vaccination of tramps.

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# Looking Back.

FROM

## THE LANCET, *SUNDAY, JAN.* 11, 1824.

### ON BATHING.

(CONCLUDED.)

No. 5.

THE following experiment of the late Bishop of Llandaff has been thought much more conclusive in favour of the supposition that something is positively received from without. Dr. Watson gave a Newmarket jockey, previously to a race, a single glass of wine, which weighed little more than an ounce, and upon weighing him immediately after the course, he was *found to have increased thirty* ounces, although he had taken nothing more than the glass of wine, and notwithstanding that something considerable must have been lost by the pores of the skin. The *objector* to cutaneous inhalation replies to this curious fact, that the additional matter might have been taken in by the lungs, and that no decisive results can be obtained without instituting processes which shall take pulmonary exhalation and absorption into the account. Under this impression, Dr. Rousseau of South Carolina made the following experiment: he poured a phial of spirit of turpentine on a table, in a close room, and walked backwards and forwards for half an hour; at the end of that time he found that his secretions manifested most unequivocally that the system was impregnated with the material He then provided a long pipe which communicated with the external air; he breathed *through it, cautiously excluding*, all communication with the air of the room. He then again poured out the same quantity of the spirit of turpentine and found that no impregnation had been produced. He then immersed his arm in the same fluid for two hours, luting the vessel to the skin, so that no vapour could escape; and in this case also both his urine and perspiration remained without the slightest impregnation; as was the case likewise when he smeared his body with the spirit of turpentine, while he guarded against the inhalation of the vapour by the lungs Other experiments have been instituted with a view to ascertain, whether by immersion in the warm bath, the weight of the body is increased, and in those trials which have been marked by the greatest accuracy, the result seems unfavourable to the supposition of any fluid being imbibed through the epidermis.

*To the statement, however, that no increase of weight* follows bathing, the objection naturally and obviously suggests itself, that the absorption may be countervailed by the increased exhalation. In order to meet this objection, M. Seguin, an anti-absorptionist, dissolved in the water of the bath in which he made his experiments, substances which produce a specific effect when actually taken into the system. He employed the oxygenated muriate of mercury in solution, and while the epidermis was entire, he never perceived a single instance of salivation or mercurial influence. But in cases where a considerable portion of epidermis was injured or destroyed, the specific effects of mercury on the system was produced.

*Experiments are still, perhaps, wanting to establish either* the one or the other doctrine on an immovable footing; but we think, to say the least, that the doubts which have been thrown on the permeability of the outer skin to extraneous matter, are such as to make us cautious in believing that much efficacy can fairly be ascribed to medicinal baths (whether the impregnation be natural or artificial) beyond that which is derived from temperature applied in a liquid or aerial form. In instances of cutaneous affection, indeed, the case may be different, because *in most of these last disorders, the actual skin, and* therefore the mouths of the absorbents are brought into contact with the material employed—the epidermis or scarf skin being broken down in several points by the morbid action going on upon the surface; and when these cutaneous derangements happen to be manifestations of internal disorder, the impregnated bath may prove of service in two ways: 1st, by exciting new actions in the superfices of the body; and 2ndly, by influencing the general frame, so as to subdue the force of the morbific process, whence had emanated the *disease of the skin.* J. W.

designs for the proposed new courts we do not know, but the failure of the courts of the High Court of Justice to satisfy any but the most optimistic critics points to some difficulty in obtaining competent opinions as to the merits of an architect's design by those best able to judge of the practical requirements of the building to be erected. Criticism in the case of a law court should be directed to its fitness for the trials to be held in it, and as a matter of equal importance to its suitability as a living room in which large numbers of men and women will have to spend many hours at a time, while some of them will pass therein considerable portions of their working lives. Of these regular inmates the judges, owing to the elevated positions, speaking literally, which they occupy, are the most exposed to the heated exhalations arising below them. Some judges are indifferent to this, preferring a warm atmosphere that is foul to air that is purer but at the same time possibly cooler, and are also apparently unaffected by that which is distinctly injurious to their weaker brethren. Sir Henry Hawkins, for example, who is now enjoying a green old age as Lord Brampton, never, we believe, allowed a particle of fresh air to enter his court that could possibly be excluded, and the late Baron Huddleston had the same peculiar taste. These, however, are exceptions, and the majority of our judges, we feel sure, would be grateful for pure air and would certainly not deteriorate in health in consequence. At the High Court of Justice and in some country assize courts every effort is now made to provide it, but at the Central Criminal Court the promise of a future new building which has been held out for many years seems to have stood in the way of present reform or even of palliative measures. Handfuls of herbs, indeed, are laid on the ledge in front of the dock, on the judge's desk, and elsewhere as an interesting survival of bygone days when dried camomile, daisies, and fragrant leaves were considered to be prophylactic against gaol fever. No doubt the aromatic foliage offered a welcome variety to the stenches of Newgate Prison, but more is now required than sanitary bouquets. Modern judges, barristers, jurors, and witnesses, all of whom come into the court through no fault of their own, have a right to claim that their sojourn in it may be as little unwholesome as possible. If a better building cannot be provided for temporary use, which is highly to be desired, it is at least possible, as we have suggested, to improve the old one, and to prevent it from being overcrowded to a point at which the constant and effective renewal of its atmosphere amounts to an impossibility.

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# The Recent Situation at the Macclesfield Infirmary.

A large number of references to the recent situation at the Macclesfield Infirmary have been made in the lay press, and the majority of them seem to us to have been inspired by considerable ignorance of the real points at issue. We therefore think it right to return to the subject, both in case any of our readers should be labouring under similar misconceptions, and in order that the public may through their medical advisers properly instructed in the matter when occasion arises. The awkward position at the Macclesfield Infirmary—and how awkward it was may be judged by the fact that if two completely divergent views had not been reconciled by the 15th of this month the institution would have been left without a medical staff—was not due to general opposition on the part of the medical staff to the female practitioner. So to represent the matter is entirely unfair to the medical staff, the medical profession, and the medical press who supported the staff in their attitude throughout. The rights of women were not involved in any general manner whatever, although it happened that the sex of the junior house-surgeon was the reason that in the eyes of her superior officers disqualified her for her post.

There were two questions involved in the dispute between the medical staff and the governors of the infirmary: (1) What is the duty of a public institution towards its patients? and (2) What is the position with regard to the election of the junior medical officers that the medical staff ought to occupy? The medical staff having failed to recommend to the governors, for election as junior house-surgeon, Miss Murdoch Clarke, considered that her subsequent election by the governors was a distinct vote of want of confidence. The medical staff did not believe that in such an institution as the Macclesfield Infirmary a lady could adequately discharge the duties of junior house-surgeon. Certain classes of cases could not in their opinion be left to her ministrations in justice to the patients themselves; while to maintain at the infirmary a resident medical officer unable to deal with the whole routine work of the infirmary was not, they held, economical or fair to her colleagues. There were additional reasons which influenced them in the view that the election of a female medical officer to reside in the Macclesfield Infirmary was inadvisable, but with a reticence that was perhaps more delicate than prudent they laid no stress upon the matter. But others have spoken out since, and it has become clearer to the public now than it was while the dispute was acute, that the domestic circumstances, in which the resident officers of a small general hospital find themselves mutually placed are such as call for uniformity of sex. The medical staff, having these points definitely in their minds, decided that the institution would not be at its best state of public efficiency if a female resident medical officer was appointed, for it would not be able properly to meet its responsibilities towards all its patients. They thereupon expressed their minds in their choice of a candidate for the vacant post; but the governors disregarded the staff entirely and elected Miss Clarke. And this brings us to the more important question:—What position with regard to the selection of the junior medical officers, with whom they have to work, ought to be occupied by the medical staff? This is a matter which remains to be settled yet as far as the Macclesfield Infirmary is concerned. At the meeting of the governors at which Miss Clarke's resignation of her post was accepted, one of the governors, Mr. R. Brown, on whose sensible attitude in the matter we have already commented, proposed the following motion:—

> "That in view of the resignation of the junior house surgeon (Miss Annabella Murdoch Clarke), which has just been accepted, the governors, with the object of avoiding in future a repetition of the unpleasant experience of the past two months, hereby place on record their opinion, subject to the

of persons upon whom Mr. Kipling might well have specially emptied his vials of wrath and scorn.

If anything that Mr. Rudyard Kipling has written, backed by the weight of public opinion, should tend to lure the young men of the British Islands to regard a period of healthy training as soldiers as an essential portion of a young man's education great good will be done. Mr. Kipling will have helped Great Britain to the attainment of a better force for home defence than an army composed of, or leavened by, unwilling conscripts will ever be. The men who have served as volunteers will be healthier men and better citizens than if they had devoted their leisure to watching others compile record scores and win challenge cups, or even than if they had themselves won fame for a season by performing feats that another generation will surpass and forget. We regret that Mr. Kipling, who is a real patriotic force in the land, should have represented the inhabitants of these islands as profoundly indifferent to the national fame now that the day of peril is over; in his desire to do justice to the colonial contingents of our South African army he has ridiculously overstated their performance; while to frighten us into being volunteers he has forgotten the existence of our navy. But with these reservations we consider that his much discussed poem of "The Islanders" is a cry of timely warning. If he has made the cry too shrill for sensitive tympana, he is all the more likely to have aroused the sluggish sense of those who hear slowly or imperfectly.

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## The Atmosphere of the Old Bailey.

Early in last year the prolonged trial of Bennett, the Yarmouth murderer, at the Old Bailey had as its consequence the indisposition of the Lord Chief Justice who presided at it. We called attention to this in The Lancet[1] and questions asked in the House of Commons elicited the reply that the building was under the control of the City authorities, to whom the site of Newgate Prison was to be handed over for the construction of a Central Criminal Court more worthy of the metropolis of England. The date for the commencement of this work was not indicated and we are not aware of any visible signs that it is in progress or that its inception is any nearer than it was nine months ago. Since then the trial of the Horos case has been followed by the indisposition of Mr. Justice Bigham, and it is still possible that before a new court has been built the loss of valuable life may be the price paid for the dilatoriness and lack of proper precaution exhibited by the civic authorities. They have had plenty of warning. The Bennett trial was not the first occasion on which attention has been directed to the evil atmosphere of the Old Bailey. It was, however, a typical instance, and Dr. Holman, a personal friend as well as the medical attendant of the Lord Chief Justice, and himself a frequent visitor at the court during crowded trials, expressed strongly in public the opinion that the foul air inhaled during the six days that this case occupied was the cause of Lord Alverstone's illness. His view was confirmed by Sir Richard Douglas Powell, but nothing has been done.

The court is admittedly a bad one—bad for the purpose to serve which it was built—namely, the trial of prisoners—and bad from the point of view of sanitary science—a matter which no doubt did not largely occupy the mind of its architect. It is not, by the way, the court in which in 1750 two judges, the Lord Mayor, and about 60 jurors and others caught "gaol distemper" and died; nor is it, as that court was, subjected to the pestiferous influence of a contiguous prison filled with malefactors and debtors huddled together in circumstances of filth and disease that we can hardly realise in these more enlightened days. It is, however, a court ventilated by windows at each end, which cannot be opened during the sitting of the court because at the one end they are immediately over the heads of the jury and at the other almost as close to the representatives of the press. A judge might disregard the convenience and remonstrances of the latter, but he could not hope to bring his trials to a proper issue if he insisted on the former being subjected to draughts against which they would inevitably protest. As a result the windows of the particular court at the Old Bailey of which we are speaking are usually opened during a day's sitting for about half an hour in the luncheon interval, or for less time if the judge chooses to give, as judges have been known to do, orders to that effect. There is either no other outlet for foul air than the windows, or none of any substantial value; while such "fresh" air as from time to time may find its way into the court does so through doorways opening on corridors or from the premises below the dock, up the stairway by which the prisoners enter; but in the absence of any established exit for the air the atmosphere can hardly be replaced in appreciable quantities. Meanwhile, in sensational cases the usual audience is increased by eager spectators from the general public, some privileged to occupy seats (that is to say, introduced by the authorities to whose custody the court and the health of those in it are entrusted), some being barristers in robes, some pressmen and artists, and others, perhaps, jurors in waiting. The result is that, instead of only the seats being occupied which the architect designed for those destined to be present at trials, every inch of standing room is filled by persons who not only breathe and re-breathe the foul atmosphere, but also appropriate many cubic feet of space which otherwise would at any rate be filled with atmosphere of some sort. There are, therefore, two points to which the attention of the city authorities may well be directed, should they consider it worth their while to protect those whose duties take them to the Central Criminal Court. The ventilation of the courts, or of the particular court most liable to be overcrowded, should be improved as far as it is possible by temporary measures not necessarily involving a large pecuniary outlay. Steps should also be taken to avoid overcrowding by limiting the number of those admitted to the seats above and below and by forbidding the filling of the gangways with spectators. It may here also be pointed out that, unless such steps for the preventing of overcrowding are to be taken in the future, the architect of the proposed new courts should be instructed that his scheme for providing them with fresh air must take into account the fact that every inch of the floor, and not only the seats which he has introduced into his plans, will be liable to be filled by the audience.

What measures may have been taken with regard to the forms of pneumonia are in future to be discriminated, the croupous or lobar being separated from the catarrhal or lobular forms, and these forms, in their turn, being separated from the epidemic or infective type of that disease. The italicised terms, "puerperal fever," "gastro-enteritis," and "convulsions," similarly come under condemnation, and it is to be hoped that in future they will be used but sparingly. We have said enough to show that pains have been taken to render the new weekly return as serviceable as possible, and we trust that medical men generally, as the authorised certifiers of cause of death, will assist the authorities at Somerset House to improve to the uttermost our national system of vital statistics.

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[1] The Lancet, March 9th, 1901, p 723.

## THE RELATION OF THE CHURCH TO SANITARY REFORM.

A STORY is told that a Local Government Board inspector who was sent to a provincial town in consequence of an outbreak of small-pox met amongst others the rector of the parish who, being anxious to promote the physical as well as the spiritual welfare of his parishioners, asked how he could assist matters. The inspector, noting the profession of his interrogator, drily remarked: "*Preach vaccination and revaccination.*" On the following Sunday the rector dilated upon the blessings of science in general and upon those of vaccination in particular, and on the succeeding Monday morning the public vaccinator was besieged by those anxious to follow their pastor's advice; so much so, indeed, that the lymph running out a riot was only with difficulty prevented. This little narrative is illustrative of many which might be told of the signal service which the clergy of all denominations have from time to time rendered on occasions of danger to the public health. Nevertheless, the assistance of the clergy might, we think, be more generally accorded than is the case at the present time The opportunity of the clergy for utilitarian work of this description is, indeed, unique. Each Sunday a very considerable proportion of the population finds its way to some place of worship and this material fraction of the whole population reacts to some extent upon the remainder who, whether from indifference or for other reasons, do not often darken the doors of our churches and chapels. But even the indifferent are in no sense positively hostile to the Church, and many of them would gladly welcome any effort by which the work of the clergy might be turned into practical channels such as are here in question. We do not for a moment suggest that at festivals such as Christmas the doctrine of cleanliness should be substituted for the higher theme of peace and goodwill, but if the clergy would from their pulpits now and again urge upon their congregations the blessings of cleanliness, fresh air, and light a force would be brought into operation the results of which would soon become apparent. Not only could the clergy do this from their pulpits, but they could in their intimate and trusted relations with the poor in their homes instil into them the doctrines of health. There is no body of men more fitted to assist in bringing about a better housing of the poor than the clergy, who, by teaching the people to open their windows and to seek the light, would gradually elevate the dirtier classes to a desire for better dwellings and an unwillingness to occupy dilapidated and ill-ventilated property. In this way the clergy would indirectly assist the sanitary authorities and medical officers of health, and would help to bring about the return of men to local authorities and to Parliament who would see that the housing problem received adequate attention. There is, too, another direction in which the clergy are in a position to promote reform Churches, many of them at least, were erected at a time when the [illegible] of ventilation was but little attended to, and hence [illegible] about that the atmosphere of these places is very often during divine service either eminently oppressive from the accumulation of organic products, or altogether unbearable by reason of the draughts which abound. The clergy would be doing a good work were they to appoint through Convocation or some other body a commission to investigate the matter and to report thereon. Finally, there is still outstanding the old and somewhat threadbare subject of the communion cup. We refer to this matter with due reverence and with the true interests of the Church at heart It must be borne in mind, however, that amongst those who gather together at the altar-rail are likely to be found some who are in feeble health and who are perhaps afflicted with communicable disease of a subacute or chronic type It has also to be pointed out that, according to the rubrics in the Prayer-book of the Church of England, the officiating priest must consume such of the consecrated elements as are left over and above the requirements of the communicants. That an element of risk is recognised by that Church itself is obvious from the fact that in the case of private communion of a sick person such sick persons have to communicate last. We do not propose to discuss here whether or not drinking from the common chalice is in the view of the Church a custom necessary to be retained—in the Roman Catholic church communion in one kind alone is employed for the laity—but we should be glad to see the question seriously faced by the Church itself, rather than that the necessary reform should be enforced from outside or that a partial abstention should result.

## THE INVESTIGATION OF CANCER.

WE have received from an evidently well-meaning correspondent a request that publicity should be given in THE LANCET to the announcement that a "cancer statistical bureau" has recently been formed in London with the object of undertaking a crusade against that disease. We are further asked to insert a circular and list of some 25 questions which the bureau desires to be answered by friends and others having special opportunities of furnishing general information respecting cases of malignant disease. We need hardly say that any judiciously directed attempt to increase the sum of human knowledge concerning this most intractable scourge will always receive sympathetic consideration at our hands; there are, however, certain fundamental conditions which are essential to the success of such an undertaking as the present, and which appear to be lacking in the scheme before us. We may at once declare that there is no problem within the domain of science which is more closely beset with difficulties than is that of the natural history of malignant disease. Accordingly we should have expected in the circular referred to some assurance that the persons undertaking the investigation possessed a competent acquaintance with scientific medicine. As, however, we can find no indication of the kind, and as moreover the name of the gentleman who addresses us does not appear in the Medical Directory, we must assume that the Cancer Statistical Bureau is exclusively composed of laymen. In a leading article in THE LANCET of August 31st last we strongly urged on the Government the appointment of a Commission to investigate exhaustively, and therefore necessarily under medical direction, the whole question of the etiology of malignant disease; and we further expressed the hope that inasmuch as His Majesty the King had publicly signified to the medical profession his earnest desire that such an investigation should be undertaken prompt effect would be given by the Government to the King's gracious request We deeply regret that although many months have elapsed since the period referred to, yet another year has closed and still no Commission has been appointed. It is to be hoped that when Parliament again meets next week pressure will be brought to bear upon the Government rules, as to the selection and election of senior and junior house surgeons—namely, that when a vacancy occurs it shall be advertised at least twice in the recognised medical journals, the applications for the vacancy submitted to the honorary medical staff, with a request that they carefully consider the same and select at least three, if possible, from which the governors shall appoint "

This motion fell to the ground because it found no seconder, but the matter cannot end there We are glad to observe that Mr BROWN gave notice that he would propose his motion at the next monthly meeting of governors When this occurs we trust that the governors will take Mr BROWN'S view and, within the limits of the considerable discretion which the motion allows, will grant the medical staff of the Macclesfield Infirmary a prominent voice in the choice of the resident staff Until matters are put upon some such satisfactory footing the infirmary may again become the scene of a quarrel that cannot conduce to its welfare

While we congratulate the medical staff upon a position which has allowed them to withdraw their resignations and to continue their work for the institution in an honorary capacity without loss of dignity, we sympathise with them in the trial that they have undergone and in the misrepresentations to which they are still subjected They have been, are being, and we fear will be, represented as selfish opponents to MISS CLARKE on the ground of her sex, as obstinate supporters of the old time doctrine that women should be kept to domestic work and should not be allowed to play a part in public life or to embark on a professional career Not one of the many journalists—we doubt if we should exaggerate if we said the many hundreds of journalists—who have written offensively of the medical staff of the Macclesfield Infirmary during the last month have taken the trouble to find out what it was to which the staff really objected in the behaviour of the governors The medical staff have been abused as selfish, ignorant fogeys, and we fear that they must not expect any large measure of redress MISS CLARKE, with whom both sides of the dispute sympathised, originally refused to assist either the medical staff or the governors by resigning, upon the ground that she was standing for a principle We presume that she recognised that the principle for which she was standing was not on the *tapis* We trust that here and there a few of our fellow journalists may also come to understand the inwardness of the dispute at the Macclesfield Infirmary, when we are certain that they will feel it their duty to make some amends to the medical staff for having depicted them as narrow self seeking misogynists They definitely declined to recommend MISS CLARKE to the governors for a resident post in the infirmary When the governors selected MISS CLARKE the medical staff were compelled to resign their offices, both in justice to themselves and in the furtherance of the best interests of the institution which they were serving

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FREEMASONRY —The St. Luke's Medical Lodge of Instruction has been formed by a committee appointed by the eight medical masonic lodges for the use of medical Freemasons Meetings will be held at the Criterion Restaurant on the first and third Mondays in every month from October to May inclusive at 8 45 P M The first meeting will take place on Jan 20th Any medical Freemasons who may wish to join should apply to Mr G Rowell, 6, Cavendish place, W.

# Annotations.

"Ne quid nimis"

## THE REGISTRAR-GENERAL'S NEW WEEKLY RETURN OF BIRTHS AND DEATHS

JUST as we are preparing for press the Registrar General's return for the first week of the new year comes to hand and as it is in many respects a great improvement on former issues we think it worthy of a brief notice in our columns In the first place, we observe that the area covered by the return is now considerably enlarged the list of great towns for which statistics are given has been extended so as to include, in addition to Greater London, 74 other cities and boroughs in place of the 32 previously included Uniform particulars of mortality are now therefore published weekly respecting nearly one half of the population of England and Wales In the second place it will be seen that the tabular matter in the return has been re arranged so as to present the more salient facts in a manner as convenient as possible for reference But the improvement which seems to us the most important from a medical point of view is that which has been effected in the classification of diseases in Table 4 From the preliminary remarks in the return itself we learn that the list of death causes in the table referred to "has been modified, but that "care has been taken to preserve the means of comparison with the former list wherever this has been possible " In this table we notice several useful amendments For example, although the total number of death causes remains the same, several of the less important diseases included in the former list have been deleted and thus space has been obtained for the insertion of other and more definite diseases Again, we are pleased to observe that a note has been appended at the head of the table to the effect that certain of the terms retained in the list (presumably because they are still in use by some medical men) are printed in italics, in order to indicate that they are either the names of symptoms merely or are otherwise objectionable The italicised terms should therefore be used in medical certificates only in cases where more precise information is wanting Further we note that certain of the principal groups of disease have been subdivided in this table, so as to give opportunity for the more accurate classification of those causes of death which hitherto have been sometimes ambiguously returned For example, deaths from tuberculous phthisis are generally certified as from "phthisis" or "consumption' simply, which term include, according to the authorised nomenclature, other diseases besides pulmonary tuberculosis The more precise term is therefore inserted *in addition to* the term more commonly, but less correctly, employed So also, as an alternative for the old fashioned but most misleading term "tabes mesenterica tuberculous peritonitis" is suggested In the past tabes mesenterica has been held by some to include not only tuberculous mesenteric disease, but likewise atrophy, marasmus and certain other ailments attended by wasting which are not necessarily tuberculous in their nature The malignant group of diseases also has been subdivided so as to distinguish the ' carcinomata from the sarcomata," and both of these from the numerous tribe of diseases indefinitely returned as "malignant We believe that inasmuch as a large proportion of the deaths in London from cancer occur in hospitals where necropsies are commonly made, the medical officers of those institutions will gladly avail themselves of the opportunity now afforded to improve the statistics of this terrible disease For the rest we notice that the various died. The minimum was in 1900, when there were only 444 deaths. The average deaths in November from all causes is 902, but in November last year there were only 443 deaths. This is equal to an annual death-rate of 19·58 per 1000, and compares favourably with any town of the same size in any other part of the civilised world. The death-rate for the month of November in Havana has in the past often amounted to about 100 per 1000 per annum and the average for that month was 38 per 1000. Thus we have another and an excellent object lesson of what sanitation can do in a general way to reduce death-rates, supplemented, in this instance, by special measures against yellow fever.

## IS THE COAL-SUPPLY OF ENGLAND SERIOUSLY DIMINISHING?

IN a letter to the *Times* of Jan. 7th Professor Raphael Meldola expresses regret that the question of the waste of coal by imperfect combustion in grates, stoves, and factory furnaces has not been specifically included in the terms of reference of the recently appointed Royal Commission on Coal Supply. Everyone will share this regret with Professor Meldola, for the appointment of such a strong Commission of capable men would afford an excellent opportunity for dealing decisively and authoritatively with the question of smoke-polluted atmospheres and their prevention. But, as we suggested in an annotation last week, the Commissioners in dealing with the question of the immense waste of coal through defective ways of burning it, will surely be brought face to face with the question of the prevention of smoke, for smoke implies waste, and if the Commissioners succeed in showing how this waste can be prevented they will have indicated at the same time how the evil of smoke may be abated. There is little doubt, however, that primarily the Commission was appointed to determine the broad question of future resources and supply, having regard especially to the needs of the navy as well as of industrial processes. But we should be surprised if the Commissioners found that the question of the prevention of smoke could be avoided considering that in London alone it is calculated that there are discharged into the atmosphere daily some 18,000 tons of unconsumed fuel. That alone is eloquent testimony of the need for investigation.

## THE RESULTS OF PARTIAL GASTRECTOMY.

IN March, 1899, Mr. J. Rutherford Morison of Newcastle-on-Tyne showed at the Clinical Society of London five persons on whom he had performed partial gastrectomy for malignant disease of the stomach. In commenting on these cases we expressed the hope that Mr. Morison would later let the surgical world know the after-results, for obviously in several of them the interval after the operation was far too short to justify an opinion as to an absence of liability to recurrence. We are indebted to Mr. Morison for furnishing us with further particulars of these cases, which appear in this issue of THE LANCET (p. 86). In the first case pylorectomy was performed in 1897, and for nearly three years the patient was perfectly well, but signs of recurrence then appeared, a great part of the lesser curvature of the stomach was involved, and she died three years and two months after the operation. The second patient continued well for 18 months, but then he began to lose weight, and he died two years and two months after the operation. At the necropsy the neighbouring lymphatic glands and the liver were extensively affected by the growth. The third patient first had signs of recurrence eight months after the operation; a large swelling appeared in the epigastrium, and she died 15 months after the pylorectomy. In the fourth case the patient had perfect health for nearly two years, but then he had a febrile attack, and as he recovered from that signs of recurrence of the growth appeared, and he died 11 months later with a large mass in the epigastrium and an enlarged liver. In the fifth case gastric symptoms appeared about two months after the operation, and death occurred about six months after the pylorectomy. On a superficial consideration of these cases it might at first be thought that they were unsuccessful, for in every one of the five recurrence occurred either locally or in the liver. This is certainly true, but it must also be borne in mind that in all the cases there was a period of absence of symptoms, more or less lengthy, but extending in one case beyond two years. During this period the patients gained greatly in weight and were able to digest ordinary food. The lessons to be learnt from these cases are: 1. That malignant disease of the stomach is frequently more extensive than appears to the naked eye, for in most of the cases local recurrence took place. Therefore, a very wide removal of the growth is indicated and the experience of the last few years shows that large portions or the whole of the stomach may be removed without any serious disturbance of the digestive functions. 2. Since recurrence in the second case occurred in the lymphatic glands and in the liver though the stomach itself remained free it is obvious that these must have been affected before the operation. The only method of obviating such a result is to operate early and for the opportunity to do so the surgeon must be indebted to the physician who invariably sees these cases first. If an evident swelling in the epigastrium is awaited before a diagnosis of malignant disease of the pylorus is made a very large proportion of the cases will be too far advanced for complete removal of the growth, for the lymphatic glands and the liver will be already affected. So far as the surgery of Mr. Morison's cases goes nothing could have been better; from the operation itself recovery in all cases was speedy and complete, but the operations were undertaken at too late a date for the complete removal of the disease.

## SMALL-POX AND CHICKEN-POX.

WE have on several occasions referred to the difficulties which may arise in the differential diagnosis between small-pox and chicken-pox. Some of the metropolitan boroughs have already decided to make chicken-pox a notifiable disease under the Public Health Act and the council of the borough of Paddington has now decided to do likewise. The council also at the meeting held on Jan. 7th passed two resolutions: (*a*) urging the London County Council to put in force the powers conferred by Sub-section 6 of Section 56 of the Public Health (London) Act, 1891, with a view to making chicken-pox notifiable throughout the metropolis; and (*b*) to forward copies of the resolutions to the city and borough councils of the metropolis and to the councils of all the districts within Greater London. We also urge the public health committees of other boroughs to adopt a similar course. The addition of chicken-pox to those diseases which a medical practitioner is obliged by law to notify need not be a permanent one, but it might be enforced for a period of 12 months only or until the present outbreak of small-pox has subsided. A correspondent sends us an interesting account of a family attacked with chicken-pox. Three children, aged respectively six, four, and two years, suffered from varicella at the same time. Two of the cases were of the ordinary type, but in the eldest child the eruption was very profuse and the amount of constitutional disturbance which followed was characterised by feverishness and headache. There were well-defined ulcers in the mouth and on the fauces. The child had been successfully vaccinated. In all three cases there were no premonitory symptoms, the rash being the first evidence of anything ailing the children. About a fortnight after the rash appeared on these children the to secure that adequate investigation of this most important subject should be no further delayed. From what has been said our correspondent will gather that we think it inadvisable to attempt such a partial, and therefore insufficient, inquiry as that advocated by the bureau; and we do so mainly out of consideration for the feelings of relatives who may be called upon to supply the information asked for. The intrusion of such questions as those proposed at a time of actual or impending bereavement can be justified only on the ground that by such means future suffering may possibly be spared to others: and as we are satisfied that the scheme of the bureau will leave the main subject of the essential nature of cancer untouched we think it better that a competent scientific authority, such as the Commission suggested, should be empowered to deal exhaustively with the entire subject. We are therefore reluctantly obliged to say that we cannot give effect to the wishes of our correspondent.

## SANITARY WORK IN MANCHESTER.

OUR Manchester correspondent writes:—Defective drainage, with the nuisances and injurious consequences resulting from it, is one of the commonest facts and experiences of either town or country. Some years ago its supervision by the municipal authorities of Manchester was very imperfect, the work and the responsibility being divided between the sanitary and the paving and highways committees Reports as to nuisances from defective drainage received by the former were referred to the latter, who, when property owners failed to remedy the nuisance, stepped in and did the work, charging the owners with the cost. This was the theory but it failed in practice, for the highways committee could not cope with the work and many complaints of its shortcomings were made both by the public and by the medical officer of health In 1896 it was arranged that this inefficient system should cease and that the sanitary committee should take entire charge of the matter The house drainage sub-committee of the sanitary committee now superintends the house drainage department, which is an offshoot or extension of the sanitary department At first there were only three inspectors, then two more were added, and now there are seven at work in the city under the direction of the manager, while in the town-hall eight clerks are engaged in the work of the department. In a report issued in 1898 it was stated that 95 per cent of the drains examined were defective, while fully 80 per cent. were in a "deplorable" condition. Of the orders executed up to that time "over 35 per cent originated through death, fever, or other sickness on the properties concerned." To show the extent of the work it may be stated that during the financial year ending last March, a sum of £26,205 was expended on repairs, the number of houses dealt with being 5258 and of business premises and public buildings 894, making a total of 6152 The drainage of Manchester has always been supposed to be fairly good, though what to do with its products has seemed an almost insoluble problem But the revelations of the inspectors show, that though ignorance may be bliss, it is not folly to be wise. "Butt ended pipes" without sockets were common and as a consequence there were cesspools under houses One was found under a restaurant, 17 feet deep. Personally I remember a case of bad throat that occurred in a good house occupied by a well-known engineer who was quite sceptical as to anything being wrong with his drains But on investigation it was found that an old brick drain, filled with sewage matter, extended right under the house It will probably be some time before such things cease to be brought to light in the older parts of the city Now all pipes must be socketed and be properly fitted with cement and the work has to come up to a high standard. When a nuisance is reported a notice of 14 or 21 days is served on the owner or agent. If the necessary work has not been done by that time one of the sanitary inspectors visits and reports to the house drainage department. The owner is then advised that the corporation is about to do the work, and if this is not effective the contractor for the district is instructed to remedy the nuisance This is done under the close supervision of the inspector, and before the work is covered up the drains are tested thoroughly by the water test. All new drains, their course and condition, are marked on the ordnance map. The inspectors are all trained men who have passed a technical and practical examination There is no doubt that the department is doing work that will tend to improve the public health. Bad as the drainage has been in Manchester, it is probably quite as good as in other large towns throughout the country, so that an immense amount of work has still to be done before it can be said with truth, though it is often said in ignorant faith, that "our drains are all right."

## THE DIAGNOSIS OF SYPHILITIC INSANITY AND GENERAL PARALYSIS.

Dr. W. K. Walker, Dr. Theodore Diller, and Dr. R G Burns have published in the December number of the *American Journal of the Medical Sciences* an article which discusses the differential diagnosis of syphilitic insanity and general paralysis, with cases illustrative of the same. According to Fournier 21 per cent. of patients with tertiary syphilis developed cerebral affections of syphilitic nature, and in nearly all such cerebral cases mental disorder was present. The above named writers believe that "syphilis may be an etiological factor in the production of insanity through toxæmia or through exhaustion of the highest psychical centres from worry and anxiety." Such exhaustion, they say, might also result from venereal excesses, traumatism, alcoholic and other intoxications, and infectious fevers such as influenza. When the mental symptoms were at first uncomplicated with such manifestations as sudden faints, convulsions, paralyses, or optic neuritis, diagnosis of both syphilitic insanity and general paralysis was difficult, and the malady might be often overlooked and the hope of early treatment lost to the patient Whether the mental symptoms assumed a hypochondriacal, delusional, maniacal, or melancholic type they speedily tended to pass into dementia The following cases afforded practical illustration of the points of diagnostic importance

Case 1—The patient was a man, aged 35 years, whose parents were neurotic and "queer," and whose paternal and maternal relatives were tainted with insanity. Up to the age of 16 years the patient had suffered from violent attacks of intestinal colic. He was bright and intelligent when at school, but became addicted to excesses in drinking and smoking since the age of 18 years. He got readily and unduly intoxicated with small doses of alcohol. He contracted syphilis at the age of 18 years and married at 22, the union being unhappy and leading to a separation. In August, 1899, he sustained an injury attended with fracture of several ribs produced by a falling weight He had barely recovered from this when he contracted malaria, from which he suffered continuously for three months. He now became dazed and oppressed, had intense headache and insomnia, grew irritable and suspicious towards his friends, and had occasional outbursts of frenzy, during one of which he attempted to murder his wife In July, 1900, he had two "fainting spells" and began to suffer from hallucinations of hearing "music" An obscure febrile attack followed in which he seemed to be suffering from visual hallucinations of horrible objects He recovered from this attack, but recurrences took place twice afterwards (during September) square inch, a pressure which is found to be sufficient for fire-extinguishing purposes and thus to render the service of a fire-engine superfluous. According to the late Sir Edward Frankland, the water possesses an extremely high degree of organic purity and is of excellent quality for dietetic use. The Urban District Council of Portland, its engineer, and others may be congratulated upon having undertaken a work which has been thoroughly done and is well calculated to secure for the town the highest possible sanitary conditions and a satisfactory health return.

## GUY'S HOSPITAL.

ON Wednesday, Jan. 15th, there will be held at the Mansion House, under the presidency of the Lord Mayor, a meeting in support of the appeal on behalf of Guy's Hospital. There is no need for us to emphasise the good work done by Guy's Hospital, but, like nearly every other charitable institution in the kingdom, it is sorely pressed for funds. The very name "Mansion House" is synonymous with the word "alms" and we earnestly wish the meeting every success.

## THE SCHOTT TREATMENT OF CHRONIC CARDIAC DISEASE.

WE have received a copy of a pamphlet entitled "Personal Observations and Comments on Bad-Nauheim and the Schott Treatment," written by Dr. C. Turner of Butte City, Montana. The writer states that he made a prolonged stay at Bad-Nauheim and minutely studied the methods of treatment adopted at that resort. In this pamphlet Dr. Turner makes very serious charges against the professional ability and conduct of Professor Schott who holds a high place among the physicians of Bad-Nauheim. We understand that this pamphlet has been widely distributed and we think that Professor Schott should, in justice to himself and the many English physicians who send patients to Bad-Nauheim to be placed under his care, at once take steps to challenge, and we feel sure to refute, the grave professional charges which are brought against him.

## SANITATION IN INDIA.

THE principal article in the December number of the *Indian Magazine* consists of an address delivered on Nov. 25th, 1901, in the Jehanghir Hall of the Imperial Institute in London by Dr. Mohan Lal Dhingra, many of whose hearers were well acquainted with the conditions he touched upon, as the meeting was held under the auspices of the National Indian Association, and Sir George M. Birdwood, K.C.I.E., presided. Dr. Dhingra described his address as a humble attempt to claim for sanitation a place in the consideration of his countrymen and the Indian Government. He believed that the time had now come for the enactment of special sanitary legislation. In India it was practically impossible to control the numerous sources of water-supply, each house often having its own well, but if every town were provided with waterworks the people would soon take to this innovation and wells would fall into disfavour. Until this could be done wells should be placed under the control of municipalities with powers to enforce the roofing-in of wells and the protection of them all round with masonry. There was, he knew, a difference of opinion as to whether the populations of India were enlightened sufficiently for the introduction of such measures, but there could be no difference of opinion as to the necessity for an efficient sanitary service, and the first step in this direction would evidently be the appointment of a health officer for every important t He hoped that the time was not far distant when chools would be opened for the training of sanit nspectors, and when the Indian universities would grant minor sanitary diplomas. In the ensuing discussion Sir George Birdwood said that Dr. Dhingra's proposals would involve heavy taxation and would have to be enforced by penalties. In the prevention and cure of disease sanitary precautions and medical skill did not count for so much as the constitution of the individuals concerned, their habits, whether temperate or not, and their domestic and personal cleanliness. He thought that enthusiastic public health officers like Dr. Dhingra would do much more in support of village and municipal sanitation in India by appealing to the authority of the Code of Manu and similar law-books than by invoking the coercive interference of the State. He also related the case of a non-commissioned officer in an Indian regiment who had been under orthodox treatment for malaria and was apparently dying, but made a marvellous recovery after perspiration was induced by Brahminical incantations.

## THE MEDICAL DIRECTORY.

THE Medical Directory for 1902 has made its appearance promptly during the first days of the new year, and the publishers are to be congratulated upon their punctuality, which nothing short of a fire—as occurred two years ago—is known to disturb. The total number of practitioners for 1902 is 36,788, an increase of 434 over the total of 1901, which was 36,354. There are 6292 names on the London list, and 16,232 on the English provincial list. Scotland possesses 3645 medical men, as against 3569 in 1901, being an increase of 76; Ireland possesses 2587 medical men, as against 2575 in 1901, being an increase of 12; and Wales possesses 1183 medical men, as against 1165 in 1901, being an increase of 18. The lists of registered medical practitioners abroad, and of members of the Naval, military, and Indian medical services also both show a small increase upon the numbers of last year. The foreign and colonial names in 1901 numbered 3910, and this year number 3952, or an increase of 42; the members of the services in 1901 numbered 2798, and this year number 2886, or an increase of 88. The profession would seem, therefore, to have expanded evenly in all directions, and not in a greater degree than the increase in population ought to determine. The introductory article on the Principal Laws Affecting the Medical Profession, originally written by the late Mr. R. G. Glenn, is edited and revised this year by Mr. E. A. Armstrong. This article is not the least valuable part of an excellent book of reference, and we often have occasion to refer our readers to it.

## THE CONTROL OF PHTHISIS IN THE ROYAL BOROUGH OF KENSINGTON.

AS we foreshadowed in a leading article on the results of the British Congress on Tuberculosis, the several expressions of opinion which were then focussed in the shape of resolutions are already beginning to bear fruit. In London the first sheaves of the harvest are being gathered in by the Royal Borough of Kensington, and there is little doubt but that ere long other of our new boroughs will take action. The Sanitary Committee of Kensington has proposed, and the council has adopted the proposal, that cases of phthisis attended with expectoration should be notifiable, and consequently the medical practitioners of this wealthy and important district have been invited to notify such cases, the usual fee being paid for each case. The council has moreover arranged with the Jenner Institute for the bacteriological examination of sputum suspected to be tuberculous. On receipt of a notification the medical officer of health will determine whether or not the circumstances call for a visit from the sanitary staff, and we are glad to note that in this matter every effort will be made to coöperate with the attending practitioner. Rooms infected by tuberculous patients will be disinfected free of charge in all cases mother gave birth to another child who was born with four papules upon the body which developed into vesicles and ran the usual course without any further increase in number. Had the severe case above mentioned been an isolated one it might well have puzzled most practitioners as to whether it was one of chicken-pox or of small-pox.

## ARTIFICIALLY MATURED (?) WHISKY.

COUNTLESS attempts have been made from time to time to remove rapidly the raw characteristics of new whisky, but no real success has ever been attained comparable with the mellowing influences of age. The common and erroneous belief is that new whisky would at once be made as old if such things as fusel oil, furfurol, and probably other aldehydes could be extracted or destroyed. That is not the case. The product would then be simply alcohol and not whisky at all and spirits of wine might as well be consumed. It is constantly forgotten that genuine old whisky is palatable and wholesome because those very products which give it a raw, harsh, and disagreeable taste when it is young are the very constituents which time, and time alone, fashions into pleasing flavour. In fact, the harsher the taste when young the more full-flavoured is the whisky when matured. This salutary change is due to a gradual resolution of certain of the products of distillation, but not the alcohol, into new bodies which communicate to the whisky its characteristic flavour. These products, therefore, the aldehydes and higher alcohols, are essential to the production of a wholesome and good-flavoured spirit This result cannot possibly be gained by chemically abstracting these bodies as it is proposed to do. In fine old brandy the flavour is due essentially to these bodies assimilating each other, so to speak, over a long period of time and producing wholesome flavours. The ethers in particular, upon which much of the excellent medicinal effect of old brandy depends, increase largely with age and the ethers themselves are most probably a product of the union of the raw bodies. To eliminate these raw bodies, therefore, by a chemical process is to eliminate the materials which afterwards contribute the finest characteristics, and such a spirit cannot be regarded as being in any sense equivalent to a spirit mellowed by age. The process may take out deleterious things in a new spirit but it does not leave old whisky or old brandy behind and such extracted spirit would probably never be the better or more wholesome for maturing in the absence of those ingredients which make old spirit acceptable to the palate and the economy. The temptation to mature spirits artificially is, of course, very strong as storage represents so much capital locked up and some amount of loss by evaporation. But such artificial preparation can never be looked upon as fit to replace the spirit mellowed by age, and any attempt to substitute it is to be deplored and certainly on medical grounds to be discountenanced strongly.

## THE VON COLER LIBRARY.

WHEN in March last the late Inspector-General A. von Coler, the head of the medical department of the German army, was about to celebrate his seventieth birthday, it was resolved by a number of his friends, inclusive of many university professors besides military medical officers, to present him with a collection of works, all connected with military medicine, which should be entitled "The von Coler Library." Up to the present 10 volumes have appeared, but the list is not yet complete. The works published are as follows:—1. Kubler: "A History of Small-pox and Vaccination." 2. Buttersack: "Non-medicamental Therapeutics." 3. Transmann: "Operations on the Brain." 4. Fischer: "Operative War-surgery." 5. Zuntz and Schumburg: "The Physiology of Marching." 6. Köhler: "A History of War-surgery." 7. Behring: "Diphtheria." 8. Muschold: "The Plague." 9. H. Jaeger: "Cerebro-spinal Meningitis." 10. Gerhardt: "The Therapeutics of Infectious Maladies." According to a writer in the *Archives de Médecine et de Pharmacie Militaires* for December, 1901, von Coler is regarded as the reorganiser of the military medical service in Germany. It is owing to his energy that this department has undergone complete reconstitution since the Franco-German War. Amongst other benefits, the army owes to him the rehabilitation of its hospitals, which are now provided with all the requirements of modern science. To von Coler are also due the establishment of sanatoriums for convalescent soldiers and the institution of bacteriological laboratories. Under his rule German military medicine has increased in importance and widened its scope. By the creation of teaching centres, as well as by procuring the appointment of young medical officers as clinical assistants, he has opened out channels of instruction which heretofore were closed, thereby adding immensely to the efficiency of an important section of the war machine.

## THE ISLAND AND ROYAL MANOR OF PORTLAND.

COMMENDABLE steps have recently been taken in the quaint town of Portland to assure for its inhabitants and its visitors a clean bill of health. The drainage of the island was formerly of the crudest description, exposed sewers emptying into cesspools which were for the most part in a leaky and insanitary state. The sewers consisted of old stone drains which were originally open channels that from time to time were covered. In the scheme just recently completed at a cost of £25,000 some 20 miles of stoneware pipe sewers have been laid in such a way as to provide for an ample fall, no gradient being less than 1 in 150 at any point. The system is thus self-clearing. The drainage area comprises two districts, each having its own outfall. The first district discharges into West Bay into deep water, and from observations made in regard to the tide it was found that the sewage immediately on discharge was carried far out to sea The length of the outfall sewer is over 400 feet from the shore and it is constructed of heavy iron pipes with turned and bored sockets and spigots bolted together and supported on cast-iron piles. The construction of this outfall was carried on under considerable difficulty owing to the prevalence of heavy seas at the time. As it was the temporary plant and staging were washed away, but the sewer has been well and truly laid, inasmuch as it has been unaffected by the heaviest gales. For the purpose of drainage the town is divided into two districts. Some portion of the first district proved to be too low for the satisfactory discharge of sewage, and in such cases patent sewage lifts were used. In one instance the sewage from the high level part of the district is used in conjunction with air compressors for raising low-level sewage. In other cases water from the mains was used. The sewage from the second district is discharged through an iron pipe fixed in a line with the face of the cliff into deep water, and entering a strong current is rapidly carried seawards. The house connexions without exception are being laid by the urban district council's own workmen The sewers receive the drainage of the Admiralty hospital and works. A new hospital is shortly to be erected by the Admiralty at a cost of about £30,000. The water-supply of Portland is derived from a deep well in chalk 160 feet deep with headings 900 feet. The water is collected in a reservoir at Upwey which is capable of holding 550,000 gallons. A new reservoir is in course of construction at Portland which is to have a capacity of 600,000 gallons. The water is delivered from the Upwey reservoir through a 10-inch trunk main at a pressure of from 150 to 225 pounds per

# A DECADE OF PUBLIC HEALTH WORK IN THE ADMINISTRATIVE COUNTY OF LONDON.

## I.

WE have received from the medical officer of health of the administrative county of London a copy of his ninth annual report, which contains, in addition to an elaborate set of statistical tables with appropriate comments relating to the year 1900, a carefully written and most interesting history of sanitary administration in the metropolis during the first complete decade of the County Council's existence—a period which corresponds with the last 10 years of the nineteenth century.

Were we writing for Londoners alone we should at once proceed with our notice of this report, but inasmuch as so many of our readers reside outside the metropolitan area, and are consequently less familiar than ourselves with sanitary progress in London, we think it well to preface our review of the document before us with the following explanatory remarks.

The London County Council was constituted by Act of Parliament in the year 1888, and under the guidance of an illustrious chairman the first elected members of that body promptly set themselves to lay the foundation of that vast administrative system which has its present centre at Spring-gardens, and which ever since that year they have incessantly laboured to perfect for the benefit of their fellow-citizens.

At this stage it will be useful to recall the fact that up to the year 1888 the sanitary government of London had been distributed among 43 vestries, each of which exercised its functions (or refused to exercise them) according to its own will, exclusively and without regard to the welfare of adjoining districts and, indeed, without regard to the general welfare of the metropolis. Consequently, epidemics were free to spread from one metropolitan district to another simply from lack of suitable coördinating and supervisory machinery such as it is the principal function of a county authority to supply. Although for certain purposes of self-government London is subdivided under many independent authorities, nevertheless it is obvious that from a public health standpoint it must be regarded as one vast community, no part of which can suffer, either from epidemic visitation or from sanitary shortcomings, without imminent danger to all its other parts.

From the nature of the case it will readily be understood that many important preliminaries had to be arranged before the County Council could with propriety address itself to the formation of a public health department which should fully satisfy the requirements of London. For it is obvious that in order to meet such requirements a central health department must be so constituted that by successive developments it may be adapted to supervise, and where necessary to control, the sanitary functions of the various local bodies within its jurisdiction as supreme authority. Accordingly it was not until late in the year 1889 that the County Council took its first and most important step in this direction by appointing a superintendent medical officer of health.

On his appointment Mr. Shirley F. Murphy was unprovided either with office accommodation or with clerical staff. Perhaps fortunately for him, he was left to construct the new department mainly according to his own judgment, the necessary medical and clerical assistants and other requisites for the conduct of business being furnished at his special request. From the first his constant care has been to cultivate friendly relations with the local medical officers in charge of the 43 districts of the county, and by degrees he has built up what is practically an intelligence department or central bureau, to which communications may be addressed by his local medical colleagues, and from which they may derive expert advice or assistance in cases of difficulty or doubt.

It is only necessary to refer to the interesting series of reports already issued from Spring-gardens in order to show how completely Mr. Shirley Murphy has succeeded in his projects, as well as to indicate the thoroughly practical character of the work which is being done in connexion with the central bureau by the county medical officer of health and his able staff of professional assistants.

Coming now to an examination of Mr. Shirley Murphy's annual report for 1900, we find that as it is the latest so also it is in many respects the most interesting of the series of which it forms the ninth number. That this should be so is not surprising when we reflect that it treats of the health and sanitary condition of the largest urban community in the world—not for a single year only but for an entire decennium The administrative county of London is not only the largest; it is likewise, from a sanitary standpoint, the most perfectly equipped urban community of which we have knowledge For more than 10 years past it has enjoyed the protection of compulsory powers for the notification of infectious disease supplemented by a very complete system of hospital provision for the infectious sick. The arrangements for the isolation of small-pox are perhaps the most perfect at present existing within the British isles, for, instead of being treated in hospitals where they may readily become a source of danger to others, the small-pox patients are removed to hospital ships moored in the estuary of the Thames and at a safe distance from human habitation. London is divided into a large number of sanitary areas, each possessing its own medical officer of health and a complete sanitary staff, and so great is the importance which now attaches to accuracy of statistical method that for 10 years past every death occurring in a hospital, either in London or in a Metropolitan Asylums Board establishment in the suburbs, has been referred in the registers to the area in which the patient or inmate originally resided. Mr Shirley Murphy therefore enjoys exceptional advantages for the preparation of trustworthy vital statistics and for the compilation of sanitary reports, and we think that he has availed himself of those advantages very fully.

In the present report the annual rates of birth, marriage, sickness, and death for each year of the last decennium are set forth in great detail, the rates having been carefully corrected by the help of the census returns of population recently published. As in the earlier reports, so in the present, the statistical tables relate to the old sanitary districts of London As a matter of fact, these districts ceased to exist and were replaced by the new metropolitan boroughs on Nov. 9th, 1900, but for the purposes of this report it was obviously impracticable to do otherwise than assume that the old sanitary areas had continued in existence up to the end of the year.

In the county of London as a whole the rate of increase of the population has rapidly declined during the last 30 years; in the decennium 1871–80 the rate of increase had been 17·4 per cent., in the following decennium it fell to 10·4 per cent, and in the decennium just completed the increase did not exceed 7·4 per cent.

The space at our disposal will not admit of our following Mr. Shirley Murphy in his detailed examination of the metropolitan *general* death-rates for the year 1900; but we may note that the mean mortality of London during the decennium just completed was below that of 1881–90 at all periods of life from infancy to old age. Mr. Shirley Murphy reproduces a table, given in previous reports, by which he shows the mean annual number of deaths occurring in 1891–1900, as compared with the annual number that would have occurred had the death-rates of the previous decennium been maintained throughout 1891–1900. The number of lives gained and the number of lives lost at the several ages in the later period are also shown. This gain or loss is expressed in terms of "life capital," the figures being obtained by applying the "mean future life time" values, as ascertained from a London life table, to the number of lives gained or lost at each age group. According to this calculation we find that in the 10 years 1891–1900, as compared with the previous decennium, there accrued a saving of 3664 lives per annum, representing an annual salvage of 118,483 years of life capital. It is, however, important to observe that this reduction in the mortality has by no means been manifested in the death-rate from all causes alike Thus, for example, there has been in the later decennium, as compared with the earlier, a marked *increase* in the death rate from diphtheria, cancer, and influenza, and a slight increase in the death-rates from a few other causes. On the other hand, there has been marked *reduction* in the mortality from phthisis and also from non-tuberculous respiratory diseases and diseases of the nervous system, as well as a less strongly marked decrease in the death-rates from several other causes. Perhaps the most important of these changes for where death has resulted or where removal has taken place. Dr. T. Orme Dudfield points out in his circular letter addressed to all medical practitioners in Kensington that notification is especially necessary where good may be expected to accrue to the public therefrom. In addition to these precautions the leaflets of advice on the lines of those drawn up by the National Association for the Prevention of Consumption are being distributed, and Dr. Dudfield is careful to accentuate the importance of *wet cleansing in place of the dry and dust-disturbing methods* usually employed. This action on the part of Kensington, upon which Dr. Dudfield is to be cordially congratulated, emphasises the wisdom of the resolution on notification which was passed in the State Section of the British Congress on Tuberculosis, and subsequently confirmed by the Congress as a whole. There were some ardent spirits then present who would gladly have seen compulsory notification advocated, but in a matter of such far-reaching consequences as this, where the goodwill of the medical profession and of the public is essential to success, we are strongly in favour of going slowly, and for this reason we view with satisfaction the reasonableness of the Kensington programme.

## THE DEPARTMENT OF PUBLIC HEALTH FOR NEW SOUTH WALES.

WE have received a copy of a report of the Board of Health for New South Wales for 1898 The report is dated June 9th, 1900, and although it has therefore reached us at a rather late date the matter which it contains is none the less interesting. The usual vital statistics and the prevalence of the specific fevers call for no special comment. The work emanating from the biological laboratory, however, is well worth notice on account of the reports which are given of certain pathological conditions found in animals. For instance, there is a "Pathological Note on a Form of Blindness in Horses." This disease appeared amongst horses in the Darling river districts. When first affected the animals only showed defective vision in dim lights Horses whose sight seemed good in bright daylight were noticed to shy and to stumble in the evening after sundown. Later the sight became bad even in the daytime; the horses advanced cautiously with tremulous limbs and appeared as if frightened. No cases of total blindness were reported and the animals generally recovered after some lapse of time There was no external sign of disease of the eye. Except for the defective vision the animals appeared to be in good health. On examination of specimens of eyes sent to the laboratory the periocular connective tissue and the muscles were normal, and the bulbar conjunctiva and cornea were also normal. Mesial sections showed no abnormality of the coats of the eyeball or dioptric media Microscopical sections were made and transverse and longitudinal sections of the optic nerves showed fibrosis and atrophy of the nerve fibres. Individual nerve fibres of a bundle were atrophied, refused to take the stains, showed breaking-up of the myelin sheath into droplets, and granularity and interruption of the axis cylinders. Amongst other subjects dealt with in this part of the report are a "Preliminary Communication on the Etiology of Lymphadenitis in Sheep," "Observations on Epizootic Ophthalmia in Cattle," and the "Pathogenic Characters of Bacillus Typhi Murium." In an appendix to the report are some observations on the more common specific fevers: diphtheria, scarlet fever, and typhoid fever. A brief summary is given, in popular phraseology, of the nature of each disease, how infection may be spread, and the earlier signs of the disease. Directions are then given as to the precautions which should be taken to avoid infection. We recommend a perusal of these pages to our sanitary authorities as examples of leaflets which might be reprinted and widely distributed in times of epidemics. Unless a certain amount of education in these matters is afforded to the public the prevention of the spread of infection is rendered most difficult.

## SMALL-POX IN LONDON.

THE number of cases of small-pox in London increases day by day. On Saturday, Jan. 4th, there were 37 fresh cases notified and removed, on Sunday the 5th there were 33 fresh cases, on Monday the 6th there were 60 fresh cases, on Tuesday the 7th there were 53 fresh cases, and on Wednesday the 8th there were 33 fresh cases.

## THE DISTRIBUTION OF PLAGUE.

AS regards Egypt, during the week ending Dec. 22nd, 1901, no case of plague has been reported throughout Egypt, and the only case remaining under treatment, isolated at Ziftah on Dec. 7th, was discharged from the hospital as cured on Dec. 22nd. As regards the Mauritius, a telegram from the Governor received at the Colonial Office on Jan 3rd states that for the week ending Jan. 2nd there were 34 cases of plague, of which 23 were fatal.

## METROPOLITAN HOSPITAL SUNDAY FUND.

AT a meeting of the Metropolitan Hospital Sunday Fund held at the Mansion House on Jan 7th under the presidency of the Lord Mayor, the Earl of Stamford was elected a member of the Committee of Distribution in the place of Mr. Lidderdale who retires in consequence of ill-health, and the Rev. C. H. Grundy was elected a member of the General Purposes Committee in the room of Sir Trevor Lawrence. Mr. R. B Martin, M P., and Sir Edmund Hay Currie were re-elected honorary secretaries and Mr. Henry N. Custance secretary.

AT the meeting of the Royal Medical and Chirurgical Society to be held on Tuesday, Jan 14th, the adjourned discussion of Dr. Sydney Monckton Copeman's paper on "Modern Methods of Vaccination and their Scientific Basis" will be opened by Dr. T. D. Acland. Amongst others who will take part are Dr. Sidney Coupland, Dr. Louis Parkes, and Professor Sims Woodhead. Dr. Copeman's remarks will be illustrated by lantern slides to be shown on Zeiss's epidiascope.

THE annual general meeting of the Harveian Society of London will be held at the Stafford Rooms, Titchborne-street, Edgware-road, W., on Thursday, Jan. 16th, at 8 P.M. The President, Dr. D. B. Lees, will deliver an address and the officers for the year will be elected. The meeting will be followed by a conversazione, at which will be shown illustrations of colour photography and a collection of British butterflies and moths by Mr. H. C. Phillips.

SIR W. O. DALGLEISH has offered to provide £5000 for building the new medical school for University College, Dundee and St Andrews University, and an additional sum of £5000 towards the extinction of the debt on the college. This last-named sum is offered on the condition that the balance of the debt—£7500—is forthcoming in a reasonable time

WE regret to learn that on Sunday, Jan 5th, Professor Virchow slipped in alighting from a tram-car and injured his hip. Everyone will wish the eminent professor as speedy a recovery as is compatible with his advanced years.

IT is announced that the donor of the sum of £200,000 for the King's Sanatorium is Sir Edward Cassel, K.C.M.G He is a well-known financier who was one of the pioneers in the development of modern Egypt.

point of view the year was less satisfactory than usual on account of a considerable increase of expenditure. The income was larger than in any previous year and there had been no reduction in the amount of charitable assistance received. The increased expenditure arose from various causes, the principal being an increase in household expenses, the high price of coal, a large addition to the assessment, and also the carrying out of many improvements. 16 of the patients admitted were deemed to be incurable, being chronic cases of long standing. During the year 18 patients were discharged as recovered, or 11·1 per cent. of the average number resident. "The length of residence of these patients had varied from three weeks in one case to 17 years in another. The latter was the case of a gentleman suffering from melancholia who for a large part of the time rarely spoke ...... and seemed to take no interest in his surroundings. Such occurrences of recovery after long periods of time are very encouraging." The deaths during the year amounted to 10, or 6·2 per cent. of the average number resident. The average age at death was nearly 75 years and the average residence in the Retreat was 15 years. One lady was 94 years of age and had been nearly 46 years in the Retreat. Of the deaths one each was due to phthisis, ovarian disease, and bronchitis, two each to cardiac failure and cerebral hæmorrhage, and three to senile decay. 13 voluntary boarders have been admitted during the year. One of them who was allowed to go out on parole attempted to drown himself in the river but was rescued by a policeman. He was subsequently placed under certificates. A newly admitted and violent patient secreted a match in the lining of his coat and when in the padded room he set fire to the cushions. He had the presence of mind to lie full length on the ground and to cover himself with mattresses and rugs and to breathe the fresh air as it entered under the door. The fire was speedily noticed and extinguished and the patient was rescued without having sustained any harm. The general health of the institution has been good except for one case of typhoid fever—affecting a nurse who, however, made a satisfactory recovery. Everything possible has been done to induce patients to occupy themselves usefully. "Patients doing regular work in the garden are paid by the hour, an arrangement which answers well. One patient earns sufficient to pay for his maintenance, whilst others keep themselves in clothes and pocket money." The Commissioners in Lunacy state in their report that the patients appeared to be well cared for and comfortable, and that the rooms and wards were in very good order, well aired, and comfortable. The committee of management state in their report that the sum of £130 has been received in donations during the year, and also a payment of £993, the final balance of a bequest under the will of the late Clement Jackson of East Hoe, Cornwall.

## VITAL STATISTICS.

### HEALTH OF ENGLISH TOWNS.

FROM the commencement of the current year the Registrar-General's weekly returns will relate to the 75 large English towns which at the recent census contained populations exceeding 50,000. The aggregate population of these towns in the middle of 1902 is estimated to be 14,800,427. During the week ending Jan. 4th, 9695 births and 5707 deaths were registered in these towns, the deaths being equal to an annual rate of 20·1 per 1000 of the population. In London the death-rate was 20·6 per 1000, while it averaged 19·9 in the 74 other large towns. The lowest death-rates in these towns were 5·6 in Handsworth, 9·7 in Grimsby, 9·8 in Newport (Mon.), 10·2 in Coventry, 11·2 in West Hartlepool, 11·3 in Walthamstow, and 12·1 in Leyton; the highest rates were 24·3 in Brighton, 24·4 in York, 24·9 in Norwich, 26·4 in Sunderland, 27·3 in Merthyr Tydfil, and 28·1 in Tynemouth. The 5707 deaths in these towns included 510 which were referred to the principal zymotic diseases; of these, 157 resulted from measles, 83 from diphtheria, 80 from whooping-cough, 66 from scarlet fever, 51 from diarrhœa, 43 from "fever" (principally enteric), and 30 from small-pox. In Croydon, Tottenham, Walthamstow, Southampton, Nottingham, and 11 other smaller towns, no death from any of these diseases was registered last week; the highest zymotic death-rates were recorded in Hanley, Aston Manor, Preston, Rotherham, Stockton-on-Tees, and South Shields. The greatest proportional mortality from measles occurred in Norwich, Aston Manor, Preston, Rotherham, and South Shields; from scarlet fever in Birmingham, St. Helens, Middlesbrough, and South Shields; from diphtheria in Willesden, Reading, Hanley, and Middlesbrough; from whooping-cough in Birmingham, Leicester, Burnley, and Stockton-on-Tees; from "fever" in Great Yarmouth, Rochdale, Middlesbrough, and Stockton-on-Tees; and from diarrhœa in Tynemouth. 28 fatal cases of small-pox occurred in London, one in West Ham, and one in East Ham, but not one in any other of the 75 large towns. There were 754 cases of small-pox under treatment in the Metropolitan Asylums hospitals on Saturday, Jan. 4th, against 506, 538, and 666 at the end of the three preceding weeks; 261 new cases were admitted during the week, against 134, 161, and 225 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 3033 and 3137 on the two preceding Saturdays, had declined again to 2987 on Jan. 4th; 313 new cases were admitted during the week, against 331, 247, and 263 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 427, 393, and 425 in the three preceding weeks, further rose last week to 452, but were 171 below the corrected average number. The causes of 86, or 1·3 per cent., of the deaths in the 75 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Portsmouth, Bristol, Manchester, Bradford, Leeds, and 38 other smaller towns; the largest proportions of uncertified deaths were registered in Ipswich, Birmingham, Liverpool, and Sunderland.

### HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·7, 21·5, and 22·6 per 1000 in the three preceding weeks, further rose to 23·2 per 1000 during the week ending Jan. 4th, and was 3·1 per 1000 above the mean rate during the same period in the 75 large English towns. The rates in the eight Scotch towns ranged from 14·6 in Leith and 23·0 in Edinburgh to 25·0 in Perth and 27·2 in Greenock. The 750 deaths in these towns included 30 which were referred to measles, 12 to diarrhœa, 12 to whooping-cough, seven to "fever," five to diphtheria, and four to scarlet fever. In all 70 deaths resulted from these principal zymotic diseases last week, against 69 and 86 in the two preceding weeks. These 70 deaths were equal to an annual rate of 2·2 per 1000, which was 0·4 above the mean rate last week from the same diseases in the 75 large English towns. The fatal cases of measles, which had been 28, 30, and 36 in the three preceding weeks declined again last week to 30, of which 24 were registered in Glasgow, three in Dundee, and two in Greenock. The deaths from diarrhœa, which had been 15, 17, and in the three preceding weeks, declined again to last week, and included four in Glasgow, four Dundee, and two in Paisley. The fatal cases whooping-cough, which had been 10 and seven in the two preceding weeks, rose again last week to 12, which 10 occurred in Glasgow. The deaths referred to different forms of "fever," which had been 11, seven, and five in the three preceding weeks, rose again to seven last week, and included five in Glasgow and two in Paisley. The fatal cases of diphtheria, which had been three and eight in the two preceding weeks, declined again last week to five, of which two were registered in Edinburgh and two in Dundee. The deaths from scarlet fever, which had been two and seven in the three preceding weeks, declined again to four last week, and included two in Glasgow and two in Greenock. The deaths referred to diseases of the respiratory *organs in these towns, which had been* 188 and 166 in the two preceding weeks, increased last week to 182, and 77 in excess of the number in the corresponding period of last year. The causes of 41, or more than 5 per cent., of the deaths in these eight towns last week were not certified.

### HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 17·9, 25·9, and 26 per 1000 in the three preceding weeks, further rose to 29·4 per 1000 during the week ending Jan. 4th. During the past four weeks the death-rate has averaged 25·0 per 1000, the

the worse is that which concerns that terrible malady cancer, the death-rate from which has increased during the last decennium by little less than 27 per cent. As His Majesty the King has publicly expressed a desire that the question of the causation of cancer should be investigated by competent persons, with a view, if possible, of checking its ravages, we can only express our astonishment that the Government has not as yet taken active steps with this object in view.

There is no single test of the healthiness of a community which is so generally trustworthy as that furnished by the rate of *infantile mortality*—*i.e.*, the death-rate of children under one year of age in each 1000 registered births. Infant life is peculiarly sensitive to the sort of insanitary conditions which generally abound in great centres of population. It is accordingly satisfactory to find from the present report that throughout the decennium ending with the year 1900 London experienced the lowest infantile mortality of any of the principal English towns save one—viz., Bristol, which has enjoyed an enviable notoriety in regard to low infant mortality for many past years. During the year 1900 the eastern group of metropolitan districts suffered the highest infantile mortality—namely, 175 per 1000 births; the northern group experienced the lowest, 145 per 1000; whilst the southern, the central, and the western groups experienced a rate of 158 per 1000. Among individual sanitary districts Holborn showed the highest rate (240 per 1000) and Hampstead the lowest rate—viz., 100.

# THE SANITARY CONDITION OF LEICESTER INFIRMARY.

As the result of a joint conference between the weekly board and the honorary medical staff of the Leicester Infirmary with respect to the recommendations of Professor W. H. Corfield as to the sanitary condition of the institution a report has just been issued of the decisions arrived at and it will be presented at the quarterly meeting of the governors to be held next week. The report candidly admits that the central block of the infirmary is old and structurally unsuitable for hospital wards, but urges that it is capable of conversion for administrative purposes. In regard to the wards the members of the conference agree with Professor Corfield that "certain re-arrangements and improvements are required," and that "the building would be greatly improved for the purposes of a hospital if it were divided into sections by means of cross-ventilated lobbies, as suggested in the plan prepared by Mr. Pick." The report states that the members of the conference agree with Professor Corfield's recommendations in reference to the nurses' bedrooms—that the nurses should be provided with a separate building—"as," adds the report, "entire separation from the wards must be beneficial to the health of the nurses." The report also supports Professor Corfield's recommendations for separate accommodation for infectious cases and for the out-patient department. In regard to the latter Professor Corfield stated that a separate building for out-patients "would considerably lessen the introduction of infection into the infirmary." With regard to the infirmary building in general Professor Corfield reported that "the floors are in most cases old and much worn" and that they required to be replaced with new ones, or covered with a parquet flooring, but the report of the conference points out that although in many parts of the house the floors require renewal none of the wooden floors are older than 1862, except possibly in the central block. Dealing with the question of the sanitary annexes and offices the report states that "a personal inspection of the various annexes and offices throughout the building shows that with the exception of St. Mary's Ward all the water-closets and slop-sinks are either new or have been renewed within the last 10 years. In most cases the iron and lead sinks in the ward sculleries have been replaced by sanitary earthenware ones, and the old baths have been replaced by new ones and others have been added. The particular pattern of the water-closet apparatus now in use has been called in question in the reports, but expert opinion appears to be divided as to the relative superiority of 'wash-downs' and 'wash-outs,' some modern institutions preferring one, and some the other. In each case much depends upon their being properly fixed and receiving systematic attention. The same remark applies to the question of 'tip-up' wash-basins." The "borough pattern" gully-traps, largely in use at the infirmary, are strongly disapproved of by Professor Corfield, but, adds the report, they have some distinct advantages for hospital purposes. Coming to the most important part of Professor Corfield's report—the state of the drains of the infirmary—the report says that "the drains, both internal and external, have been carefully tested, and in several cases faults have been discovered in the latter, and later investigation has disclosed that some of these faults were due to imperfect workmanship in fitting the drain-pipes to the iron outlets of the traps, thus allowing the escape of smells not through, but by the side of, the traps. There can be little doubt that in this way the atmosphere of the wards has from time to time been vitiated. The upper length of the drain most responsible for this state of things has already been entirely removed. Cases of imperfect connexion between iron and earthenware pipes were found in two instances on the western side of the building, which may have contaminated the hot-water duct near the nurses' dining-room windows. The escape from these faulty connexions has doubtless been injurious to the sanitary condition of the house, and instructions have been given to test, and if necessary to re-set, the whole of the gully-traps around the infirmary, and also to put additional ventilation pipes on the eastern block as recommended by Professor Corfield, and to make any other minor alterations in the existing upper connecting drain-pipes which may be thought advisable. The gully-traps have been regularly examined and cleansed and their satisfactory condition has been reported on from time to time at the weekly meetings. The drains have been systematically and thoroughly flushed. Those in immediate connexion with the buildings are receiving, and will continue to receive, careful attention. Sufficient cause has not been shown to justify Professor Corfield's opinion that 'the whole of the present drainage arrangements must be condemned and removed entirely and new drains laid on concrete ...... preferably throughout of heavy iron pipes, coated inside and outside with Dr. Angus Smith's solution and having the joints caulked with metallic lead.' This could only be carried out at a great expense which urgent need alone would justify." The concluding portion of the report of the joint conference sets out in brief the recommendations made by Professor Corfield and states that although doubtless many alterations and additions are desirable the weekly board and the governors will have to consider what is most urgent and really practicable, for to carry out the recommendations enumerated would entail an expenditure far in excess of any funds at present at disposal. The surgical staff having called attention to the utter inadequacy of the present operating theatre and the great difficulties under which the important and critical work of that department is carried on, the weekly board have ordered plans to be prepared for a new surgical wing, to comprise all the arrangements and appliances that the experience of the most modern hospitals has proved to be valuable. These plans have been adopted and the work is now making rapid progress. The new wing will contain two operating theatres (with anæsthetic, sterilising, and nurses' rooms), a waiting hall, a new surgery and two examination rooms adjoining, a dispensary and ample store-room, a room for special night cases, a sitting-room and bedrooms for the house surgeon and resident surgical staff, an entrance hall, a clerk's office, a porter's room, and sanitary and other requisite accommodation. The cost of the new wing will be about £12,000.

# ASYLUM REPORTS.

*The Retreat, York (Annual Report for 1900).*—The York Retreat was founded early in the nineteenth century by the Society of Friends for the care and treatment of insane patients and is one of the oldest institutions for the treatment of mental disease in England. The average number of patients resident during the year was 162 and comprised 60 males and 102 females. The admissions during the year amounted to 39—viz., 17 males and 22 females. Of these, 31 were first admissions. Dr. Bedford Pierce, the medical superintendent, states in his report that from a financial injury, giving a ratio per 1000 of strength of 688·9 and 135·2 respectively. The daily average of patients was 799·8, and the ratio per 1000 of strength 34·8, as compared with a daily average of 645·8 and a ratio per 1000 of 32·1 for 1899. The number of persons invalided from the service was 695, a ratio of 29·2 per 1000 of force, classified as 586 invalided for disease and 109 for injury. During the year there were 211 deaths, the death-rate per 1000 of force being for disease 5·01 and for injury 3·87, or a grand total of 8·88 per 1000. The admissions to the sick list during the year included 1699 cases of epidemic catarrh, 983 of malarial diseases, 963 of wounds, 902 of diarrhœal affections, 828 of rheumatic affections, 336 of dengue, 246 of alcoholism, 195 of dysentery, 175 of typhoid fever, 160 of measles, 132 of mumps, 128 of heat-stroke, 117 of pulmonary tuberculosis, 100 of organic heart disease, 99 of pneumonia, 40 of nephritis, 37 of rubella, 10 of small-pox, two of yellow fever, and one of bubonic plague. The returns of recruiting show that a total of 25,081 recruits were examined, of whom 9625, or 383·7 per 1000, were rejected for all causes, and 628, or 25·0 per 1000, were rejected for colour-blindness. A special appendix to the report, occupying 24 pages and drawn up by Dr. Presley M. Rixey, Medical Inspector, United States navy, is devoted to the case of the late President McKinley.

### AFFAIRS IN SOUTH AFRICA.

The War Office return of the casualties in the Field Force in South Africa during the month of December, 1901, shows the total reduction of the military forces up to the end of that year through the war to have been 24,299, made up as follows: deaths in South Africa, 931 officers, 18,033 men; missing and prisoners, 442 officers and men; invalids sent home who have died, seven officers and 449 men; and invalids who have left the service as unfit, 4437. As regards deaths (exclusive of those who have died in captivity) described as killed in action or died from their wounds we find the numbers to be 630 officers and 6397=7027, as compared with 11,273 deaths from disease The number of officers sent home as invalids amounts to 2664, and of men 61,666. Of these, a great majority have recovered and rejoined for duty; of the rest, 449 have died, 4437 have been discharged the service as unfit, and 862 are in hospital. As regards the purely military news it seems clear that De Wet had a strong force of excellent fighting material in his audacious and enterprising, as well as skilfully executed, attack on the British at Tweefontein. It was a disastrous attack as far as we were concerned and does not, we fear, say much for the alertness and foresight of the British force. The slanderous and unfounded charges against British officers and soldiers in the continental, and especially the German, press have naturally caused a good deal of indignation in this country.

### DEATHS IN THE SERVICES.

Surgeon-Lieutenant-Colonel Henry Cramer Guinness, L.R.C.P., L.R.C.S. Irel., A.M.S. (retired), at his residence, Wellington Lodge, Cheltenham, on Jan. 2nd, in his sixty-fourth year. The deceased, who was the son of the late Dr. Arthur Guinness, took the qualifications of L.R.C.P. and L.R.C.S. Irel. in 1859. He entered the army as an assistant surgeon in 1859 and was promoted to the rank of surgeon in 1873, surgeon-major in 1875, and surgeon-lieutenant-colonel in 1879. The deceased officer retired from the army on half-pay in 1893.

Colonel Oswald Gillespie Wood, C.B., R.A.M.C., who is reported to have died on Jan. 3rd at Kroonstadt, where he was principal medical officer, was in his fifty-fifth year, and was appointed a lieutenant-colonel in the Royal Army Medical Corps in March, 1894, after about 20 years' previous army medical service. In 1882 he served with the first Egyptian expedition and was at Tel-el-Kebir; in 1889 he was senior medical officer with the British troops engaged in operations on the Nile; and in the present campaign he was for some time in charge of a general hospital before taking up the post which he last held. Colonel Wood's South African services have been mentioned in despatches and they obtained for him the C.B.

### THE CHANGES IN OFFICERS' UNIFORM.

It seems an extraordinary thing that whenever an outcry rightly or wrongly is raised in this country in regard to the reform of the army, the War Office, or the Horse Guards authorities steps are taken, often without any apparent reason, to bring about, under a real or alleged idea of economy, some change of uniform or dress reform. There is no finality about anything and least of all about officers' uniform. The latest of the many regulations which have been issued on the subject will affect officers of the Royal Army Medical Corps in common with those of all other branches of the service. That the ultimate result of the new orders will be one of economy may be true, but that its immediate effect is to put officers to much expense in the meantime cannot be doubted and we hope that ample time may be given to allow of the present uniform being worn out instead of having to be cast aside as obsolete or not up to date. We may add that the new Army Order just published regarding the service dress of the army, which is a long and elaborate production, seems to be sensible and good and to have been carefully drawn up.

Captain Ernest Kinloch Johnstone, M.D., L.R.C.S. & P. Edin., lately assistant-surgeon, has been promoted to major and surgeon and is serving with the United States Army in the *Philippines*. *He is acting as chief surgeon of the* 3rd Military District, Northern Luzon.

# Correspondence.

"Audi alteram partem."

## INERT VACCINE LYMPH.

*To the Editors of* THE LANCET.

SIRS,—I have read with interest the letters which have recently appeared in your pages on the subject of inert vaccine lymph. Opinions appear to be divided on the subject, some of your correspondents suggesting that every practitioner should publish the results of his vaccinations and revaccinations, giving the source of the vaccine lymph employed; others incline to the view that the State alone should manufacture and distribute the glycerinated pulp; and others, again, would like to see a committee of experts appointed by the State to supervise private establishments *and to lay down the best methods of preparation and pre*servation of vaccine. I do not believe that the remedy is to be found in any of these proposals and I shall indicate what I consider is the remedy further on. To make use of the publicity afforded by the journals for the purpose of calling attention to certain marks of vaccine which have given good results or none at all would, I submit, be illegal. Moreover, a particular institution may conceivably supply an excellent vaccine at one time and a very inferior one at another. A monopoly of vaccine by the State would be like the monopoly of matches in France, where it is a saying: "They won't light, they are Government matches." A monopoly of vaccine, indeed, would be a much more serious matter than a monopoly of matches. There must be a method of manufacturing matches which is invariably successful, whereas there is nothing of the kind for the manufacture of vaccine. If a match will not light it is due to a defect in the process of manufacture or exposure to damp. In respect of vaccine the procedure may have been faultless, the lymph may not have been exposed to too high a temperature (heat being for vaccine what damp is for matches), yet the results may be negative. It follows that if the State undertook the exclusive manufacture of vaccine it is quite possible—indeed, it has actually happened—that for some considerable time the State may find itself in the position of being unable to furnish a trustworthy vaccine. So long as the field is left open to private institutions England will never, during such period, be left destitute of vaccine, since even public vaccinators can obtain a supply from institutions which, at that particular period, are in possession of an active vaccine. The French Academy of Medicine supplies lymph gratis to all practitioners who apply for the same, yet many prefer to obtain their lymph from private establishments on account of the failures following the use of the Academy lymph. *If the* State monopolised the manufacture of vaccine lymph it ought logically to monopolise the manufacture of all serums and even of all drugs. The State would become manufacturer of chemical products, druggist, herbalist; it would supply the retail chemists who would themselves become servants of the State.

There is no obvious reason why medical men should not in their turn become administrative officers and be constrained to take the opinion of their hierarchical superiors on the applicability of a particular remedy to a particular disease Following in the steps of medicine and pharmacy, industry rates during the same period being 19·6 in London and 21·1 in Edinburgh. The 214 deaths of persons belonging to Dublin registered during the week under notice were 21 in excess of the number in the preceding week, and included nine which were referred to the principal zymotic diseases, against 15 and 10 in the two preceding weeks; of these three resulted from diphtheria, three from diarrhœa, two from "fever," and one from whooping-cough. These nine deaths were equal to an annual rate of 1·2 per 1000, the zymotic death-rate during the same period being 1·8 in London and 0·3 in Edinburgh. The deaths from diphtheria, which had been three and two in the two preceding weeks, rose again last week to three; the fatal cases of diarrhœa corresponded with the number in the preceding week; while the deaths referred to different forms of "fever," which had been four and five in the two preceding weeks, declined last week to two. The 214 deaths in Dublin during the week under notice included 33 of children under one year of age and 65 of persons aged upwards of 60 years; the deaths of infants showed a marked increase upon the number in the preceding week, and those of elderly persons were slightly in excess. Nine inquest cases and six deaths from violence were registered; and 65, or nearly one-third, of the deaths occurred in public institutions. The causes of 13, or more than 6 per cent., of the deaths in Dublin last week were not certified.

## THE SERVICES.

### ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeon E. W. Luther to the *Majestic*. Surgeons: J. R. Muir to the *Vivid* for dental duties; J. M. H. Conway to the *Jupiter*; W. B. Maurice to Haslar Hospital; H. C. Adams to the *Resolution*: M. L. M. Vaudin to the *Espiegle*; and W. Jackson to the *Wildfire* for the *Immortalité* and Naval Barracks.

### ARMY MEDICAL SERVICE.

Lieutenant-Colonel A. Keogh, C.B., R.A.M.C., to be Deputy Director-General and to have the temporary rank of Surgeon-General whilst so employed, vice Surgeon-General H. S. Muir, C.B., whose period of service in that appointment has expired. Dated Jan. 1st, 1902.

Colonel Sir T. J. Gallwey, Principal Medical Officer of the Home District, has been selected for appointment as Principal Medical Officer in India, with the rank of Surgeon-General, succeeding Surgeon-General W. Taylor, appointed Director-General of the Army Medical Service.

### ROYAL ARMY MEDICAL CORPS.

Temporary Major C. Stonham, C.M.G., Surgeon-Captain, Middlesex Imperial Yeomanry, is granted, on relinquishing the appointment of Officer in Command and Chief Surgeon, Imperial Yeomanry Field Hospital, the honorary rank of Major in the Army, with permission to wear the uniform of the corps. Dated May 2nd, 1901.

Surgeon Captain C. N. Lee, A.M.R., assumes medical charge of troops, &c., inner defences (Inchgarvie, Dalmeny, Carlingnose, and coastguard batteries). Lieutenant R. I. Rowley is posted to the Mandalay District for duty in the Station Hospital, Shwebo. Lieutenant-Colonel W. L. Lane, in medical charge of the Station Hospital at Ahmednagar, and Lieutenant-Colonel G. E. Weston, in medical charge of the Station Hospital at Nusseerabad, hold themselves in readiness to proceed to England. Lieutenant-Colonel F. P. Nichols, doing duty at the Station Hospital, Mandalay, is ordered to assume the medical charge of the Station Hospital, Shwebo, vice Major W. S. Boles, who proceeds to Mandalay. Captain Hall assumes charge of the Station Hospital at Calicut, vice Lieutenant-Colonel J. Maconachie, proceeding to Nusseerabad, in the Bombay Command, for duty.

The Government of India has sanctioned house rent for all officers of the Royal Army Medical Corps of the establishment authorised for employment in Station Hospitals at the Presidency towns of Bombay, Madras, and Calcutta, provided such officers are not supplied with public quarters.

### IMPERIAL YEOMANRY (IN SOUTH AFRICA).

The undermentioned officers having relinquished their commissions are granted honorary rank in the Army as follows, with permission to wear the uniform of the corps:—

*1st Battalion:* Temporary Captain E. T. Shorland, Medical Officer, to be Honorary Captain. Dated April 9th, 1901.

*10th Battalion:* Temporary Captain E. Hopkinson, Medical Officer, to be Honorary Captain. Dated July 18th, 1901.

*12th Battalion:* Temporary Captain H. Manders, Medical Officer, to be Honorary Captain. Dated July 10th, 1901.

*13th Battalion:* Temporary Captain F. A. Hadley, Medical Officer, to be Honorary Captain. Dated June 2nd, 1901.

### VOLUNTEER CORPS.

*Artillery:* 1st Berwick-on-Tweed: Surgeon-Lieutenant C. L. Fraser to be Surgeon-Captain. 1st Midlothian: Surgeon-Lieutenant A. A. S. Skirving, C.M.G., to be Surgeon-Captain. Supernumerary Surgeon-Lieutenant W. M. Taylor to be Surgeon-Lieutenant on the Establishment. 1st Newcastle-on-Tyne; Surgeon-Captain P. H. Watson resigns his commission. *Rifle:* 1st Volunteer Battalion the Cheshire Regiment: Surgeon-Lieutenant A. R. Wilson to be Surgeon-Captain. 1st Volunteer Battalion the Prince of Wales's Volunteers (South Lancashire Regiment): Surgeon-Lieutenant J. N. Patterson to be Surgeon-Captain. 7th (Clackmannan and Kinross) Volunteer Battalion Princess Louise's (Argyll and Sutherland Highlanders); Surgeon-Lieutenant S. Ferguson resigns his commission. 26th Middlesex (Cyclist): Surgeon-Lieutenant P. J. Edmunds to be Surgeon-Captain.

### SOUTH AFRICAN WAR NOTES.

Lieutenant M. F. Foulds, R.A.M.C., recently reported dangerously wounded, has had his right leg amputated at the knee. The injury was received at Harrismith on Dec. 30th.

Civil Surgeons John Collett Osborne, John Wigglesworth, Harold Sidney Callum, and T. Parker have been discharged from hospital to duty.

### NAVAL COURT-MARTIAL AT CHATHAM.

A court-martial was held on Jan. 3rd on board the *Forte*, at Chatham, for the trial of Fleet-Surgeon Robert William Anderson of the *Andromache*, in connexion with the illness and death of a stoker named George Belleney between Nov. 22nd and 25th, 1901. There were two charges: the first alleging negligence and want of due professional care, and the second alleging omission to comply with the regulations ordering the sick to be visited twice daily and oftener if necessary. The court found the charges proved and ordered the accused to be severely reprimanded and dismissed his ship. It appears that the stoker in question was admitted to the sick bay of the *Andromache* at North Shields on Nov. 23rd, with a history that he had been previously suffering for a few days from the symptoms of an ordinary cold. Shortly before his admission he had walked about five miles in the wet and cold. Pneumonia followed and death suddenly and unexpectedly occurred owing to heart failure. Fleet-Surgeon Anderson, who was on short leave at the time but occupying a house in the neighbourhood, was communicated with and saw the deceased, but it does not seem that he or the sick-bay attendant found any cause for apprehension in the patient's condition; indeed, it is stated that his temperature was normal. But the report in the *Times* of the proceedings of the court-martial is not such as to enable us to arrive at any definite opinion, for we are not told whether the patient's temperature remained normal throughout his illness, what was the rate of respiration, or whether the medical examination included any special physical examination of the chest. It seems clear, however, that the serious or urgent nature of the case was not suspected by those in the sick bay or in immediate attendance on the patient, and his illness, therefore, did not attract the attention which it would otherwise have done. Fleet-Surgeon Anderson, it is right to say, had always previously held a high character for his care and attention to the sick. We think that it is to be regretted that he did not proffer himself for examination on oath by the court.

### HEALTH OF THE UNITED STATES NAVY DURING 1900.

The medical report on the state of the United States navy during the year 1900, drawn up by Dr. W. K. Van Reypen, Surgeon-General of the navy, is a voluminous work, including a great many reports presented by individual officers, and in the aggregate filling 328 closely printed pages. The health of the navy and marine corps for the calendar year 1900 was satisfactory. The average strength of the active list was 23,756, an increase of 2937 over the previous year. The total number of admissions to the sick-list for all causes was 18,936; of these, 15,829 were for disease and 3107 for

It is a pity that Mr. Spencer should blame those of his professional brethren who are ambulance lecturers, for he should have sufficient confidence in them to know that they would never teach such glaring mistakes as he mentions, but he should be excused if he blamed the lay public for not paying sufficient attention to the lectures and instruction given them, and also for not keeping up the general principles taught them.

I am a lecturer of 20 years' standing and an examiner for the St. John Ambulance Association, and have probably seen a good deal more of ambulance work done by the lay public than Mr. Spencer has, and am proud to say that I have seen much excellent work done by holders of the First Aid certificate, and have known more than one life saved by their prompt attention. As an examiner I say that I should not hesitate to pluck any candidate who told me that he would act in the way that Mr. Spencer describes. In conclusion I cannot help saying I do not wish to shield those laymen who made the mistakes Mr. Spencer has mentioned, but it is not the fault of the teaching; it is the difficulty of driving plain common-sense into the heads of some people.

I am, Sirs, yours faithfully,
JAMES J. MARSH,
Surgeon to the Belgravia Nursing Division of the
Jan. 6th, 1902. St. John Ambulance Brigade.

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*To the Editors of* THE LANCET.

SIRS,—As a lecturer on first aid for over 16 years and an examiner for many years I ask you to allow me to reply to a letter by Mr. W. G. Spencer in THE LANCET of Jan. 4th. Mr. Spencer details a list of cases in which improper first aid has been the cause of disastrous results. Of course, good intentions cannot be adduced as an excuse for ignorance or justify doing harm although meaning well. But it is in his deductions that I take exception, as I consider they are formed upon an imperfect basis. He states that because those who have been pupils of ambulance classes have in many instances made grievous errors in first aid treatment, therefore the instruction given has been wrong. He says: "It would appear that instruction is given in such classes which is not informed by the actual requirements of practical surgery. Those who have attended such classes seem to have got the idea fixed in their minds that they must always apply some sort of an improvised tourniquet to the limb above the bleeding point, whilst they have not learned in these classes the necessity of applying pressure directly to the wound."

I have always impressed upon my classes that the two most important things to remember in first aid to a case of hæmorrhage are—position and pressure upon the bleeding point. I have examined classes all over East Kent and I have universally found that the same teaching has been adopted, and it has been a very rare exception to find a candidate applying a tourniquet, except as an adjunct, when the hæmorrhage was arterial and excessive. I will not go further into details, but must say from my experience that the teaching in first aid classes in connexion with the St. John Ambulance Association is sound from a surgical point of view and in no way deserves the public strictures which Mr. Spencer has directed against it.

The practical side of the question raised is of great importance, as such disastrous results of first aid call for a remedy as speedily as possible. This, I believe, can only be achieved by discovering the true cause of the ignorance displayed, and not by hasty condemnation. In my opinion the defect lies in the short course of instruction—viz., five weekly lectures. With enthusiastic pupils, reading up their notes and book, this is sufficient to enable them at the end of the sixth week to pass an examination with about 60 per cent. of marks. But evaporation soon takes place, and unless they continue their reading they soon become very uncertain and mixed in their ideas as to what they should do in any emergency. This is a natural result. Therefore, the remedy appears to be to prolong the course of instruction, and thus give an opportunity of more firmly fixing the principles of first aid on the minds of the pupils. I have had many opportunities of seeing cases in which suffering has been greatly relieved, and in more than one instance life probably saved, by properly applied first aid, and I feel strongly that encouragement ought to be given to every man and every woman to acquire a knowledge of it rather than discouragement.

Defects and ignorance certainly are rightly and justly brought before the profession, but I fail to see any justification for making ruthless accusations against ambulance teachers without any evidence whatever. I maintain that they have not deserved this censure, as they cannot be held responsible for the fault of others.

I am, Sirs, yours faithfully,
Herne Bay, Jan. 6th, 1902. EDWARD C. FENOULHET.

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*To the Editors of* THE LANCET.

SIRS,—It is with the greatest satisfaction that I see that a surgeon of Mr. W. G. Spencer's position has taken up this important subject, the necessity for reform in which was first forcibly impressed upon me by a case which occurred when I was a house surgeon at St. Bartholomew's Hospital. Although almost exactly similar to one related by Mr. Spencer, yet it is so typical that I would wish to quote it, for it is difficult to effect an alteration in traditional teaching, and I do not think the point can be too much emphasised.

A workman was carried into the hospital with the history that a piece of iron had fallen against his leg, causing it to bleed freely. and that the foreman of the works, having received ambulance instruction, had duly attended to him. The right leg of his trousers was saturated with blood, and his blanched face and anxious, restless expression showed how severe had been the hæmorrhage. Round his leg were loosely wrapped some rags; on tearing these off an actual jet of blood was disclosed issuing from a small wound in a varicose vein. The tip of one finger arrested this at once, and looking up the leg I found a tourniquet of cord and pieces of wood tied firmly round the thigh tight enough to impede all venous return. This was cut away at once, and there was no further trouble with the hæmorrhage, but the man was not well enough to leave the hospital for a week owing to his anæmic state.

Two things seemed clear in the case: firstly, that if no tourniquet had been applied the bleeding would have ceased spontaneously; and secondly, that if it had not been removed the man would have bled to death. He would have been killed by misguided interference, and this case is but one of many. Surely it is wrong to encourage the use of such an uncertain and dangerous appliance. If it is applied tightly enough not to actually increase the hæmorrhage it must cause great pain, and if not soon removed may determine gangrene of the limb, while in the immense majority of cases it is a quite unnecessarily severe measure. We know that hæmorrhage from wounds of even large arteries—and these form but a fraction of the cases dealt with—can be treated successfully by pressure. Mr. Bowlby, writing of his recent experience of cases of primary hæmorrhage in South Africa, states that "in the vast majority of cases rest, pressure, and careful bandaging with elevation of the wounded limb, will suffice." Why, then, should the inexperienced be worried and confused by being told first to distinguish between capillary, venous, and arterial hæmorrhage, and to apply different treatment for each, and a tourniquet in one position or the other for the last two, when one simple method, *pressure at the seat of injury*, is the right treatment for the overwhelming majority of them all, no matter where the wound is situated? And add to this confusion the loss of valuable time in trying to determine the particular kind of bleeding in a given case (when probably all three are occurring) and then improvising and attempting to apply a tourniquet in what is imagined to be the right place. The only objection to local pressure seems to be a possibly increased risk of sepsis from direct applications to the wound, but I cannot think this of much weight practically.

The fact seems to be that the tourniquet idea appeals to the average person and sticks in his mind, although undue stress may not be laid on it in the ambulance books and classes. But it is the object of first-aid instruction to impart something clear, lasting, and, above all things, useful, to the minds of those who attend, and in the subject of the arrest of primary hæmorrhage I think all must agree with Mr. Spencer that this end has not been attained by the methods of teaching at present in vogue.

I am, Sirs, yours faithfully,
R. DE S. STAWELL, M.B. Cantab., F.R.C.S. Eng.
Shrewsbury, Jan. 6th, 1902.

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## CARCINOMA AT AN EARLY AGE.

*To the Editors of* THE LANCET.

SIRS,—The following may be of some interest from the early age at which the disease developed. Last week he attended a woman, aged 24 years and five months, in and commerce as a whole would pass into the hands of the State, an alternative which certainly offers one solution of the social problem but which would leave individual initiative out in the cold. I should certainly prefer supervision by the State, but such supervision would require to be exercised by thoroughly competent experts—that is to say, medical men who prepare their own vaccine. In such case would these medical men *qua* manufacturers of vaccine not in all probability *display a tendency to believe that their own methods* are the best and that all other procedures are necessarily inferior to their own? Obviously this suggestion is impracticable. In all establishments, whether public or private, in spite of every possible precaution, there are times and seasons at which the vaccine product is inert or comparatively inactive, the reason of which is still unknown. There are periods, indeed, when this sterility affects whole countries. I am in communication with a large number of *vaccine institutes throughout* Europe *and can speak* with authority on this point. We may therefore take it as proved that at certain times this or that institute will produce only inert lymph. A lymph which was originally very active may become inert in a very short space of time, while other specimens will retain their activity unimpaired for an indefinite period. The accuracy of this observation can be *testified to by all directors of vaccine institutions.* There is a third fact—viz , that lymph too freely diluted with glycerine or water loses its virulence. We are confronted, therefore, with three causes of inert vaccine: (1) defective virulence *ab origine;* (2) spontaneous loss of virulence after a short time; and (3) loss of virulence as the result of too free dilution.

Now for the remedies. *It is indispensable in the first* place that directors of vaccine institutes should test their glycerinated lymph. This test may be applied on the rabbit, the calf, or the child. The only real test is that on the child, because a vaccine which takes very well in the animal may fail in the child. Since vaccine, when first gathered, always contains a large number of micro-organisms, possibly pathogenic, it must be allowed to stand for some time in order to allow of the destruction of the greater part of these organisms. Vaccine a month old and free from injurious organisms must be inoculated by means of incisions of sufficient length and well separated so that the vaccinal vesicles may run a separate course at the site of each incision. The evolution of the vesicle must be inspected daily and it is on the third or fourth day (not the eighth) that one can form an opinion as to the value of the vaccine. If we make an incision one centimetre in length the vesicles at the end of the third day should be present in such abundance as to look like a single vesicle with straight edges following the line of incision. If the margins are irregular or dentated the vaccine is not of the first quality. If along the incision there are only one, two, or three isolated vesicles which do not become confluent for a day or two the vaccine is not active enough for use. When vaccine remains in stock for several months it is the duty of the director to test *it from time to time,* eliminating *on each occasion* all vaccine which shows itself inactive. By following this procedure the institutes will furnish vaccinators only with active lymph which will invariably *give satisfactory results—i e ,* 100 per cent. for vaccinations and 80 per cent at least for revaccinations.

Loss of activity as the result of too free dilution is the least important because it can be made a rule never to mix with the pulp more than the quantity of glycerine absolutely necessary to render it fluid and to allow of its introduction into tubes. *Glycerinated pulp ought always to be thick, and* in no case should the proportion be exceeded of four parts of glycerine to one of pulp gathered by the curette without forceps—that is to say, not already diluted with blood serum. If all vaccine institutes follow the method which I have just described they will never supply vaccinators with inert lymph, though they themselves may now and again find themselves in possession of inert lymph and they may even have a run of bad luck in this direction. What, then, is the remedy? There are several, but I will limit myself to one—viz., never vaccinate the calf with fresh lymph, but use vaccine which has been in stock for two, three, or four *months, the perfect virulence whereof has been ascertained* by previous tests. If, in spite of this precaution, the desired result is not obtained recourse should be had to an institute which is furnishing an active lymph, and a series of calves vaccinated with this lymph after having tried it on a child. No attempt should be made to start the series with lymph of one's own preparation until one is sure that the bad period is at an end. The obligation to have *occasional recourse to* another institute is a strong argument against the proposed State monopoly, because should the State vaccine become inert it would perforce have to find an institute in a position to supply it with active lymph to start afresh with, and if the institutes in Europe were restricted to a few State institutes it might very well happen that they were all *suffering from the same defect* at *the same time.*

What would seem particularly desirable is the establishment of a closer relationship between all vaccine institutes in Europe, or even of the whole world, so that they may come to each other's assistance. I have endeavoured to establish some such intercommunication and I am pleased to say that my appeal has been favourably received by a certain number of *institutes in England, Germany, Austria, Russia, Spain,* Portugal, Switzerland, and France. I hope ultimately to succeed in forming a sort of syndicate of vaccine institutes. When I have attained that object the problem will have found its solution and in the event of a lack of virulence the institutes will know where to put their hands on the supply of active pulp or lymph which they require.

I am, Sirs, yours faithfully,
EDMOND CHAUMIER, M.D. Paris.

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# FIRST AID FOR PRIMARY HÆMORRHAGE: THE WRONG TEACHING GIVEN TO AMBULANCE CLASSES.

*To the Editors of* THE LANCET.

SIRS,—I read Mr W. G. Spencer's letter on the wrong teaching given to ambulance classes in THE LANCET of Jan. 4th with surprise. *He seems to take it for granted* that because a person has gone through one course of lectures on "First Aid" and treats a patient wrongly that the lecturer must be at fault, because the said person *says* he was taught to do what he did I am perfectly aware that a deal of harm is done by people who attend one course of lectures and no more and, maybe years after, when suddenly called upon to stop hæmorrhage and having only a hazy recollection of what they ought to do, clap a tourniquet on somewhere or other, and cover their retreat by saying, "That is what I was taught to do." But when you come to a trained body of men, such as the St John Ambulance Brigades, who are constantly rendering first aid under the *immediate supervision* of an honorary surgeon of the brigade, my experience *is totally different.* *I have never* seen a case of primary hæmorrhage that was not treated in the same way as I should have done myself—viz: (1) by digital pressure in the wound; and (2) by a hard pad and bandage (if available) over the wound. If a member of the Worksop Division were to tie a handkerchief "on the side nearest the heart," instead of *directly over* a ruptured varicose vein, I *should advise him to go home,* burn all his certificates. and hand in his resignation.

I am, Sirs, yours faithfully,
A. J. HELM MONTAGUE,
Honorary Surgeon and Superintendent, Worksop Division,
St John Ambulance Brigade.
Jan. 6th, 1902

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*To the Editors of* THE LANCET.

SIRS,—In answer to Mr. W. G. Spencer's letter on the subject of "*First Aid and Primary Hæmorrhage:* the Wrong Teaching given to Ambulance Classes," I am sorry that he has made use of a wrong statement in the latter part of his heading, because in the commencement of his second paragraph, he says, "It would 'appear' that instruction is given in such classes which is not informed by the actual requirements of practical surgery." By saying this he goes against the *positive* statement given in his heading.

Surely, Sirs, Mr. Spencer cannot for one single moment believe that any qualified medical man (who alone are entitled to lecture and examine for the St. John Ambulance Association) would be foolish and ignorant enough to leave out in his lecture *the first general principle of the arrest of* hæmorrhage? If so, he can have very little faith in his own *cloth.* If Mr. Spencer will look at the "Text-book on First Aid" which is supplied by the St. John Ambulance Association, and on which lecturers have to give instruction, he will find clearly printed and in large type what he says *is* not taught, and it is in such languauge that the most ignorant person who is able to read can easily understand.

lessons which they have received in elementary hygiene, a knowledge which those around them may readily acquire.

It is much to be regretted that many in whom the disease is more firmly established are unable to remain in sanatoriums long enough to enable us to put "arrested" after their names when describing their condition on leaving. When the profession, and perhaps the public as well, realise the vital importance of *early* treatment and patients are sent in before the disease is firmly established; and when slight apical dulness and prolonged expiration are, with the subjective symptoms we all know, regarded as more than suspicious, the numbers who must now be returned to their homes as "not improved" will be very small. In many cases the "treatment" as regards the open window, dietary, and exercise is followed up at home with excellent results.

I venture to think that the term "aggregation" is inapplicable. Flocking together of the patients is very strongly discouraged. There may be two in one shelter or a larger number in a roomy, breezy ward; but here, as in the dining-hall—the only place where patients come together—the air-space is unlimited and the air in motion, and this motion of the air is the very essence of the open-air feature of sanatorium treatment. Closed windows or shelters that do not permit the free passage of air-currents ought never to be used. If the patients were allowed to occupy a still and stagnant atmosphere the *circulus vitiosus* might be created, but under proper sanatorium treatment this could never be the case, the aërial currents removing at once all organic matter and bacilli which are soon destroyed by nature's methods—air and sunlight. In this way no zone of infective matter can be formed and infection is impossible. With a single open window the thorough purification of the air cannot be assured and herein lies the difficulty, or one of them, of carrying out the treatment away from a sanatorium which is literally an open-air institution. Unfortunately, in the vast majority of dwelling-houses the air is vitiated more or less and here infection is very probable, but we do not learn of any attendant on consumptives being attacked, nor are there any grounds for assuming that reinfection does take place. And I doubt if such is possible in a well-constructed and well-conducted institution. The patients themselves enjoy their healthy surroundings and fairly revel in the fresh air, and to one who has lived in a sanatorium no word could seem less suitable than that of "prison" used by Mr. Marriott. The cheerfulness, the ready acquiescence to the necessary discipline, the returning health, the hopefulness of recovering patients and their enjoyment of their surroundings tend to produce a harmony and brightness far from one's idea of durance vile. The disease, we know, is not to be eradicated by sanatorium treatment alone, which deals mainly with a result but in some measure reaches the cause by the dissemination of knowledge of the best means of promoting health and preventing infection. . The patients learn the value of fresh air, instruction in the use of which is needed so urgently amongst all classes, as the poisonous atmosphere of public buildings and conveyances as well as residences amply testifies; so that while all effort should be made to promote a higher standard of health by the adoption of thorough ventilation, better housing of the working-classes, modern drainage systems, and other sanitary measures, no pains should be spared to ameliorate the condition of those who are afflicted.

It does not follow that any claim has been made for a "corner" in fresh air because the treatment cannot always be effectually carried out at home. Though fresh air may be the principal agent in the treatment there are others which are of hardly less importance. I mean a careful regulation of the patient's daily life in every detail, and this, I believe, can, until the patient is in a fair way to recovery or the disease of very early stage, only be carried out in a sanatorium where the patient is guided by those who have made a special study of the disease and are accustomed to sanatorium practice. Under these conditions the happiest results may be looked for in those who come under treatment at an early stage of the disease, and often to those in whom evidence of consolidation of extensive area of lung is not wanting hope of prolonging life under pleasant circumstances may be given.

I would add a word about the condition of the teeth in phthisical patients, a matter on which one can hardly bear too strongly. It is an exception, in my experience, to find even a moderately good set of teeth; not only is the masticating power lost or defective, but the mouth is often filled with stumps in all stages of decay. The food, on which the feeble patient is so dependent, is not only introduced at the very entrance to the digestive tract to the action of septic micro-organisms, but is swallowed in masses too large for the enfeebled digestive organs to deal with. I would make it a rule that prior to the treatment of a consumptive patient the teeth and gums should receive the attention that will enable them to fulfil their important offices effectually.

I am, Sirs, yours faithfully,
W. M. M. JACKSON
(Late Resident Medical Officer, Westmorland Consumption Sanatorium).

*Scarborough, Jan. 4th, 1902.*

## THE LONDON LICENTIATES' AND MEMBERS' SOCIETY.

*To the Editors of* THE LANCET.

SIRS,—I would like to state concerning the paragraph in your annotation of Jan. 4th—

> *If the London Licentiates' and Members' Society can prove that* the diminishing number of medical students at the metropolitan schools is really due, or largely due, to the fact that the title "Dr." is not obtainable through the portals, &c.,

I submit that little further proof is necessary, for it is well known and felt by the teachers of London that the grave disabilities of London medical students have been an ever-increasing cause of dissatisfaction for the last 15 or 20 years and have culminated in many men joining provincial schools. As regards provincial men, it is unlikely that Welsh, Liverpool, and Birmingham students will be induced to come to the metropolis, London offering practically no pass degree as a reward when they have degree-granting bodies of their own. It must also be remembered that the Carnegie Trust of £2 000,000 will naturally act as a further stimulus for Scotchmen to return to study medicine in Scotland. I have been repeatedly informed by conjoint men that they strongly advise intending students to avoid coming to London under present circumstances. I think the above facts go to show that the absence of attraction in London with the counter-attractions elsewhere is, and will be, the further cause of a diminution in the number of London students.

I am, Sirs, yours faithfully,
FREDERICK W. COLLINGWOOD

Wimpole-street, W., Jan. 4th, 1902.

## IRRIGATION IN INFANTILE DIARRHŒA.

*To the Editors of* THE LANCET.

SIRS,—In THE LANCET of Dec. 21st, 1901, p. 1728, Mr. W. B. Bennett reports a case of epidemic diarrhœa in an infant treated by irrigation of the bowel. Only on one occasion was irrigation performed and immediate and lasting relief followed, although on withdrawing the nozzle of the syringe the injection was "immediately shot out in all directions." While agreeing with Mr. Bennett as to the value of this form of treatment, I cannot but think that the evidence adduced in his case is not very convincing It is not easy to persuade oneself that the almost momentary presence of a weak solution of permanganate in the bowel could bring about immediate and lasting cure of a disease which had resisted all other treatment for nine days; at any rate, I fear that anyone expecting a like result would be disappointed in a considerable proportion of cases. If Mr. Bennett had been able to report upon the result of similar treatment in others of the many cases which came under his care last summer it would have been of greater value. My own experience of this treatment has so far been very limited In one case of very obstinate diarrhœa in a child, aged 13 months, treated in the summer of 1900, irrigation was, I believe, the means of saving the child's life. The diarrhœa had persisted for about six weeks before I began to irrigate, from 10 to 25 extremely offensive watery motions being passed in 24 hours, with latterly mucus and streaks of blood, in spite of dieting—whey, albumin water, and raw meat-juice being successively tried, and bismuth, salicylate of soda, resorcin, creasote, tincture of opium, &c., in the way of drugs. I commenced by injecting half a pint of weak boric acid solution twice a day, gradually increasing it, under low pressure (and desisting as soon as the child showed any signs of discomfort), up to nearly two pints. This treatment had, however, to be continued first confinement, but she was unable to nurse the child as one breast was removed in April last for carcinoma and the other now shows some evidence of being implicated. She has been married about 12 months and it is two years since she first noticed a lump in the breast. The diseased tissue was subjected to a pathological examination and the diagnosis was confirmed before operation. Her mother is stated to have died from a "tumour in the side." *There is nothing else of importance in the family history.*

I am, Sirs, yours faithfully,
E. F. O'FERRALL, L.R.C.P. Lond,
Brixton, S.W., Dec. 16th, 1901.

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# THE SANATORIUM TREATMENT OF CONSUMPTION.

*To the Editors of* THE LANCET.

SIRS,—I noticed with great regret that in THE LANCET of Dec. 28th, 1901, p. 1843, Mr. Edward Dean Marriott used Sir Dyce Duckworth's remarks, on the personal factor in tuberculosis as a text to anathematise the sanatorium treatment of consumption and all who follow it; and I venture to controvert several of his statements, as I feel that his letter, if left unchallenged, might do much to throw discredit upon a *method of treatment* the value of which we in England have but lately recognised. Apart from various side issues which your correspondent raised, such as the question whether tuberculosis is an infectious disease, the main burden of his philippic was grouped under these headings: 1. Is any scheme devisable by means of which the aspirations of the National Association for the Prevention of Consumption and other Forms of Tuberculosis can be attained? 2. Judged by their own theories of disease-causation, does the aggregation of cases of consumption in sanatoriums recommend itself to ordinary common sense? 3. Are these extraordinary efforts being directed in the true spirit of disease prevention?

1. Dealing with the first question Mr. Marriott very rightly lays stress on the fact that in order to effect a permanent cure the treatment taught in *efficient* sanatoriums must be kept up by the individual patients for two or may be three years; but there is nothing to support his *deduction that a patient must spend these two or three* years in a sanatorium. It has been found, after an experience of 10 or more years, by competent authorities such as Brehmer and Otto Walther, that patients can complete their own "cure" in the greater number of instances after they have spent from four to six months in a sanatorium. During these four to six months the greater number lose all the active symptoms of their disease, which assumes a quiescent and fibrotic character, and in addition they learn the infinity of detail which is necessary to their well-being and by following which they can consolidate their "cure." Mr. Marriott is not justified in making his deduction that the time required is so long that "the financial problem alone is absolutely insoluble," for Sir John Burdon Sanderson,[1] in an admirable address on our duty to the consumptive breadwinner, has shown that the financial problem involved has already been solved in Germany by a system of compulsory insurance; in other words, "every workman whose income is less than £100 a year is required by a law, which came into full operation about *10 years ago*, to insure himself against the two greatest ills flesh is heir to—sickness and old age." Part of the funds accumulated in this manner has been devoted to the establishment and upkeep of the numerous sanatoriums which now exist in Germany for the treatment of consumption among the poor.

2. Mr. Marriott asks the question, Does the aggregation of cases of consumption recommend itself to ordinary common sense? and then asserts that the atmosphere of sanatoriums is so laden with tubercle bacilli that it is a positive source of danger to the patients Now, sanatoriums are usually built where sunshine and pure fresh air—the two greatest enemies the tubercle bacillus has—are most abundant and every precaution is taken in efficient establishments of the kind to avoid any possible spread of infection. In fact, it seems highly probable that the "atmosphere" of any good sanatorium is far more free from tubercle bacilli than the "atmosphere" of an ordinary English house. Your correspondent further bolsters up his argument by stating that the aggregation of cases of scarlet fever and diphtheria in isolation hospitals has been followed by nothing but harm and has created a disease—post-scarlatinal diphtheria. If he will put himself in communication with the medical superintendent of some such institution as the London Fever Hospital, where the treatment of these diseases is carried out on rational open-air lines, I think he will find that the complications and sequelæ met with there compare most favourably with those which obtain in ordinary houses.

3 Mr. Marriott holds that he is committing a heresy in saying that consumption is chiefly caused by want of cubic space and by defective drainage. His figures on this point are hardly necessary, for, as Sir John Burdon Sanderson has said, "the prevalence of phthisis is now recognised as one of *the most certain indications of sanitary defects*"; but, notwithstanding his recognition of the fact that absence of fresh air, together with the presence of debilitating influences, such as bad drainage, are the main etiological factors in consumption, your correspondent strongly protests against any endeavour being made, by means of sanatorium treatment, to place those already afflicted with consumption under such conditions that they may have a continuous supply of fresh air together with complete absence of debilitating influences.

To quote Sir John Burdon Sanderson once more, "Sanitary improvement is only one of the lines along which we have to work in the combat with pulmonary tuberculosis. ...... In other words, *sanatoria for the poor are a necessity.* It is 10 years since this great necessity was recognised in Germany. It has not, even yet, been recognised in England." I would add that Mr. Marriott has also failed to recognise the enormous educational value of sanatoriums and of hospitals such as the Brompton Hospital for Consumption.

Your correspondent enters a further "earnest protest" against specialisation in this disease. He says that this is equivalent to making a "corner" in fresh air. As those who have carefully studied efficient sanatorium treatment know, fresh air is one, but *only one, of the essentials of the treatment* and is not the end and beginning of it. Dr. Otto Walther, in a recent letter to me, says, "The importance of 'individual treatment' must be emphasised again and again. There is no rule which has not to be altered more often than followed." So far as my own experience goes I am convinced that the personal factor in tuberculosis receives more anxious attention in efficiently conducted sanatoriums than under any other conditions

If Mr. Marriott is merely inveighing against sanatoriums run on the principles of an hotel and mainly for profit I am entirely with him, but it is unfair to throw discredit upon a vital form of treatment because certain men have succumbed to the "grosser temptations of the hotel-keeper."

I am, Sirs, yours faithfully,
Brook street, W., Dec 30th, 1901. ARTHUR LATHAM.

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*To the Editors of* THE LANCET.

SIRS,—Mr. E D. Marriott, in his letter in THE LANCET of Dec. 28th, 1901, p 1843, has touched on several points of special interest at a time when the sanatorium or open-air treatment of tuberculosis is occupying the thought and attention of the profession and the public. The cure of phthisis by the open-air treatment has for a long time been a favourite theme of the public press. So radical a change in the principles of treatment as was the exposure of feeble consumptives to the action of cold, fresh air, regardless of climate and season gave rise to amazement, and often to incredulity. From various sources came tales of wonderful "cures," the enthusiasm of the ardent supporters of the treatment and the press notices leading many to expect the impossible. The hope and anticipation of the profession itself have hardly been as yet fully realised, but there is every reason to feel sanguine, looking at the results which have already been obtained. As more data come to hand and those interested in the work have further experience, the subject will be put on a clear and well-defined basis. As regards the use of the word "cured" it is not now generally adopted and it is unlikely that careful men in charge of sanatoriums will use the expression We are justified in substituting "arrest," as those who have had charge of sanatoriums can well testify. Argument on the use of such terms as "cure" and "first stage" case throws no discredit on the treatment. The fact remains that the large majority, if not all, of the *early* phthisical patients are enabled to return to their homes and occupations in robust and vigorous health—a striking object-lesson to all of the value of properly conducted open-air treatment. *Not only* do they carry away with them a healthy frame, but a mind widely expanded by the practical logically refuse by advice of their solicitor by-laws which according to their own statement they do not possess? It was on Feb. 25th of last year when I first applied to the Registrar for the said by-laws.

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[1] Brit. Med. Jour., July 6th, 1901.

I am, Sirs, yours faithfully,

Dublin, Jan. 8th, 1902. S. WESLEY WILSON.

## MUNICIPAL BACTERIOLOGISTS.

*To the Editors of* THE LANCET.

SIRS,—The annotation headed "Municipal Bacteriologists," which appears on page 47 of THE LANCET of Jan. 4th is scarcely distinguished by your usual accuracy. A complete department of bacteriology has been working in the borough of Camberwell for more than four years, and its foundation was commented on at the time, whilst various features of its working have been noticed since, in your own columns. The example thus set has been fairly widely imitated, and, so far as my information goes, neither Cambridge nor Liverpool can claim anything like priority, even in succession to Camberwell. I am happy to be able to add that not only was the local authority of this borough the first to recognise the value of work in this particular direction, but that there is no suggestion which I have been able to make in connexion with it which has not been promptly adopted and carried out as thoroughly as money and trouble could do it. Honour to whom honour is due.

I am, Sirs, yours faithfully,
EDWARD C. BOUSFIELD,
Bacteriologist to the Metropolitan Borough of Camberwell.
Old Kent road, S.E., Jan. 4th, 1902.

## THE TEACHING OF ANÆSTHETICS.

*To the Editors of* THE LANCET.

SIRS,—In THE LANCET of Dec. 7th, 1901, p. 1638, Dr. Heron Watson is reported to have said, during the discussion of the General Medical Council on the above subject, (1) that the subject was taught in Scotch universities; (2) that nurses and dressers were taught the use of anæsthetics in Scotch hospitals and infirmaries; and (3) that *there were no accidents in the said institutions with anæsthetics.*

Now, while the subject of teaching anæsthetics systematically—i.e., compelling the student to attend a course of instruction and show a certificate of such attendance at his final examination—may be one over which there is room for discussion and diversity of opinion, seeing how overburdened he is with "certificate acquiring" already there can be no good object attained by perversion of the truth, unintentionally or otherwise, and I beg most emphatically to deny the third statement *in toto* and the first two partially. I submit that the teaching of anæsthetics in Scotch universities at the present moment amounts to one lecture given, often perfunctorily, by the professors and lecturers on surgery, some even omitting it altogether. Secondly, *clinically* students from their first year, often totally ignorant of the most elementary physiology, are shown how to give chloroform "by rule of thumb." But I beg to say that nurses are not taught to give anæsthetics. I rejoice to say it. They may have been in Dr. Watson's earlier days, and, indeed, I believe they were. I met one of these said nurses not long since—"one of the old school"—and she gave me a very dramatic account of how a patient died in her hands from $CHCl_3$ once, since when she had refused to touch what was distinctly out of her sphere. In no well-regulated hospital is such a procedure now permitted, and Dr. Watson is hardly doing justice to the school he represents in making such a statement. Thirdly, accidents do occur in Scotch hospitals and infirmaries just as they are known to occur in English hospitals and, indeed, in private practice; of this I have abundant documentary evidence and personal knowledge. In Glasgow during a recent year *50 deaths were registered as due to anæsthetics. In five months 10 occurred in hospitals alone.* These last figures are from the gentleman who conducted the post-mortem examinations on behalf of the Crown. As to Edinburgh I know little except that during the past year there have not been less than six deaths in public institutions. Of Aberdeen I can say nothing, but proportionate results are probable. I need not take up your space with further figures; that these accidents do occur is well known even by the laity through the public press. It is no use moralising on the subject, some of them are quite unavoidable, but it were well if more surgeons had the honesty and common sense of Sir William M. Banks and gave their conclusions and experience to the profession as he has recently done.[1] What is wanted is for practical surgeons in large hospital and private practice to discuss such a matter. I know for a fact that a large proportion of students desire more teaching and more light on various points in anæsthesia. If 90 per cent. of students in our schools were asked why the pupil dilated early in chloroform anæsthesia, why it contracted later, and why if the drug was again pushed it dilated again and remained fixed, not one would reply that the first was due to stimulation of the sympathetic, the second to stimulation of the third nerve or its cerebral centre, and the last to absolute poisoning and paralysis of the third nerve and centre.

Dr. Heron Watson has earned the respect of the whole profession by his versatility and his brilliant contributions to the surgical art, but a man in his position when pronouncing on so important a question should make himself more sure of his facts. Borbonius said:—

> "Tempora mutantur, nos et mutamur in illis."

The latter is not always true. I inclose my card and apologise for the length of my protest.

I am, Sirs, yours faithfully,

Jan. 7th, 1902. NICOL JARVIE.

## NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

*The Plague Epidemic.—The Shortcomings of Indian Municipalities.—Typhoid Fever amongst the Natives.—Confused Terms for Mild Cases of Plague.*

LAST week's figures showed only a temporary diminution in the mortality from plague. This week they have again risen and the total deaths for the whole of India number 8878. The Bombay Presidency returns higher figures—viz., 5989, as against 5655 last week. The Punjab had 1689 deaths, as compared with 1646. There has been an increase in Bengal from 168 to 205. The total mortality in India from plague last year during the corresponding week was 1989 only. Plague seems to be increasing again in Bombay city. In Calcutta also, though the figures are small, there are signs of a recrudescence. The deaths from plague last week were only 21, while for this week 31 deaths are recorded. In Bangalore city and in the cantonment, and also in Mysore city, the deaths from plague are higher.

Notwithstanding the increase of plague in nearly all of the infected districts it is disappointing to find that only 1218 doses of the plague vaccine were sent out from the laboratory at Bombay. Inoculation is being carried on to a limited extent in Poona It is reported that the mortality amongst those recently inoculated is much less than amongst those who were inoculated in 1897. The development of the disease in the district of Lahore and its spread in the Punjab has awakened the citizens of Lahore to take steps against it. A non-official committee has been formed and the station has been divided up into specified areas. The formation of these committees is useful as an instructional movement in sanitation, but their value in controlling the extension of the outbreak is very doubtful. The continued existence of plague has directed more attention to sanitary matters than has been given to them before, so that at probably every infected station in India out of evil will come some good. Some of the municipalities are very apathetic. At Madura, the second town in the Madras Presidency, sanitation is the most crying want. The water-supply is reported as deficient in the hot months. There is no drainage system. There is not a single cart maintained for sewage. The markets are in bad repair and dirty. The night-soil depôt is half under water during the rains and the slaughter-houses are mere inclosures without the barest essentials. The public roads, streets, and lanes are used as latrines. Again, it is reported for the town of Dindigul that the disposal of the rubbish and the night-soil is unsystematically carried out and that the market and slaughter-houses are badly in need of improvement.

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[1] THE LANCET, Nov. 16th, 1901, p. 1323.

or nearly three weeks before the motions became normal, nd had to be resorted to some weeks later when a relapse ollowed a perhaps too sudden increase of diet, and was then gain successful. In addition to the cleansing of the bowel, robably some benefit is derived from the absorption of fluid f the injection is retained for a sufficient length of time, and or this reason, as well as for the more thorough washing out of he bowel, it is well to use as large a quantity of fluid as can be orne without discomfort and to retain it as long as possible. hough irrigation is a well-recognised form of treatment, it s probably not made use of as frequently as it might be, nd considering the heavy mortality from diarrhœa in nfants any treatment which holds out any prospect of relief s of vital importance. I am, Sirs, yours faithfully,

WILLIAM THORNELY, M B. Cantab.

Herne-hill, S E, Jan. 4th, 1902

## THE CONSULTANT AND THE GENERAL PRACTITIONER.

*To the Editors of* THE LANCET.

SIRS,—The letter of Mr. F. Montague Miller and your leading article on the Relationship of the Consultant and he General Practitioner will do more for the latter in a few months than all the muddling and bungling of the General Medical Council will do for him in a dozen years. I have been engaged in practice for over 20 years, and I have for ome time been very sure that the relationship of the conultant and general practitioner has been steadily altering—or the worse. One reason is, that the general practitioner s becoming more and more of a "general specialist" He as to have nowadays an intimate knowledge of all "special" rgans; firstly, for purposes of passing examinations; and secondly, for the purposes of existing amidst the competition f his fellows. On the other hand, the consultant is rapidly becoming more of a general practitioner. If a specialist he oes not disdain to prescribe for ailments outside his peciality.

Personally, I regret to have to say that although I have eceived every courtesy from some consultants, by the majority I have actually had patients filched It may possibly be charitably supposed that in the bustle of his busy onsulting-room the consultant may "forget" to ask a patient who has obviously been previously receiving treatment from someone (sometimes prolonged) who the somene was, but it certainly is annoying to find that when, having answered a patient's offhand question, such as: "Who is a good man for the toe-nail, doctor?" the patient hereafter goes to the good man "on his own" and never eturns. More than once the explanation has been: "Well, doctor, you see I found him in the end just as cheap as you. He charged me a *guinea*, but as I *told him* I *could not pay* that every time he told me he would see me twice or three times after each fee for nothing; and occasionally he even saw me at the hospital."

No wonder the general practitioner is beginning to fight shy of his consulting *confrère* when the consultant—so-called—salves his conscience forsooth and acts perfectly uprightly by the terms: one consultation one guinea; second ditto, gratuitous; third ditto, gratuitous. Of course he cannot accept a lower fee than one guinea, and equally, of course this is not the same as 7*s*. per consultation. Oh, dear, no! So he retains, if possible, every fish in his net that swims his way, and the general practitioner, finding that such is the case, keeps them in his own pond if possible.

I am, Sirs, yours faithfully,

Jan. 6th, 1902. A GENERAL PRACTITIONER.

## THE LIVERPOOL PATHOLOGICAL DIAGNOSIS SOCIETY.

*To the Editors of* THE LANCET.

SIRS,—In the Thompson-Yates Laboratory Reports, vol. iii., part 1, I find the following facts about the above society. The annual subscription is 10*s* 6*d*., and for this amount any practitioner can send for examination any number of specimens from cases of infective diseases, or tumours, or samples of urine There are 200 members and nearly 1000 examinations were made during the year. This works out at 2*s*. 1*d* for each examination. These facts show that the practitioners of Liverpool, who, I suppose, value the opinion of a consulting physician or surgeon at the usual amount, think that the opinion of a pathologist is only worth 2*s*. What would be the result if the chemical department of a college undertook to carry out the work of consulting analytical chemists for a twentieth of the usual fees? Would not the chemists throughout the kingdom unite in condemning such a practice? I fail to see the difference in principle between such a society as this and a consultative institute for providing cheap medical and surgical consultations, and we know the opinion of the profession with regard to the latter. *Pathologists are necessarily consultants and should* be treated as such.

It is much to be regretted that the Liverpool laboratories, from which such excellent work emanates, should be associated with this society, but Liverpool is not the only defaulter in this respect. There are numerous centres throughout the kingdom at which pathological opinions can be obtained at cheap rates without any questions being asked about the position of the patient in whose favour the opinion is desired, and it is certainly not to the credit of the profession that these societies should continue to exist unless they are restricted in some way or other.

I am, Sirs, yours faithfully,

Leeds, Dec. 10th, 1901 C. POWELL WHITE.

## A SPEEDY METHOD OF RELIEVING THE PAIN OF PILES.

*To the Editors of* THE LANCET.

SIRS,—The composition of the substance referred to at p. 25 of THE LANCET of Jan 4th which gave almost immediate relief to the pain of a protruded pile was 10 per cent of cocaine and 20 per cent. of menthol in oil of theobroma. The reporter probably mistook "p.c." for "c.c." and wrote "cubic centimetres" instead of *per cent.*

I am, Sirs, yours faithfully,

Liverpool, Jan. 5th, 1902. WILLIAM CARTER.

## X RAYS IN THE TREATMENT OF PHTHISIS.

*To the Editors of* THE LANCET.

SIRS,—As an aid to the methods usually employed at the present time in the treatment of phthisis I have used the Roentgen rays. The cases most suitable for this treatment are of course those in which the apex of one lung only is affected. Using a coil giving a 10-inch spark the resulting x rays were focussed on the seat of the pulmonary lesion for an hour or longer each morning and evening. I should be glad if any other practitioners who have used this method would record their experience

*I am, Sirs, yours faithfully,*

Sheffield, Dec. 30th, 1901. E. B. HAZLETON, M.D. R.U.I.

## A DANGEROUS PRINCIPLE.

*To the Editors of* THE LANCET.

SIRS,—In THE LANCET of Dec. 21st, 1901, p 1764, you were good enough to publish under the above heading a letter of mine in reference to the President, Vice-President, and Council of the Royal College of Surgeons in Ireland refusing to give me a copy of their by-laws "by advice of their solicitor" As your readers may recollect, I stated that I asked for these in order to ascertain if they in any way bore upon the following provision of the College charters of 1844 and 1885:—

> And the examiners or any number of them declared by the by law to be competent to transact business as a Court of Examiners shall in the presence of the President or in his absence of the Vice-President and two or more members of the Council examine . ... any candidate for a Fellowship.

Since then a Fellow of the College applied for a copy of the by-laws and received the following reply, under date Jan. 2nd, 1902:—

> SIR,—In reply to *yours of 27th inst. I am directed by the President* and Council to inform you that there are no copies of the by-laws available
>
> A new edition is being prepared, but it will take some time to bring out this edition *as several changes are contemplated in the by-laws* and *Charters*
>
> Yours truly,
>
> JOHN BARTON, F.R.C.S., Secretary of Council.

I admit I am now mystified by the action of the College, for how can the President, Vice-President, and Council administrative block, with which they are connected by corridors, the latter taken together being several miles in length. There are two wings, for the male and female patients respectively, and at some distance away is a hospital for infectious diseases. At the opposite side is a row of houses for officers. On Jan. 6th 25 patients were admitted to the asylum and these will be increased week by week. The asylum will be chiefly utilised for chronic cases. A church is also in course of erection to seat 800 people. There is also a large recreation hall which will accommodate an enormous number. The whole of the buildings were inspected with great interest by the members of the board who expressed the opinion that they would greatly relieve the pressure to which the board has been put to meet the large demands for accommodation for lunacy cases from various parts of the county.

Dr. Gemmel, senior assistant medical officer of Prestwich Asylum, has been appointed medical superintendent of Whittingham Asylum.

### *Bequests to Liverpool Hospitals.*

The late Mr. Alexander Taylor Riddock of Bootle has bequeathed £500 to the David Lewis Northern Hospital and £500 to the Bootle Borough Hospital.

### *The Health Committee and Preservatives and Colouring Matters in Foods.*

The report of the Departmental Committee nominated by the President of the Local Government Board to inquire into the matter of food adulteration and preservatives was the subject of discussion at the last meeting of the health committee. The defence put forward from time to time in the Liverpool police-courts has been that the preservative has certain medicinal merits, and medical evidence has even been adduced in support of this contention, apparently to show that the consumer would derive some advantage from the casual and surreptitious administration of a dose of drugs with his food. Evidence of such a character, the medical officer of health (Dr. E W. Hope) stated, had frequently been given for the defence when prosecutions had arisen on account of the excessive use of salicylates in foods. Dr. Hope pointed out to the health committee that the final recommendations of the Departmental Committee might be summarised as follows. That the use of formalin or formaldehyde should be absolutely prohibited and that salicylic acid should not be used in a greater proportion than one grain per pint in liquid food and one grain per pound in solid food, and that in all cases its presence should be declared; that the use of any preservative or colouring matter in milk ought to be constituted an offence under the Sale of Food and Drugs Act; that the only preservative to be allowed in cream should be boric acid or borax, in amount not exceeding one-quarter of a grain per cent. expressed as boric acid, the amount to be notified by a label upon the vessel; the only preservative to be used in butter and margarine to be the same as in the preceding, in proportions not exceeding half a grain per cent; that in the case of dietetic preparations intended for the use of infants or invalids chemical preservatives of all kinds should be prohibited; and that the use of copper-salts in the so-called "greening" of preserved foods should be prohibited. It was also recommended that means should be provided for more direct supervision over the use of preservatives and colouring matters in foods. Dr. Hope remarked with satisfaction that the report of the Departmental Committee not only confirmed the equity of the action taken by the health committee, but that, if acted upon by manufacturers and dealers, it would remove altogether the necessity for legal proceedings.

### *The Liverpool School of Tropical Medicine.*

The Liverpool School of Tropical Medicine has received the gratifying intelligence that, following up the excellent work done at the instance of the school at Sierra Leone in the direction of destroying the breeding-places of the anopheles mosquito, the Government has decided to adopt similar measures in other West African colonies. In Gambia a special officer has been appointed who is to see that the most stringent precautions are taken in the matter.

Jan. 7th.

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DIPHTHERIA ANTITOXIN.—At the meeting of the Bridgend Board of Guardians held on Dec. 28th, 1901, it was decided to allow the cost of antitoxin to the district medical officers who used it in cases of diphtheria.

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## WALES AND WESTERN COUNTIES

(FROM OUR OWN CORRESPONDENTS.)

### *Cardiff Workhouse.*

AN inquest was held at the end of November, 1901, upon the body of a child, 15 months old, who had been taken by the mother from the Cardiff Workhouse on the previous day and who was found to be suffering from broncho-pneumonia and to have a fractured arm which it was alleged had not been diagnosed by the medical officers of the workhouse. An inquiry was held into the circumstances on Dec. 17th by the workhouse visiting committee of the board of guardians, when it was stated that the mother persisted in removing the child in spite of the remonstrances of the workhouse matron who pointed out the serious condition of the patient and that the child was undoubtedly of rickety constitution. A great deal of contradictory evidence was given as to whether the woman who had charge of the nursery, and who was not a trained nurse, did or did not call the attention at various times of the visiting medical officer and of the resident medical officer to the child, and the assistant porter admitted that he forgot to enter the child's name in the medical attendance book on the day before the patient left the workhouse. Both these subordinate officers have been called upon to resign, and at the meeting of the board of guardians on Jan. 4th a resolution was passed declaring that although the evidence at the inquiry did not point to any specific neglect on the part of the medical officers they were deserving of blame for not discovering the fracture. The only comment which it is necessary to make upon this resolution is that the resident medical officer was expected to act also as dispenser and that there are over 1000 inmates in the Cardiff Workhouse.

### *Somerset Lunatic Asylums.*

There are in the county of Somerset two lunatic asylums—one at Wells, established in 1848, with accommodation for 850 patients, and the other at Cotford near Taunton, established in 1897, with administrative accommodation for 700 patients but actual ward accommodation for only 450. At the end of last year there were 850 patients at Wells and 476 at Cotford, a total of 1326, of whom 567 were men and 759 were women. The necessity for completing the ward accommodation at Cotford is therefore very urgent. The population of the county at the last census was about half a million. At a meeting of the county council held on Dec. 31st there was a discussion upon the question of providing a separate institution for the idiot paupers of the county. The asylums committee reported that in the present state of the law county councils were only authorised to provide asylum accommodation for certified lunatics and had no power to provide for the idiots and imbeciles at present maintained in workhouses or boarded out with relatives and friends and not so certified. Sir Edward Fry traversed this opinion, and upon his suggestion a special committee was formed to take the matter in hand

### *Brentry Homes for Inebriates.*

There were at the end of last year 36 men and 170 women under treatment in the Brentry homes for inebriates.

### *The late Mr. F. G. Engelbach.*

At Moretonhampstead parish church on Jan. 1st, in the presence of a large congregation, a memorial tablet was unveiled in memory of the late Frederick George Engelbach, L R C.P. Lond, M R C.S. Eng. The rector (the Rev. S. D Dewey) in the sermon spoke of the formation of the Moretonhampstead Volunteer Corps by the deceased, the great interest he took in it, and his subsequently proceeding to the war and his lamented death there while succouring the wounded. The tablet is of brass on a black marble base and bears the following inscription: "To the glory of God and in memory of Frederick George Engelbach, for 10 years medical practitioner in this town and first commanding officer of the G Company (Moretonhampstead), 5th V.B D B, who was killed whilst succouring the wounded at the battle of Nooitgedacht. South Africa, December 13th, 1900. Erected by the inhabitants and other friends —December, 1901."

Jan. th.

The more frequent reports of cases of typhoid fever mongst natives show that this disease has been hitherto verlooked. Instances of continued fever not due to malaria equire more careful investigation. The intestinal symptoms eem less marked in the native. There may be little or no iarrhœa and not even any marked meteorism. Spots may e difficult of detection and the spleen may have been preiously enlarged. Typhoid fever in the native is more of a ystemic infection without local manifestations.

The case of suspected plague found in West London and eported in THE LANCET of Nov. 23rd, p 1443, is described y Mr. A Baldwin and also by a writer in one of your *ontemporaries* as one of pestis minor notwithstanding that "the bacteriological investigations negatived the idea of the ase being true plague." There is apparently great confusion f terms concerning mild cases of plague and doubtful forms f glandular enlargement. Pestis minor is plague. It cannot e applied to "a specific form of glandular enlargement vhich occurs when plague either threatens or is actually bout" and at the same time not be a mild case of plague t is plague, but a mild form of it, and pestis ambulans is nly another gradation of it. Medical officers in India are amiliar with these cases, but though they may be given lifferent names they are all recognised as cases of plague Surely the proper term for cases not in any way due to lague is "glandular fever." The confusion of terms has risen in England; it does not exist here.

Dec. 15th, 1901.

### *he Plague Epidemic: Prospects in Calcutta and Bombay.—The Distribution of Plague Vaccine—Increase of the Indian Nursing Service.*

THE returns of deaths from plague throughout India luctuate week by week. For the past seven days 7797 leaths have been reported, as compared with 8873 for the revious week. For the corresponding week of last year here were only 2107 deaths While diminishing in some of he places now long infected it is increasing in others. In he North-West Provinces the deaths have risen suddenly in umber from 68 to 228 Plague has appeared in the cities of Kasur and Phillour in the Punjab. There is a slight decline in Bombay city and the number of deaths in Calcutta continues bout the same. In the latter city there is an exceptionally ow general mortality; this is accounted for partly by the few leaths from cholera and small-pox. The infantile mortality s enormous. This low mortality in Calcutta, as compared vith that of the last two or three years, may possibly indicate ither that a recrudescence of the plague outbreak will be leferred or that it will be lessened. The general mortality in Bombay city, also, though high, is below the mean of the corresponding periods of the past few years. The same indication may, perhaps, be seen in the case of Bombay. It is at all events reassuring that the deaths from plague during the past six months favourably compare with the returns of the past two years. There is at present no indication of a recrudescence in Bengal. The disease is declining in Karachi, but it continues virulent in Bangalore city, in the Cantonment, and in Mysore.

The number of doses of plague vaccine sent out from Bombay during the week ending Dec. 13th, 1901, was 7126 As these are less than the number of deaths from plague the progress of protective inoculation can hardly be considered satisfactory. Very little is done in Bengal, and I understand that no operation has been done in Calcutta for some time

It is reported that the Indian Army Nursing Service is to be augmented by seven senior nursing sisters and 32 nursing sisters

Dr. Sarat K Mullick, who in England during the past summer strongly advocated the claims of native medical men to certain posts in India, has returned to India and has been lecturing, amongst other places, in Mysore. He has certainly given good advice to young Indians in urging them to travel and to see England. He tells them that it is quite possible for them to live as vegetarians and total abstainers.

Dec. 20th, 1901.

## BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

### *Hospital Festivities*

CHRISTMAS-TIME has been kept with enthusiasm at most of the hospitals in Birmingham. The authorities of the General Hospital always make every effort to promote the comfort and happiness of the patients This year an entertainment was given by the resident officers on one evening, and on another a similar gathering was promoted by the resident nursing staff. Both were appreciated highly by crowded audiences At the Queen's Hospital the occasion was marked by the richness and variety of the decorations, coupled with the distribution of useful gifts to the patients, ornament and utility being happily combined. The workhouse infirmary, the Eye Hospital, the Royal Orthopædic Hospital, and other kindred institutions provided ample enjoyment for the inmates. At the Ear and Throat Hospital the festivities were damped somewhat by one of the patients committing suicide on Christmas Day by throwing herself over the staircase railing and falling some 25 feet while in a fit of temporary insanity.

### *Milk-blended Butter.*

It would be satisfactory to have some definite legal pronouncement on this subject for the guidance of those who have to investigate the numerous cases constantly occurring at the police-courts. A large firm makes what is called a milk-blended brand of butter, the result being that a large percentage of water is incorporated in it. This compound is sold with a label stating what it is and that it retains about 24 per cent of moisture Two specimens lately obtained for the purpose of prosecution at the Aston Police-court were alleged to contain 26 83 per cent. of water. The Bench dismissed the case The question is one of considerable importance to the dairy trade and is of equal moment to the customers.

### *Middlemore Post-graduate Lectures.*

The annual lecture under this endowment was given at the Birmingham and Midland Eye Hospital on Dec. 19th, 1901, by Mr H Eales, who took for his subject Some Functional Disorders of Vision. A rather small audience listened attentively to the results of the varied experience of Mr. Eales, which he placed before them in an interesting and able manner

### *The Police and the Public.*

At the recent discreditable riots which occurred in this city on Dec. 18th, 1901, a young man met with his death in the street after the meeting had been held at the town-hall. It is alleged that the police, receiving an order to charge the crowd, violently assaulted numerous unoffending persons and that the deceased was struck by a police-officer and knocked down. At the inquest held on Dec. 23rd the medical evidence showed that there was a cut on the right side of the head, the subsequent post-mortem examination revealing a fracture of the base of the skull with rupture of an artery causing effusion of blood. There was much evidence adduced to indicate that the deceased was struck by a baton used by the police The identity of the constable has not so far been established Meanwhile the watch committee has asked for an inquiry by the Home Secretary, which it is to be hoped will be granted

Jan 8th.

## LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

### *The new County Asylum at Winwick.*

ON Jan 2nd the new asylum at Winwick was informally opened by the members of the asylums board of the county of Lancaster. There was a large attendance The undertaking is an enormous one and has been in progress since 1896 The site was formerly Winwick Park, the residence of the late Canon Hopwood, the vicar of Winwick, and was purchased from the Ecclesiastical Commissioners in 1894 for £21,000 Brick-making was commenced in 1896 and in October, 1897, Messrs. Neill and Company of Manchester signed the contract for the building of the asylum for £253,000 Owing to strikes the work has been delayed on several occasions, but everything will be completed within a few months The buildings will accommodate 1000 male and 1000 female patients and a staff of 200 persons. The block of buildings presents the appearance of a small town, and occupies almost the whole of the large park. The administrative block is in the centre and the remainder of the buildings are built on the pavilion system all around the

Irish Channel, not personally conducted, but with the easterly wind blowing from England—a wind that all good Irishmen have reason to dislike. There are now 39 cases of diphtheria under treatment in the Cork-street Fever Hospital. As to small-pox, a disease which has never been stamped out in the British Isles, one of the most important recommendations of the Cadogan Commission which was appointed to inquire into the causes of the exceptionally high death-rate of Dublin and to suggest means of lowering it was that a hospital should be built outside the city boundary for the isolation and treatment of small-pox. No such hospital has been provided. On Dec. 18th, 1901, 546 cases are reported to have been under treatment in the London hospitals. If the disease comes here, and if its victims are housed inside Dublin, it seems probable that the citizens will suffer and practically certain that the inhabitants of the particular area in which the patients are treated will suffer. Many experiments have been tried with that disease in Dublin, and we now have reason to know its striking distance only too well. In the meanwhile nothing is being done to give it when it does come a wider berth.

### *Royal Victoria Eye and Ear Hospital, Dublin.*

The new buildings in connexion with the Royal Victoria Eye and Ear Hospital have now been commenced in Adelaide-road, Dublin. It will be remembered that about four years ago an Act of Parliament was passed by which the two ophthalmic hospitals of Dublin were amalgamated and their funds united—St. Mark's Ophthalmic Hospital, Lincoln-place, which was founded in 1844, and the National Eye and Ear Infirmary, Molesworth-street, which was established in 1814. Since the amalgamation of the hospitals the joint council thus formed has purchased a site in Adelaide-road free of rent for ever and has, as stated above, commenced the erection of a portion of the extensive buildings required.

### *City Hospital for Diseases of the Skin, Dublin.*

Many patients in this hospital suffering from lupus and allied affections are at present being submitted to the Finsen light cure. The managing committee reports that it cannot extend this system of treatment to numerous applicants seeking admission until it is in command of larger funds. The Right Hon. T. C. Harrington, M.P., Lord Mayor of Dublin, and Sir Charles Cameron, C.B., are honorary treasurers to the fund, to which there have already been many subscribers.

### *The William Smyth Memorial Fund.*

The Belfast contributions to the above fund amount to over £1100, and this sum when added to the £3000 collected elsewhere will, when invested, afford a small return annually until the children of the deceased practitioner have attained ages when they can make some monetary contributions themselves to their mother. It is satisfactory to note that the Right Hon. A. J. Balfour, M.P., has procured a grant of £200 from the Royal Bounty Fund in aid of the fund.

### *Christmas at the Belfast Hospitals.*

At the various hospitals in Belfast the patients were entertained in the usual way at Christmas. There was an immense number of visitors at the Belfast Hospital for Sick Children on Dec. 27th, when the Marchioness of Dufferin and Ava, in the surgical ward, and Lady Dixon (the Lady Mayoress) in the medical ward, distributed the gifts from the Christmas-trees which were provided by friends of the institution for the children.

### *New Technical College for Belfast.*

The City Corporation of Belfast on Dec. 30th, 1901, adopted the plans for the new technical college for Belfast and authorised an application to be made to the Local Government Board for Ireland for its sanction of a loan of £85,000 to carry out the work.

### *The Visit of the King and Queen to Ireland.*

The Lord Mayor of Belfast having written to the Lord Lieutenant of Ireland in reference to the proposed visit of the King and Queen to Belfast, the object being to lay the foundation-stone of the new Royal Victoria Hospital (to be erected as a Jubilee memorial of the late Queen Victoria), a reply has been received that nothing has been so far arranged and that all the rumours are conjectures without any foundation. It is felt in Belfast that in order that due and fitting arrangements should be made for the royal visit sufficient and lengthened notice should be given by the authorities beforehand.

### *The Nursing Question in the Armagh Union.*

The point at issue as to whether or not the Armagh guardians should appoint as an assistant in the infirmary a trained nurse or a probationer (the guardians were prepared to appoint the latter, but to this the Local Government Board for Ireland would not consent) has been settled by the guardians informing the Local Government Board that they were at length prepared to appoint a qualified nurse and one wardsman upon the Board undertaking to withdraw its sealed order calling upon them forthwith to appoint a qualified assistant nurse and three wardsmaids to assist in the infirmary and fever hospital. The guardians on Dec. 31st, 1901, appointed a fully-trained nurse in the fever hospital.

### *Health of Belfast.*

At a meeting of the Belfast City Council on Jan 1st, it was reported that there was a great decrease in the number of cases of typhoid fever. The death-rate per 1000 from all causes during the past year was 21·9, while the average for the previous 10 years was 24·8. There are also a decrease in diseases of the chest and a diminution in the death-rate from zymotic diseases.

### *Rainfall in the North of Ireland in 1901.*

The year just gone has been on the whole for the north of Ireland a fine one, the total rainfall being 39 15 inches (the smallest amount since 1893). The dryness of May and July was noticeable, but the last three months of the year (October, 4·73 inches; November, 4·11; and December, 4 69) converted by a total fall of 13·53 inches what might have turned out an exceptionally dry year into a normal one.

### *Royal Victoria Hospital, Belfast.*

Sir Donald Currie has given £1000 towards the endowment fund of this hospital. Of the £100,000 guaranteed for the building fund £92,589 have been paid, and over £7000 have accrued in interest on the money deposited in the bank.

Jan. 9th.

## PARIS.

(FROM OUR OWN CORRESPONDENT.)

### *Dr. Doyen and the Microbe of Cancer.*

The Academy of Medicine has been considering recently a paper laid before it by Dr. Doyen, in which that eminent surgeon announces the constant presence of a new microbe in cancerous tumours—a microbe which after a patient research of 14 years he has been able to isolate and to cultivate. The discovery of the pathogenic microbe of cancer has been often announced before; but Dr. Doyen has not taken the risk of his statement without being sure of his ground and has in no way lightly wagered his reputation. The microbe appears in the form of motile diplococci, one coccus of which is sometimes four or five times as big as the other. Dr. Doyen has managed to cultivate these cocci in tubes of gelatin and of gelose, with the addition of a special nutritive bouillon. Two specimens of cancerous tumour taken from very different organs gave out of 250 tubes inoculated 50 positive results—i.e., 50 pure cultures of diplococci. The growth appeared as a rule within from 24 to 48 hours, but sometimes not until four or five days had elapsed. Besides the diplococcal form the microbe appeared in the form of short chains which sometimes grew in the shape of a Y. On gelose the microbe appeared as a whitish-grey growth, which when taken up by the platinum needle went into thick viscous filaments. In sections of the growth the microbe was difficult to find. It was more easily found in the affected glands and in those secondary growths which were furthest from the original growth. It is found in the blood in exceptional cases of cancerous fever, and in lymphangitis due to cases of pseudo-erysipelatous cancer. Dr. Doyen found the microbe in great purity in a secondary tumour of the pericranium which appeared two years after the removal of a cancer of the breast, in which case there was no local recurrence. It was also found in a serous discharge from the nipple of a woman who had no tumour of the breast, but who was

# SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

### *Small-pox in Glasgow.*

THE epidemic of small-pox which has again broken out in Glasgow shows an unfortunate tendency to increase Six new cases were reported at the end of last week and four additional ones have been notified since, making a total of 31 patients in hospital. All the cases except three have come from the same common lodging-house. It is significant that both the lodging-house keeper, who is an anti-vaccinationist, and his wife are among the victims. One of the lodgers, it has been ascertained, had been ill with the disease for nearly four weeks before the nature of his illness was recognised, and it is to this source that most of the present cases owe their origin. Dr. A. K. Chalmers has issued a circular letter to the superintendents of various lodging-houses in the city pointing out the necessity of obtaining revaccination for all the warders, bed-makers, and other servants, and the importance of securing medical advice in any cases of skin eruption among the inmates. In a recent speech the Lord Provost, in dealing with the epidemic of 12 months ago, pointed out the comparatively light and trifling nature of the outbreak and expressed the indebtedness of the authorities to the medical men and the medical students of the city for their cordial cooperation and assistance

### *Glasgow University.*

The register of the General Council of this University for the year 1902 has just been issued. It contains the names of 6031 members, being an increase of 204 on the previous year. The increase raises the quorum required for special meetings of the council from 60 to 72.—The total number of students matriculated at the University for the year 1901 was 1672, exclusive of women students who numbered 352—The Finance Committee of the corporation has again recommended that a sum of £5000 should be presented as a donation to the University. When the former report to this effect was presented to the town council it was sent back for further consideration. The committee has now, therefore, reaffirmed its decision

### *Glasgow Hospitals.*

The active discussion among the staffs of the three general hospitals in Glasgow in reference to the proposal to establish at each hospital an advisory committee consisting of the members of each staff, led some weeks ago to the summoning of a meeting at which all the hospitals were represented Though the proposal met with general acceptance the meeting failed to formulate a detailed scheme for presentation to the various governing bodies, and it seemed probable that the matter would thus be allowed to pass into abeyance. So far as the Western Infirmary is concerned, however, this anticipation has proved to be inaccurate. At a recent meeting of the Board of Managers of the infirmary it was resolved that the senior staff, consisting of the visiting physicians and visiting surgeons, the two physicians for diseases of women, and the pathologist, should be constituted an advisory committee for the current year, in order that the board may obtain its opinion on matters which may arise from time to time and be referred to it by the board for consideration and report. This is so far satisfactory, seeing that it will secure an official statement of the views of the staff on important professional questions arising in connexion with the management of the hospital The recently instituted department for the treatment of lupus, &c., at the Western Infirmary is exciting a considerable measure of interest and is attracting patients from various parts of the country. The infirmary possesses favourable opportunities for securing continuous observation of the effects of the treatment as it has two wards for the reception of cases of skin disease —The usual annual meeting of the nurses of the Royal Infirmary took place in the hall of the dispensary on Jan 1st Addresses were delivered by the Lord Provost and by Mr. J. D. Hedderwick. The latter made special reference to the two new operating theatres which are in course of erection and to the donations which had been received through Dr. M'Intyre for the building and equipment of an electricity pavilion.—On Jan 1st also the annual meeting of the nurses of the Victoria Infirmary took place in the board-room of the institution. Mr. John Paterson reviewed the progress of the infirmary since its foundation and made appreciative reference to the work of Dr. A. L. Kelly and Dr. James Dunlop, both of whom had died during the past year, and who were for many years governors of the hospital. Thereafter the company adjourned to the new wing which was declared open by Mr. Cameron Corbett, M.P. This contains two new operating theatres, a special electricity room, and four wards. The accommodation of the hospital is thus increased to 180 beds —Sir Donald Currie has given £1000 to the Greenock Infirmary.

### *The Aberdeen University Extension Scheme.*

A meeting of the general committee of the Aberdeen University Extension Scheme was held on Jan. 3rd in the Mitchell Hall, Marischal College, for the purpose of receiving a report from the Executive Committee as to the appeal for funds. Principal Lang presided. The honorary treasurers reported that the total amount of subscriptions intimated to them was £26,942 2*s*, of which £5345 had been received. The total number of separate subscriptions may be stated at less than 800 Principal Lang intimated a special subscription of £3000 from Colonel Cooper (Elgin), bringing the total sum up to £29,942 2*s*. With characteristic promptitude Lord Strathcona has transmitted his cheque for £25,000, and this is accompanied by a letter the terms of which clearly indicate the sincere interest which is felt by the Lord Rector in the appeal that has been so warmly supported. The following is an approximate summary of the money subscribed since the present scheme was launched 10 years ago. Result of first appeal: Government grant, £40,000; Dr. Mitchell's contribution, about £36,000; and public subscriptions, £40,000 Result of present appeal: Lord Strathcona's subscription, £25,000; Mr. Charles W. Mitchell, £20,000; public subscriptions, £30,000; and cost of New Greyfriars Church (defrayed by Town Council), £10,000. A total of £200,000 has thus been obtained from all sources. The site of the new front block is being rapidly cleared, whilst the building of the New Greyfriars Church, along the Queen-street side, is being carried on with all speed

### *Arts Class, 1880–1884.*

The sixth triennial reunion of this class was held in the Palace Hotel, Aberdeen, on Jan. 3rd, the Rev. G. M. Reith, Free St. Cuthbert's, Edinburgh, being in the chair. The following medical members of the class were present: Dr. A. T. G Beveridge, Dr A. R. Galloway, Dr. R G McKerron, Dr. J. S. Riddell (Aberdeen), and Dr. G. C. Milligan (Forres). It was resolved to publish the class album prior to next reunion. A very successful meeting closed with the singing of "Auld Lang Syne."

Jan. 7th.

# IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

### *Public Health of Dublin.*

THE notes on the "Health of Dublin" and on its death-rate published every week in THE LANCET show that the condition of the city, as appears from the recent returns, has undergone much improvement when compared with the records of former years. There would seem to be a positive, and so far a permanent, improvement in its death-rate—a matter which was much to be desired, for the rate was at one time exceptional and a disgrace to our public health department. Matters have certainly improved and the number of deaths in Dublin can now fairly compare with that of other towns in England or Scotland. Sir Charles Cameron, C.B, medical officer of health of Dublin, stated in connexion with a Local Government Board inquiry on Dec. 17th, 1901, that the public health of Dublin had been much improved by recent expenditure He said that during the period between 1876 and 1880 the death-rate from all causes was 33·3 per cent., and during the decade ending 1900 29·6 We seem still, however, not to have much ground for congratulation Scarlet fever causes many deaths, and diphtheria—which was quite rare in Ireland 10 years ago—is now claiming an increasing number of victims year after year It has gradually invaded this country—coming apparently from England—and it now prevails more especially along our eastern coast. It would thus rather seem as if the bacillus took its trip across the

the next two years he had three attacks of pleurisy in the left side. In 1897, when he came under the care of Dr. Farvarger, he suffered from œdema of the lower extremities and of the skin of the lower part of the abdomen, and dilatation of the right heart. Frequent attacks of erysipelas afterwards occurred in the lower extremities, which commenced to swell more and more. There were no albumin in the urine, no chyluria, and no lymphorrhœa. Repeated examination of the blood proved the absence of any parasites, such as filaria sanguinis. From 1896 onwards the swelling of the lower extremities became enormous, especially on the left side, the circumference of the left leg being 24 inches in May, 1896, 26 inches in July, 1896, and 30 inches in August, 1898. When the patient was shown before the society the following circumferences were measured: left leg (near the malleolus), 24 inches; left calf, 35 inches; lower part of left thigh, 38 inches; upper part of left thigh, 50 inches; right leg (malleolus), 22 inches; calf, 27 inches; and thigh, 19 inches On the back of the left thigh the elephantiasis of the skin formed a tumour of the size of two human heads and there was a second tumour on the left calf. The skin of the affected parts showed the characteristic properties of thickening due to elephantiasis, but the skin of the feet, which showed only slight œdema, was nearly normal. The enormous distension of the limbs was accompanied by a corresponding increase in the patient's weight which amounted to 280 pounds Various therapeutic means had been tried without success and surgical intervention was contemplated.

Jan 4th.

## CANADA.

(FROM OUR OWN CORRESPONDENT.)

### *Sanatorium for Tuberculosis in Toronto.*

A FEW weeks ago it was decided by the local board of health of Toronto, on the advice of the medical health officer, that a by-law should be submitted to the people at the coming municipal elections in January for the sum of 50,000 dols. for the purposes of a sanatorium for consumptive patients. Affairs were beginning to get into a tangle between the city health authorities, the Anti-Consumptive League, and the National Sanatorium Association, when the latter came forward with a definite plan of campaign and announced that it would have accommodation for 100 patients from the city of Toronto within a twelvemonth. In the meantime a city physician has addressed a letter to the mayor drawing attention to the fact that the city hospitals have closed their doors against consumptive patients and that these unfortunate individuals practically have to shift for themselves. It appears likely that the hospitals will have to set apart wards for the reception of these patients until the sanatorium is ready to take up the work.

### *Appendicitis in British Columbia.*

At the first annual meeting of the newly organised British Columbia Medical Association Dr. J. C. Davie of Victoria, who was the president of the association, contributed a very interesting and able paper on the subject of appendicitis, the first paper on this subject which has been published by a British Columbian practitioner. The paper appears in the November issue of the *Dominion Medical Monthly* and the cases constitute, without selection, all those which have come to the personal attention of Dr. Davie since the year 1893. During that time he has operated on 105 cases of appendicitis with six deaths and 99 recoveries. Of cases of general septic peritonitis he has had 15, four dying and 11 recovering. Dr. Davie certainly has had excellent results, considering the fact that he never refused to operate even in the worst class of cases.

### *Small-pox in Quebec.*

Under date Nov. 29th the Board of Health of the Province of Quebec has issued a statement showing that in that province there had been 81 places where small-pox had broken out and that in all there had been 340 cases up to that date. In Montreal alone there had been over 30 cases. Numerous and special instructions have from time to time been issued by the Health Department of the province with regard to vaccination of the employés of industrial establishments, pupils at schools, and lumbering men about to go into the woods for the winter's work, but in spite of all contagion continues to spread and the province is threatened with a very extensive outbreak of the disease. One or two cases of tetanus are reported as following on the employment of impure lymph in vaccination. The Health Department recommends only glycerinated vaccine.

### *Toronto Clinical Society.*

At the regular meeting of this society held on Nov. 6th Dr. George A. Bingham and Dr. J. T. Fotheringham reported a case of thyroidectomy in a female, aged 30 years. The operation was performed by Dr. Bingham who made an incision obliquely from the left mastoid process to the sternum, the cavity being obliterated by several rows of catgut sutures by quilting. For subsequent tachycardia both gentlemen spoke very highly of the favourable results obtained by the use of the ice-bag to the præcordia. Dr. J. Algernon Temple reported at the same meeting a case of Paget's disease of the nipple and showed the pathological specimen. He removed the entire breast from an unmarried woman, aged 45 years. There was no glandular enlargement in the breast a year prior to its removal.—At the next regular meeting, held on Dec. 4th, Dr. Graham Chambers showed a man, aged 50 years, an engineer, whom he considered to be the subject of blastomycosis, although as yet he had not been able to demonstrate the fungus under the microscope. The lesions appeared on the nose, the cheeks, the upper lip, and the backs of the hands. They were undergoing marked improvement under large doses of iodide of potassium. An interesting case of menorrhagia which baffled all treatment was reported by Dr. R. B Nevitt, while Dr. A. J. Harrington reported a case of mushroom poisoning with recovery. Dr. J. F. W. Ross, the President, showed several specimens, one being a cystic kidney, while another was a case of double ectopic gestation occurring in a patient at the same time. On one side the pregnancy had advanced to three and a half months and had ruptured; on the other side pregnancy had advanced about a month or six weeks. Although *in extremis* on the operating table the patient made a good recovery. Dr. Ross also reported that ectopic gestation re-occurring in the same patient had been observed by him four times.

Dec. 7th, 1901.

## NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

### *X-Ray Photographs.*

IN a case of personal injury the Supreme Court of Wisconsin has decided that the rule affecting photographs taken by ordinary process and used in the trial of a cause for the better understanding by the jury of the evidence submitted in the case shall hold good in the case of photographs taken by the x-ray method. The trial judge is to be the one to decide whether or not a photograph is proper in a particular situation upon the trial of the case, and this decision being based upon reasonable ground it must stand In this particular case a physician, qualifying as an expert in taking x-ray photographs, testified that he had made an examination of the patient's wrist and hand by means of the x-ray process and later had taken two photographs which gave a perfectly correct representation of the bones. The photographs were offered and accepted as evidence, notwithstanding the protest of the opponent. The case was that of Mauch *v.* the City of Hartford. The objection was based upon the plea that the pictures were taken without notice to the city or its counsel. The court announced that it knew of no regulation requiring notice of the taking of a photograph to be used by one party in the trial of a cause by the adverse party in order that the latter may be represented at the time of such taking necessary to its acceptance in evidence. It is entirely proper for the trial of causes for some purposes that photographs be exhibited to facilitate the understanding of the jury of some objects otherwise obscure; they are used to enable the court and jury more clearly to understand the particular location or object material to the litigation than could be made lucid by mere oral description or explanation, and the object being quite permissible the court may use its discretion as to whether they shall be admitted. Such a case exists when it is necessary for a non-expert to comprehend the complicated structure of the human anatomy and the presence of foreign bodies in the human body or of any abnormal condition. Since the discovery of the x-ray still under observation. Cultures injected into animals produced a very intense epithelial inflammation which was followed by the formation of adenomata. In reality the microbe brings about increased growth of those cells with which it comes in contact. The cells appear to multiply by a kind of inflammation, but the white corpuscles do not present the usual phagocytic phenomena. There are also to be found in the case of glands in connexion with a tumour, which are swollen but not obviously infected, certain cells full of microbes which are difficult to stain. Dr. Doyen found his "micrococcus neoformans" in the juice from a mammary tumour in a bitch and in the juice of various tumours in human beings, such as sarcomata, cystic tumours of the breast, and in slowly growing and sclerosing epithelial tumours. From these last no cultures could be obtained. All those cases which gave positive results in the culture-tubes were cases in which recurrence occurred with great rapidity. The points of recurrence, secondary tumours and affected glands, yielded similar cultures to those of the original growth. In the case of very malignant tumours cultures were obtained, provided that suitable media were used, in about 24 hours. Subcutaneous injection of the toxin of this microbe, attenuated in a special manner which Dr. Doyen has not yet made public, brings about, especially in the affected glands, a reaction similar to that produced in tuberculous glands by tuberculin Post-operative injection of this toxin has given satisfactory results which have endured for six months, but Dr. Doyen adds that these results must be confirmed by further observations. These injections must not be given in the case of very large rapidly-growing tumours, for in such cases they produce a violent reaction comparable to that brought about in local masses of tubercle by the first tuberculin of Koch. On the other hand, these injections appear to have given good results in patients who have been operated upon and in whom no growth is left as far as can be ascertained. In such cases the injection appears to prevent recurrence.

### *The Laws as to Public Health.*

For more than 10 years the question of a public health regulation has been sent backward and forward between the Chamber of Deputies and the Senate without anything being done. However, on Dec. 16th, 1901, a Bill passed the Chamber of Deputies in a very thin house, and yet none of the ordinary political journals and hardly any of the medical journals even so much as mentioned the fact. But the new law certainly raises very burning questions, for among other points it abolishes the professional secrecy of medical men, at least in part, for they are obliged to notify every case of infectious disease. It attacks personal liberty, for it makes vaccination and revaccination obligatory. It attacks property, for furniture and other personal articles which may be infected have to be destroyed, and it deals with the construction of houses. It also creates new taxes, for the expenses of putting into a hygienic condition or of disinfecting houses and other articles will be met by a charge upon the State or upon departmental or communal bodies.

### *Human Tuberculosis Inoculable in Animals.*

At the meeting of the Academy of Medicine held on Dec. 24th, 1901, M. Arloing reminded the meeting that at the British Congress on Tuberculosis recently held in London Professor Koch had put forward the opinion—an opinion which created a great deal of excitement—that human tuberculosis was totally different from the tuberculosis which occurred in ruminants and so there was no need to fear that tuberculosis could be transmitted from cows and such like animals to man by the agency of milk or meat. Professor Koch specified various differences which exist between human tuberculosis and that of bovine animals. Such differences were admitted by all observers, but they were by no means sufficient to afford grounds for a radical distinction. The two principles upon which Professor Koch based his argument were the following. The bacillus of human tuberculosis could not be inoculated into animals of the bovine, ovine, or porcine species, although the bacillus of bovine tuberculosis readily infected both sheep and pigs. Bovine bacilli, however, did not produce tuberculosis in man M. Arloing had attempted to verify these results and to find out if human tuberculosis could not be transmitted to animals. Using intravenous inoculations of a pure culture of the human tuberculosis bacillus, he had managed to produce certain forms of tuberculosis in 23 animals, such as calves, sheep, goats, asses, and bullocks, which were stated to be immune to human tuberculosis by Professor Koch. There was, therefore, evident ground for saying that the bacillus of human tuberculosis and that of animal tuberculosis were the same as the bacillus of Koch. For the present, then, it was obviously a wise precaution to maintain the various regulations in force with regard to meat and milk which were suspected of containing the tuberculosis bacillus.

Jan. 7th.

## VIENNA.

(FROM OUR OWN CORRESPONDENT.)

### *"Gasu-Basu": a New Local Anæsthetic.*

A NEW local anæsthetic obtained from an Indian plant, called "gasu-basu," has recently been submitted to careful examination by some Hungarian dentists—Professor Arcövy, Dr. T. Madzsar, and Dr. B. Balassa of Budapest. The anæsthetic action of this substance was discovered a year ago by a dentist in Fiume, Dr. D. Dalma, who tried the effect of gasu-basu in cases of painful pulpitis, and recommended it as a powerful agent which might replace arsenic in the treatment of that condition. Dr. Dalma also separated the active principle of the plant, which proved to be an alkaloid, and in his later experiments he used the salt obtained by treating the alkaloid with hydrochloric acid. This salt has been named "nervocidine" and its pharmacological properties have been investigated in Professor von Bokay's laboratory in Budapest by Dr. B. von Fenyvessy who obtained the following results. Nervocidine is a yellow, hygroscopic powder easily soluble in water, less soluble in ether and alcohol. The aqueous solution froths if shaken and gives all the reactions of an alkaloid. Nervocidine is amorphous and cannot be obtained in a crystalline state. In weak solutions (one-tenth or one-twentieth per cent.) nervocidine produced a marked local anæsthesia of the cornea of warm-blooded animals Two drops of a one-twentieth per cent. solution applied to the human conjunctiva produced a burning sensation accompanied by lacrymation and followed after 20 minutes by anæsthesia of the cornea lasting for five hours. After seven hours the cornea regained its normal condition. A one-tenth per cent. solution of nervocidine brushed over the mucous membrane of the cheek caused local anæsthesia of the brushed surface and of the tongue accompanied by loss of the sensation of taste and the perception of touch, but without loss of the perception of heat and cold. Solutions of a strength exceeding one-half per cent. produced irritation of the cornea, and by application of a two per cent. solution to the cornea of rabbits and dogs a severe ulcerative keratitis, lasting from five to 10 days, was produced, but on the twelfth day this keratitis was entirely gone. The anæsthesia of the cornea persisted during the whole course of this keratitis and the sensibility returned with the recovery of the cornea which did not afterwards show any trace of the previous inflammation. Attempts to produce local anæsthesia by subcutaneous injections of nervocidine in animals have not yet been successful. The general action of nervocidine on the system was that of a poison producing death by paralysis of the motor centres of the nervous system and of the peripheric nerves. All the experiments proved that nervocidine was a powerful local anæsthetic which had the advantage of producing a much more sustained action than cocaine, for the effect of a one-half or one-fifth per cent. solution might last for two or three days It is, however, not without its drawbacks, such as the local irritation to which it gives rise, the slow production of the anæsthetic state (from 10 to 20 minutes being required), and a liability to the occurrence of nausea, vomiting, salivation, and other symptoms of general poisoning. Nervocidine is an interesting addition to the list of local anæsthetics, but its practical application is at present restricted to the purposes of dentistry. In the treatment of pulpitis it has been found particularly useful in the Budapest dental clinics.

### *Sporadic Elephantiasis.*

Elephantiasis is very rare in Austria, but an interesting case of this disease was recently shown by Dr. Farvarger at a meeting of the Wiener Gesellschaft der Aerzte. The patient, a young man, aged 25 years, had always resided in an Alpine village, Aussee, in Styria, and had been healthy up to the age of 15 years In the year 1891 he suffered from pleurisy and slight œdema of the feet, and in the course of

VACCINATION AT GLOUCESTER.—At the meeting of the Gloucester Board of Guardians held on Dec. 31st, 1901, it was reported that there were 850 vaccination defaulters in the district between Jan. 1st, 1899, and Sept. 1st, 1901.

CHELSEA HOSPITAL FOR WOMEN.—The new year's entertainment arranged by the ladies' committee for the patients and nurses was given on Jan. 4th, when the following artists kindly gave their services:—Miss Nellie Ganthony, Mr. Lionel Brough, Miss Vera Beringer, Mr. Mercer Adam, Miss Ada Webster, Miss Kinnison, and Mr. Rohan Clency. The wards and corridors were prettily decorated and the patients seemed thoroughly to enjoy the songs, recitations, and musical sketches. The patients' tea had been given on new year's eve, when many of the ladies' committee were present. The nurses held their concert on Dec. 29th.

THE CLERICAL, MEDICAL, AND GENERAL LIFE ASSURANCE SOCIETY.—The bonus report of this society which was presented to the extraordinary meeting held at the offices, 15, St. James's-square, London, S.W., on Jan. 2nd, shows that the society divides the large surplus of £597,415 in respect of the past quinquennium. During the past five years the new assurances amounted to 4043 in number, assuring £2,907,556, as compared with 3810 policies assuring £2,819,894 in the preceding period. The rate of interest earned was very satisfactory in view of the high character of the investments. It increased slightly but steadily in each of the last three years and averaged £3 16*s.* 8*d.* per cent. for the whole period The claims by death were 1437 in number and, including bonuses, £1,143,321 in amount. The total expenses of management were £12 14*s.* 9*d* per cent. of the premiums, as against £13 11*s* per cent. in the preceding period.

THE WOOLWICH, PLUMSTEAD, AND CHARLTON MEDICAL UNION.—At a meeting of the above union held on Dec. 18th, 1901, the following motion was unanimously agreed to:—"That vaccination should be dealt with as a sanitary question affecting the welfare of the community on similar lines to those now in force for the notification of infectious disease, and that it is derogatory and injurious to compel a medical man by law to do an unprofessional act - viz , to call at the houses of his fellow practitioners' patients and offer professional service. The members of this union therefore respectfully submit: first, that vaccination should be placed under the control of the sanitary authority and be removed from the category of Poor-law relief; and, secondly, that the operation and certification of successful public vaccination according to the legal standard should be open to all registered medical practitioners, and that the authorised fee should be payable to such medical practitioners by the sanitary authority in all cases where the legal standard was complied with."

A PATIENT'S PREFERENCE FOR AN UNQUALIFIED MEDICAL MAN AND ITS CONSEQUENCE —The Derby borough coroner (Mr. John Close) recently investigated the circumstances surrounding the death of Charles Nicholson, aged 52 years, who died on Dec. 31st, 1901. The coroner had adjourned the case for inquiries to be made as the result of a communication which he had received from Dr. Parry-Jones, and because Mrs. Nicholson had stated that her husband had been taking medicine and using ointment supplied to him by Captain Feilden, of the Crimson Cross Dispensary. No charges were made for the remedies supplied, but a box was placed against the door at the dispensary so that persons visiting the establishment might make voluntary contributions. The widow of the deceased, in her evidence, stated that Captain Feilden first saw him about 12 months ago. He had called upon him on different occasions and when he saw him the last time about a month previously he told the deceased that he ought to see a medical man. The deceased, however, would not do so. She asked him to have a medical man but he declined. A neighbour also gave evidence as to Nicholson's strong objections to a doctor, and Captain Feilden deposed that he attended the deceased for bronchitis and another complaint. He also had something the matter with his heart and witness advised him to see a doctor.—The Coroner: Then you thought it was a case for a properly qualified practitioner?—Witness: I thought he would require someone to give him a certificate when he died. A doctor was no good for any other reason.—Dr. Parry-Jones deposed to making a post-mortem examination and finding that death was due to aneurysm. In all probability if Nicholson had had a qualified medical man to attend him he would have lived longer as the aneurysm was of long standing.—The Coroner: If he refused to have a doctor what could be done for him?—Dr. Parry-Jones: Nothing. The jury returned a verdict to the effect that death was due to an aneurysm.

DR. C. KILLICK MILLARD, medical officer of health of the borough of Leicester, is the President-elect of the Midland Branch of the Incorporated Society of Medical Officers of Health.

DR. CHARLES A. WEST of Bodmin was, at the Cornwall Quarter Sessions held on Dec. 31st, 1901, appointed visitor to the county prison in the place of the Earl of Mount-Edgcumbe, resigned

DEATH FROM BURNS.—An inquest was held at Exmouth on Dec. 30th, 1901, upon the body of a man who had suffered from gout and was lighting a cigar on Dec. 21st when some cotton-wool which was wrapped round his hands caught fire. He was severely burnt and he died on Dec. 28th. A verdict of "Accidental death" was returned.

THE LATE MR. EDWARD STOCK.—The committee of the Bristol Dispensary in the annual report for 1901 which has just been issued, allude with much regret to the death of Mr. Edward Stock, M.R.C.S. Eng., which occurred at Clevedon, Somerset, on Nov. 18th, 1901. The deceased who was 81 years of age had been for 34 years connected with the Bristol Dispensary, first as secretary and subsequently as a member of the managing committee.

DONATIONS AND BEQUESTS.—By the will of Mr. Henry Duncalfe. M.R.C.S., of Tudor-hill, Sutton Coldfield, Birmingham, £1500 are left in trust to found a "Duncalfe Exhibition" in Sutton Coldfield Grammar School, and £5000 in trust to found a "Duncalfe Benevolent Fund" under the Birmingham Medical Benevolent Society. £5000 have also been left to the Royal Medical Benevolent College at Epsom to found "The Duncalfe Trust," and the income of the sum of £5000 is to be applied for the benefit of unmarried daughters, not under 50 years of age, of medical men. Bequests are left to the Birmingham General Hospital, the Queen's Hospital, the Eye Hospital, the Blind Asylum, the Orthopædic and Spinal Hospital, the Deaf and Dumb Asylum, the Knowle Asylum for Idiots, the Wolverhampton Orphanage, the Llandudno Sanatorium, the Llanfairfechan Convalescent Home for Men, the Royal Alexander Hospital at Rhyl, and the Home for Incurables at Leamington. It is estimated that more than £30,000 will be available fo charitable purposes.

THE NEW GENERAL HOSPITAL, BIRMINGHAM.—At a meeting of the General Committee held at the General Hospital, Birmingham, on Dec. 31st, 1901, a report on the new hospital was read by the honorary secretary, Mr. Walter N. Fisher. He said that the preliminary steps to the erection of the new buildings were formally taken at a meeting held in the town-hall on Jan. 19th, 1891, when a committee with Sir John Holder as chairman was appointed to carry out the scheme. Designs for the new hospital were sent in by 12 selected architects, the consulting architect, Mr. Alfred Waterhouse, R.A., awarding the first place to Mr. William Henman. The builders were Messrs. T. Barnsley and Son. After a careful examination of buildings in which Mr. William Key of Glasgow had introduced the "plenum" system of ventilation combined with steam heating, the committee decided to adopt his methods and to employ his services. The ceremony of laying the foundation-stone was performed on Sept. 8th, 1894, by the Duke and Duchess of York, now the Prince and Princess of Wales, and on July 7th, 1897, the hospital was opened by Princess Christian. In the following October the patients were removed from the old to the new premises. The hospital contains 346 beds, of which 15 were dedicated to the memory of specified individuals The sum required for the dedication of a bed is £1250. The total cost of the hospital, land, heating and ventilating, electric supply, furnishing and fittings, architect's commission, and general expenses was £219,459, as against receipts from subscriptions and bequests amounting to £208,841. The balance is more than covered by the proceeds of the sale of the old hospital and site.

process it has several times been employed in laying bare the human frame and then photographing the appearance thereof, as in the case of ordinary photographs. The courts are bound to use every possible means of discovering the truth, and to that end every new discovery which has passed the experimental stage must be looked upon as a new aid in the administration of justice in the department it covers. The courts have never failed to avail themselves of the art of photography by the x-ray process in proper cases.

### *Insurance against Suits for Malpractice.*

The State Insurance Commission of Minnesota rules that general casualty indemnity companies may write contracts insuring physicians against loss from damages in suits for malpractice. A test case in Massachusetts was the ground of the State officials' decision that such protection is needed, not so much by inexperienced and unskilful physicians as by the best and most successful of their number as a protection against blackmail. It has come to pass in some sections that the frequency of damage suits against physicians and hospitals has rendered the practice of medicine, and especially surgery, absolutely perilous, and some good operators have seriously considered giving up the practice of medicine Many unjust verdicts have been rendered in favour of alleged injured persons and the general public usually favours this class. It has been considered adverse to public policy to put limitations upon such prosecutions or to permit insurance against them; but it would certainly be still more against public policy to allow honest surgery to be discouraged by encouraging blackmail, and popular prejudice is apt to do this very thing. A surgical operation or a medical treatment of a case depends for success upon numerous possibilities beyond the personal control of the practitioner to make their outcome a certainty in any particular case. An unfortunate termination of the case is therefore, as held by the Court of Massachusetts, to be considered an accident in the absence of proof to the contrary, and it is therefore quite legitimate to insure against such a possibility in a casualty insurance company.

### *Tetanus and Vaccination.*

Owing to the public alarm due to deaths from tetanus after vaccination the State Board of Health of Pennsylvania adopted the following motion :—"In view of the very natural public apprehension regarding the possibility of tetanus following vaccination, as illustrated by recent cases of this accident in a neighbouring State, this Board desires to state its conviction, based upon a careful study of vaccination and of the cases referred to, that it has yet to be demonstrated that vaccine virus ever contains or becomes contaminated with the germs of tetanus. When such occurrences as those referred to take place it is because, owing to carelessness usually on the part of the person vaccinated, the germs of tetanus have gained access to the wound on the arm, as they may to any other wound, abrasion, or scratch upon the surface. There is no reason for dreading or abstaining from vaccination because of these recent cases. This is sufficiently demonstrated by the fact that more than half a million persons have been vaccinated in and around the city of Philadelphia within the last few months without the occurrence of a single case of tetanus. Inasmuch as new cases of small-pox are being reported to the Board daily from all parts of the State the present would be a most unfortunate time to interrupt the general vaccination which is now in progress."

### *A Rat Crusade in Honolulu.*

It being a well-established fact that plague is often carried ashore from infected vessels by rats it is wise in the health authorities to inaugurate a crusade against rats when there is little or no plague within their borders. Through the efforts of Dr. Pratt, the executive officer of the Territorial Board of Health, a crusade has been enacted by mapping out Honolulu with an inspector to each district who distributes traps and poison, sees that they are used properly, deodorises the traps, and collects all the rats. The district as a whole is under two superintendents. The method of extermination is confined to traps, poisons, and sulphur fumigation; the rat-bounty methods are not used. All rubbish is cleared up and burned; all warehouses are made air-tight for sulphur fumigation; all inter-island vessels are fumigated; the clearing up of wharves includes cleaning underneath the same. All rats are kept according to districts and examined bacteriologically for the purpose of determining whether or not a certain district is infected and in need of special attention.

Dec. 29th, 1901.

# Obituary.

## HENRY GEORGE MADAN, F.C.S.

ALL students of chemistry, and especially those who studied the science at Eton under the direction of Mr. Henry George Madan, will learn with much regret of his death which took place at Gloucester on Dec. 22nd, 1901. Mr. Madan was born in 1838, and was educated at Marlborough College, where he obtained an open exhibition at Corpus Christi College, Oxford, in 1857. He acted as assistant to Sir Benjamin Brodie for some time, and was then appointed Professor of Chemistry at Queen's College. He was afterwards appointed master in chemistry at Eton, a post which he held for 20 years. He was joint author, with Mr. A. G. Vernon Harcourt of Christ Church, of "Exercises in Practical Chemistry," and wrote also several smaller works on Physics and Chemistry. A short time ago Mr. Madan was knocked down by a railway-truck in the docks at Gloucester, the injuries which he sustained necessitating the amputation of his right arm. He never seemed to recover from the severe shock which he received, his health giving way completely. Mr. Madan was an excellent, able, and impressive teacher. He possessed unusual manual dexterity, was an excellent glass-blower, and a first-rate and clever worker in the laboratory. He was most skilful with the lathe and an accomplished turner. All who came in contact with Mr. Madan preserved the kindliest recollections of him and will hear with sad feelings of the terrible accident which befell him and which undoubtedly hastened his death.

**DEATHS OF EMINENT FOREIGN MEDICAL MEN.**—The deaths of the following eminent foreign medical men are announced :—Dr. Hans Hensen, *privat-docent* of Medicine in the University of Kiel.—Dr. Nicolás Homs y Pascuets, Clinical Professor of Medicine in Barcelona.

# Medical News.

**SOCIETY OF APOTHECARIES OF LONDON.**—At the Primary Examination the following candidate have passed in the subjects indicated :—

PART II.

*Anatomy.*—H. Bennett, Manchester; J. Cree, Belfast; T. L. A. Jones, Cardiff; P. J. Martin, St. Bartholomew's Hospital; and E Renouf, Royal Free Hospital.

*Physiology.*—J Cree, Belfast; E. P. J. Dawes, Birmingham; A. G. C. Findlay, University College Hospital; E. Renouf, Royal Free Hospital, F. A. K. Stuart, St. Mary's Hospital; and T. R. Waltenberg, Manchester.

**FOREIGN UNIVERSITY INTELLIGENCE.**—*Cracow:* Dr. Leon Krynski, *privat-docent* of Operative Medicine, has been promoted to an Extraordinary Professorship.—*Kiel:* Dr. R. Gobell has been recognised as *privat-docent* of Surgery.—*Paris:* Dr. Gilbert, *agrégé*, has been appointed Professor of Therapeutics.

**LOW ANNUAL DEATH-RATE IN CHICAGO.**—During the 51 weeks ended on Dec. 21st, 1901, a total of 23,625 deaths was recorded in Chicago. At this rate the total deaths in Chicago for the year 1901 would not exceed 24,300, and calculated on the minimum mid-year population according to the estimate of the United States Census Office—namely, 1,758,000—the annual death-rate per 1000 for the year would be about 13·8, which is said to be the lowest ever recorded for that or any other city of more than 1,000,000 population The lowest previous rate—based on the United States census figures of population—was 14·36 per 1000 in 1897. For the previous 10 years—i.e., the period 1890–1900—the average mortality-rate was 17·67 per 1000.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge-road, S.E.—Junior Resident Medical Officer and Registrar. Salary £50, with board and washing.

GENERAL HOSPITAL, Birmingham.—House Physician. Salary £50 per annum, with residence, board, and washing. Also House Surgeon. Salary £50 per annum, with board, lodging, and washing.

GLASGOW ROYAL INFIRMARY.—Superintendent. Salary £500 per annum, with board, residence, &c.

HAMPSTEAD HOSPITAL.—Resident Medical Officer for six months. Salary at rate of £120 per annum, with rooms, coals, and gas.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Surgeon, unmarried, for six months. Salary £20, and board and residence.

JOINT COUNTIES LUNATIC ASYLUM, Talgarth, Breconshire.—Medical Superintendent. Salary £450 per annum, with house, coal, light, and washing.

LONDON HOSPITAL, Whitechapel, E.—Assistant Director of the Pathological Institute. Salary £200 per annum.

LONDON LOCK HOSPITAL.—House Surgeon to Female Hospital. Salary £80 per annum, with board, lodging, and washing.

MACCLESFIELD GENERAL INFIRMARY.—Junior House Surgeon. Salary £70 per annum, with board and residence.

MOUNT VERNON HOSPITAL FOR CONSUMPTION, Hampstead.—Senior Resident Medical Officer. Honorarium £100.

NOBLE'S ISLE OF MAN GENERAL HOSPITAL AND DISPENSARY, Douglas, Isle of Man.—Resident House Surgeon. Salary, £82 per year. with board and washing free.

NORFOLK COUNTY ASYLUM, Thorpe, Norwich.—Junior Assistant Medical Officer, single. Salary £120 per annum, with board, lodging, and washing.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, N.E.—House Surgeon for six months. Salary at rate of £80 per annum, with board, residence, and laundry.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House Surgeon for six months. Salary £50 per annum, with board, lodging, and washing.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, AND ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Research Laboratories.—Assistant Bacteriologist in the Research Laboratories. Salary £200 per annum.

ROYAL HOSPITAL FOR INCURABLES, Putney Heath.—Medical Officer. Salary £250 per annum.

ROYAL INFIRMARY OF EDINBURGH.—Pathologist. Salary £400 per annum.

ROYAL SURREY COUNTY HOSPITAL, Guildford.—Assistant House Surgeon. Salary £75, with board, residence, and laundry.

ST. BARTHOLOMEW'S HOSPITAL.—Assistant Surgeon.

SEACLIFF LUNATIC ASYLUM, Dunedin, New Zealand.—Assistant Medical Officer, unmarried. Salary £250, with board, lodging, and washing.

SEAMEN'S HOSPITAL SOCIETY (Dreadnought), S.E.—House Surgeon for Society's Branch Hospital, Royal Victoria and Albert Docks, E. Salary £50 per annum, with board and residence.

SCALEBOR PARK, Burley-in-Wharfedale.—Medical Superintendent. Salary £500 a year, with house, board, and attendance.

TOTTENHAM HOSPITAL.—House Surgeon. Salary £50 per annum, with board, residence, laundry, &c.

UNIVERSITY OF ST. ANDREWS.—Examiner in Physiology and Pathology.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Junior House Surgeon. Salary £50 per annum, with board, lodging, washing, and attendance.

WEST HERTS INFIRMARY, Hemel Hempstead.—House Surgeon, unmarried. Salary £100 per annum, with rooms, board, fire, lights, washing, and attendance.

WHITECHAPEL UNION INFIRMARY, Vallance road, N.E.—First Assistant Resident Medical Officer. Salary £130 per annum, rising to £150, with rations, apartments, coal, gas, and washing.

YORK COUNTY HOSPITAL.—Assistant House Surgeon. Salary £80 per annum, with board, residence, and washing.

# Births, Marriages, and Deaths.

## BIRTHS.

CARRUTHERS.—On Jan. 6th, at Halton, Cheshire, the wife of W. Hodgson Carruthers, M.D., of a daughter.

GIBSON.—On Jan. 3rd, at Queen's crescent, Glasgow, W., the wife of E. Arthur Gibson, M.D. Glasg., of a son.

HARDING.—On Dec. 31st, 1901, at Whittlesea, Cambs, the wife of C. Headley Harding, M.R.C.S., L.R.C.P. Lond., of a daughter.

## MARRIAGE.

VAN SOMEREN—FLETCHER.—On Jan. 2nd, at the parish church, Northwood, by the Rev. E. B. Backhouse, Ernest Herbert van Someren, M.R.C.S., L.R.C.P. Lond., of Venice, Italy, to Grace Ivy Ethel, daughter of Mr. and Mrs. Horace Fletcher, of Palazzo Saibante, Venice, Italy.

## DEATH.

CARRINGTON.—On Dec. 26th, 1901, suddenly, at Battersea rise, S.W., William Henry Carrington, L.S.A., L.R.C.P. Irel.

*N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

# Notes, Short Comments, and Answ to Correspondents.

## THE CLAMOND GAS RADIATOR.

WE have been favoured with a copy of the following letter which believe has already appeared in the *Journal of Gas Lighting.* T writer addresses us "on behalf of the Richmond Gas Stove a Meter Co."

### CLAMOND FIRES—"LANCET TESTS."

*To the Editors of* THE LANCET.

DEAR SIRS,—THE LANCET of Nov. 30th contained a report of w purported to be an exhaustive series of analytical tests of the ab named fires or radiators.

Some of the data, and the conclusions drawn therefrom, wer "peculiar" that while they may pass unchallenged in THE LAN (it not being a technical journal) I quite expected to see th questioned in the practical press.

Had the report been an ordinary "sympathetic" descriptio some novelty a little "poetic liberty" might well pass unchalle but published as these tables and detailed explanations are, w the seal of "THE LANCET Laboratory" upon them, they will, un questioned, be taken by many as reliable scientific results.

It is due, therefore, to the public, and in justice to the whol the gas stove trade, that some of the discrepancies contai the report in question be exposed and corrected.

Gas experts who read the report will have already noted som these errors; no doubt their confidence in the rest would thereby b shaken.

For instance, Table I. informs us that, with 3″ pressure of gas a certain fixed aperture in a burner passes 22 ft. of gas per hour Table II. informs us that the same aperture with 2″ pressure passes 20 ft. per hour—i.e., for 1″ more pressure *only 2 ft. in 20 ft.* more gas?

Tables III. and IV., however, show results much more "peculiar than that, for in them we are told that the same burner which passes 20 ft. per hour at 2″ pressure, *passes only 18 ft. when pressure is increased to 2½″*.

Surely something has gone wrong with THE LANCET meter.

The next "peculiar" result to be noted is the discovery that the hot air chamber which forms the upper part of one of the stoves, and which is heated by the products of combustion before they enter the flue, is of no use, and that the stove without such additional radiating and convecting power is quite as efficient.

If this is true, here is a new law of heat from THE LANCET Laboratory which may seriously upset the calculations of heating engineers, as from it we may prove that a hot radiator gives off no heat, either radiant or convected.

Another very important omission from THE LANCET tests, especially if the results are intended to be of service outside London, is that lower pressures—viz., 1½ and 1″ (the latter of which is prevalent as day pressure in the country)—are entirely ignored.

It is well known that it is at low pressures that most of the present difficulties arise, and if in this direction lies the weakness of the fires in question that fact should be made known in the places where high pressure is not available.

Passing from necessary criticisms of unreliable experiments to practical facts every right-minded progressive producer of articles of such public utility will hail with pleasure each step made towards greater perfection in appliances as they tend to stimulate their more extensive use and inspire the inventive faculties of the craft to "reach another niche the higher."

Yours faithfully,
E. W. T. RICHMOND
(On behalf of the Richmond Gas Stove and Meter Co.).
Dec. 19th, 1901.

⁂ Mr. Richmond's discursive observations—we cannot regard them as criticisms—call for little attention, coming as they do from an interested person addressing us "on behalf of the Richmond Gas stove and Meter Co." We can, however, give him a better reason than that which he supplies why "the data and the conclusions drawn therefrom" have passed "unchallenged"; why, in fact, no one save himself has thought fit to describe them as "peculiar." That reason is taps. We observe that Mr. Richmond, while not suggesting that there is any mistake in our observations on health points—such as the effect of gas-stoves upon the air, the estimation of carbonic acid, the minute detection of carbonic oxide, the composition of the gases at various points—insinuates that here also we must be wrong because of our errors which he says have been noted by gas experts. No errors have been noted by any gas experts, unless Mr. Richmond is such an one. The question of the relation of pressure to consumption in the Clamond Gas Radiators seems to have puzzled Mr. Richmond to such an extent that he has lost his manners. The solution of the mystery of course is taps, all Mr. Richmond's insistence upon the "same aperture" and a "fixed aperture" being beside the point. Mr. Richmond's meter, we may assume, will record the

**ROYAL INSTITUTION** —The Christmas lectures this year consisted of six lectures (adapted to a juvenile auditory) on Waves and Ripples in Water, Air, and Æther, delivered by Professor J A Fleming, professor of electrical ngineering in University College, London At the second ecture delivered on Dec 31st, 1901, the formation of waves n water by the motion of ships and boats was explained At the fourth lecture delivered on Jan 4th, numerous experiments were performed illustrating the principles of acoustic resonance and the structure of musical chords, and a lady played on Mr Stroh's recently invented violin This nstrument, the tone and quality of which are almost dentical with that of a violin of the ordinary construction s, however, of a very dissimilar appearance Four strings of the usual description are stretched on a stout rod or bar which may be, but is not necessarily, of wood There is no hollow wooden body or sounding box The strings are tuned and played on in the usual way and pass over a bridge of the ordinary shape, having a slight lateral rocking motion on the bar against which it rests A bent arm attached to one end of the bridge conveys the vibrations of the strings to the centre of an extremely obtuse cone of thin aluminium about five inches in diameter The resonance of the instrument is produced by this metallic surface aided by a metallic bell about 12 or 13 inches long and six and a half inches in diameter at the open end

## BOOKS, ETC , RECEIVED

CENTURY PRINTING CO , LTD , 19 and 20, Fetter-lane, E C

The War against Consumption A popular handbook of the proceedings of the British Conference on Consumption, held in London, 1901 By Dennis Vinrace M R C S Eng , L S A , *Revised by* John H Vinrace, M B Lond , M R C P Lond Price not stated

COLLINGRIDGE, W H AND L , 148 and 149, Aldersgate-street, E C

*Profitable Fruit Growing for Cottagers and Small Holders of* Land Gold Medal Essay by John Wright V M H , F R H S Written for the Worshipful Company of Fruiterers Sixth edition Revised and enlarged Price 1*s*

CHURCHILL, J. & A , 7, Great Marlborough street W.

A Short Manual for Monthly Nurses By Charles J Cullingworth, M D , F R C P Fifth edition Revised by the author with the assistance of M A Atkinson matron of the General Lying in Hospital, London *Price 1s 6d*

A Short Practice of Midwifery for Nurses By Henry Jellett, B A M D , B Ch , B.A O (Dublin University), F R C P I , L M Price 6*s*

Nursing General, Medical, and Surgical With Appendix on Sick room Cookery By Wilfred J. Hadley, M D , F R C P , I R C S , &c Price 3*s*. 6*d*

FISCHER, GUSTAV, *Jena*

Chirurgische Operationslehre By Dr Th Kocher of Berne University Fourth revised edition Price, paper, M13, *cloth* M15

GRIFFIN, CHARLES, AND CO , Limited, Exeter street, Strand, W C

A Handbook of Hygiene By A M Davies, M R C S , L S A , D P H Camb , Lt Col R.A M C , &c Second edition Price 8*s* 6*d* net

LEWIS, H K , 136, Gower-street, W C

Handbook of Bacteriological Diagnosis for Practitioners Including instructions for the clinical examination of the blood By W D'Este Emery M D B Sc Lond Price 5*s* 6*d*

Rough Notes on Remedies By Wm Murray, M D , F R C P Lond Fourth edition Price 4*s*, net

LONGMANS, GREEN AND CO , 39, Paternoster-row, E C

*Directions for Class-work in Practical Physiology*, Elementary Physiology of Muscle and Nerve and of the Vascular and Nervous Systems By E A Schafer LL D , F R S Price 3*s* net

MACMILLAN COMPANY, New York London: MACMILLAN AND CO LTD,

The Roentgen Rays in Medicine and Surgery as an Aid in Diagnosis and as a Therapeutic Agent Designed for the use of Practitioners and Students By Francis H Williams, M D Harv Price 25*s*

MASSON ET CIE, 120 Boulevard Saint Germain Paris

*Le Médecin dans la Société contemporaine* Conferences de Déontologie By MM les Docteurs P Le Gendre and G Lepage Price 2 fr

SAUNDERS, W B AND CO , Philadelphia and London

Nothnagel's *Encyclopedia of Practical Medicine*: Typhoid Fever and Typhus Fever By Dr H Curschmann of Leipzig Edited, with additions, by William Osler, M D Authorised translation from the German, under the editorial supervision of Alfred Stengel M D *Price not stated*

A Text book of Pathology Edited by Ludvig Hektoen M D , and David Riesman, M D Two volumes Price not stated

SMITH, ELDER AND CO , 15, Waterloo-place, S W.

Therapeutics its Principles and Practice. By Horatio C Wood, M D , LL D (Lafayette-Yale) Eleventh edition Remodelled and in greater part rewritten by Horatio C Wood and Horatio C Wood, jun Price 18*s*

## Appointments.

*Successful applicants for Vacancies Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to* THE LANCET *Office, directed to the Sub-Editor not later than 9 o clock on the Thursday morning of each week, for publication in the next number*

BEFGLING DANIEL HENRY, B A Sydney, M B , C M Edin , has been appointed Surgeon to the London and North Western Railway Company for Huddersfield and District

BROWN A TENNYSON M B C M Aberd , has been appointed Medical Officer of Health to the Horbury Urban District Council, Yorks

CHIPPERFIELD THOMAS JOHN BURGOYNE PEARSE M R C S Eng , L R C P & L M Edin has been appointed Medical Officer and Public Vaccinator for the Eighth District of the Liskeard (Cornwall) Union, vice J W Gill, resigned

CLARK, J M D Aberd F R C S Edin , has been re-appointed Medical Officer of Health for Lichfield

COLLINSON, HAROLD M B , M R C S L R C P , has been appointed Resident Surgical Officer to the General Infirmary, Leeds

COLLINGWOOD, FREDERICK W , L R C P Lond , M R C S , has been appointed Anæsthetist to the Samaritan Free Hospital

CRIPPS, HARRISON, F R C S Eng , has been appointed Surgeon to St Bartholomew's Hospital, vice Alfred Willett, resigned

DENYER STANLEY E C M G M A M D B C Cantab , has been appointed an Assistant Demonstrator of Anatomy in the University of Cambridge

DICKMAN, HENRY GEO , M B Edin , has been appointed Medical Officer of the Urban District Council of Diss Norfolk, and Public Vaccinator No 5 District (Diss) of the Depwade Union, Norfolk

FREEMAN JOSEPH L R C P & S Edin , L F P S Glasg , has been appointed Surgeon with the troops in South Africa

MACKENZIE, W H M D Edin has been appointed Medical Attendant at the New Hospital for Infectious Diseases erected by the Kirkcaldy District Committee and district burghs near Thornton, Fife

MCCANN, FREDERICK M D Edin , F R C S Eng , M R C P Lond , has been appointed Physician to In Patients at the Samaritan Free Hospital for Women London

MUDD, FRANK BURNAND has been appointed Honorary Anæsthetist to the Throat Hospital Golden square

OWEN, EDMUND F R C S has been appointed Consulting Surgeon and Surgeon in Chief to the French Hospital and Dispensary, vice the late Sir William Mac Cormac

## Vacancies.

*For further information regarding each vacancy reference should be made to the advertisement (see Index)*

BOROUGH OF BOOTLE HOSPITAL FOR INFECTIOUS DISEASES —Resident Medical Officer, unmarried Salary £120 per annum, with board, washing and apartments

BOROUGH OF DONCASTER BALBY WITH HEXTHORPE, AND WHEATLEY —Medical Officer of Health and Doctor to Infectious and Small pox Hospitals Salary as Medical Officer £300 per annum, as Doctor to Hospitals £50 per annum

BRADFORD ROYAL INFIRMARY —Dispensary Surgeon, single Salary £100 per annum with board and residence

BRISTOL GENERAL HOSPITAL —Surgeon Also Assistant Surgeon

CHARING-CROSS HOSPITAL —Third Anæsthetist

CHELTENHAM GENERAL HOSPITAL —House Surgeon, unmarried Salary £80 per annum with board and apartments

CHILDREN'S HOSPITAL, Sheffield (Out patient Department) —Lady House Surgeon Salary £70 a year, with board, lodging, and washing

CORPORATION OF LONDON —Female Sanitary Inspector Salary £125 per annum rising to £150

DERBYSHIRE ROYAL INFIRMARY Derby —Assistant House Surgeon for six months Salary of £30 for the six months, with board, residence and washing

DERWENT VALLEY WATER BOARD WORKMEN'S VILLAGE, Birchinlee, North Derbyshire —Medical Officer

DEVONSHIRE HOSPITAL, Buxton, Derbyshire —House Surgeon and Assistant House Surgeon Salary, House Surgeon £100 per annum, Assistant £50 per annum with apartments, board, and lodging

DURHAM COUNTY ASYLUM —Junior Assistant Medical Officer Salary £140 rising to £160, with board, laundry, and attendance called out as if in pain and seemed at times to be strangling. Towards 11 A.M. the symptoms seemed to subside, although the eye still remained swollen, apparently almost bursting. Renewed hot fomentations seemed to relieve this, and in the course of the afternoon violent sneezing and running from the nose were continued for three or four hours, and after this the symptoms seemed to improve. Later in the evening sharp headache set in, probably the result of the alcohol that had been taken, as it was promptly relieved by 15 grs. of phenacetin. A hot bath with hot local applications seemed to soothe the patient as the evening advanced, and he had a fairly good night. The next morning all the pain had practically disappeared, although the left eye was still tumid. At no time during the attack was there any exudation or running of any kind from the swollen and inflamed left eye. In the afternoon of the first day the temperature was 101·5° F. and the pulse was 83, the patient's normal pulse being about 70. The next day the patient appeared perfectly well, the left eye being quite normal in appearance. It is noteworthy that when the pain in the throat was worst and the feeling suggested suffocation and great swelling of the tissues there was not the slightest difficulty in swallowing either then or throughout the attack. I am, Sirs, yours faithfully,

Dec. 30th, 1901. PUZZLED.

⁂ It is naturally difficult to diagnose a case without having seen it. We would suggest that it was a case of angio-neurotic œdema of doubtful origin.—ED. L.

### GUESS-WORK.

*To the Editors of* THE LANCET.

SIRS,—Can you or any readers of THE LANCET kindly inform me, through the medium of your correspondence columns, the probable increase of income likely to be derived from the second and third years' working of a new practice in London amongst the middle classes in proportion to that realised the first year?

I am, Sirs, yours faithfully,

Jan. 1st, 1902. E. W. N.

⁂ Increase of practice depends upon so many factors, to say nothing of the practitioner's individuality, that "E. W. N." must not expect to get any definite information. We publish his request to his fellow-practitioners, however.—ED. L.

### CHARITY AND DENTISTRY.

THE following advertisement appeared in the *Church Times* of Dec. 20th:—

> A LADY will have much pleasure (out of gratitude) in recommending her DENTIST. She can speak well of his abilities and kind treatment, having previously been under the care of three dentists, all of whom made a failure of her teeth. Card sent with pleasure.—Address, T., 3, Radnor-place, Hyde Park, London, W.

We thought that this was a chance not to be missed, so we wrote to "T." She kindly enclosed us the card of a gentleman who, according to the *Dentists' Register*, has one qualification only, but that we may say a valuable one—namely, experience. He was in practice before 1878. Gratitude is a great quality, but why should "T" show her gratitude by advertising her dentist at 4*s.* 6*d.* per insertion? Why not send him a cheese or a turkey, or emulate the good deeds of the Pilgrims who, according to Mr. W. S. Gilbert, waited on Pasha Bailey Ben as thus:—

"They brought him onions strung on ropes,
And cold boiled beef, and telescopes,
And balls of string, and shrimps and guns,
And chops, and tacks, and hats, and buns.

They brought him white kid gloves, and pails,
And candlesticks, and potted quails,
And capstan bars, and scales and weights,
And ornaments for empty grates."

A gift of all or any of these would be a legitimate way of rewarding a dentist or anybody else. "T" being a non-professional person cannot be expected to know professional proprieties, but really the dentist in question has been in practice quite long enough (before 1878) to know that it is not fitting that his cards should be distributed as per advertisement by "T" or any other person.

### THE CASE OF THE LATE MR. W. K. BROCK.

THE following further subscriptions to this fund are announced:—Mr. A. Tuxford, Boston, Lincs., £2 2*s.*; THE LANCET Relief Fund, £12 10*s.*

◆

*General Practitioner.*—The Coroners Act of 1887 was a consolidating Act and did not abolish the essential clauses of previous Acts. If a person dies as the result of an accident the coroner is bound to hold an inquest. If a person dies within such time from the date of an accident as to render it reasonable to infer that the accident might have contributed to the death the coroner must hold an inquest. In the case mentioned only about 12 days elapsed between the accident and the death. In our opinion, as death was attributed to blocking of a large cerebral blood-vessel, it is not improbable that the shock and the sudden confinement to bed of the patient, who had previously led an active life, had some part in causing the fatal issue. We think the coroner was quite justified in holding an inquest. However strong may be the belief of a medical man that death resulted solely from natural causes it is certainly politic to communicate the facts of the accident and the death to the coroner and so to divest himself of all further legal responsibility.

*Q. E. D.*—B cannot take any vigorous steps to enforce a claim against A. The proposal of A to assist B in the management of the practice and to allow his (A's) name to remain on the premises amounted to a scheme between A and B to cover unqualified practice in dentistry. The General Medical Council would condemn the action of both, and no court of law would be likely to view B's claim for damages favourably. But while it was wrong of A to make an immoral bargain we certainly do not think it right of him to benefit pecuniarily by not keeping that bargain. More than this we cannot say.

*G. P.*—Our correspondent is at perfect liberty to analyse the preparation and to write out in testimonial form what he finds. Such a testimonial, however, must certainly not appear on the labels of the bottles unless merely the results of the examination are given without any signature, and this, of course, would render the analysis valueless.

*B. B.*—The second-class examination of the College of Preceptors is no longer accepted by the General Medical Council.

*Coccus.*—Epidemic Diarrhœa, by Dr. F. W. Andrewes, THE LANCET, Jan. 7th, 1899, p. 8; Epidemic Colitis, THE LANCET, Sept. 23rd, 1899, p. 850.

*Y. M. J. H.*—We shall be happy to make an examination of the preparation in question if a specimen is forwarded to us.

*T. D.*—We are not prepared to advocate, at any rate at the present moment, the formation of such a society.

*S. W.*—Our correspondent should consult his usual medical attendant.

*W. N. W.*—We do not know.

## Medical Diary for the ensuing Week.

### OPERATIONS.

#### METROPOLITAN HOSPITALS.

**MONDAY** (13th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.) St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.) West London (2.30 P.M.), London Throat (2 P.M.).

**TUESDAY** (14th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

**WEDNESDAY** (15th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.).

**THURSDAY** (16th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.) St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

**FRIDAY** (17th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square, (9.30 A.M.), City Orthopædic (2.30 P.M.).

**SATURDAY** (18th).—Royal Free (9 A.M. and 2 P.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.), Throat, Golden-square (9.30 A.M.)

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

### SOCIETIES.

**MONDAY** (13th).—MEDICAL SOCIETY OF LONDON (11, Chandos street, Cavendish square, W.).—8.30 P.M. Paper:—Mr. Mayo Robson: Observations on the Surgical Treatment of Obstructive Jaundice, resulting from an Experience of over 200 Operations.

SOCIETY OF ARTS.—8 P.M. Dr. S. Rideal: The Purification and Sterilisation of Water. (Cantor Lecture.)

**TUESDAY** (14th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Adjourned Discussion on Dr. S. M. Copeman's paper on Modern Methods of Vaccination and their same fact as ours—namely that when taps are partly turned off a smaller consumption will be registered, the pressure remaining the same or it may even be increasing These taps were used in the experiments in order to arrive at the maximum and minimum efficiency of the stove as is plainly indicated in the report The *pressures recorded refer merely to the supply, which is variable* The importance of an efficient pressure was also pointed out whereas Mr Richmond says it was ' entirely ignored Mr Richmond need not trouble to search for new physical laws, the application of well established principles to improvements in gas stoves has by no means been exhausted as the little progress made during the last 10 years by gas stove makers abundantly shows —ED L

## LOCUM TENENTS AND ASSISTANTS FEES

*To the Editors of* THE LANCET.

SIRS —It seems to me that the time has come when some change ıould be made in fees paid to men holding temporary charge My object ı drawing attention to this matter is to ask if men who like myself evote their whole time to locum and other temporary work will let me now what are their views on the subject Ever since the days of *r Baxter Langley there has been no recognised alteration made in these* es I think I am right in saying that some of the leading medical gents are of opinion that something definite should be done to increase ıese fees I am informed that dental surgeons have some difficulty in btaining locums even at £5 5s per week Why should medical men ıke less? If I find I obtain suitable replies to this communication I ill decide what future action should be taken to give expression to ıe general consensus of opinion of locum tenents and temporary ssistants —I am Sirs yours faithfully,

T HOWARD BROCKLEHURST M R C S Eng L S A

Weymouth Dorset Dec 30th 1901

## A CORRECTION

*To the Editors of* THE LANCET

SIRS —By an error my new address is given in Churchill s Medical irectory as 70A Grosvenor-square instead of Grosvenor street As ıe wrong address may obviously give rise to the greatest incon enience may I ask the hospitality of your columns to draw attention the oversight I am Sirs yours faithfully

Jan 7th 1902 D WALSH

## FRIENDLY SOCIETIES AND THEIR MEDICAL AID INSTITUTIONS

*To the Editors of* THE LANCET

*SIRS* —Mr J D Pike s letter in THE LANCET of Dec 7th 1901, 1643 has evidently touched C W on the raw even to the xtent of compelling him to seek medical advice which how ver judging from the tone of his reply to Mr Pike in THE LANCET f Dec 14th 1901 p 1709 has not been so much judicious as xtensive As your excellent motto Audi alteram partem is such a ood working text I trust that C W will forgive me when I inform ım that *every medical gentleman* I have *come across* who has read is first letter agrees absolutely with Mr Pike s criticism of its tone ur profession is unfortunately quite alive to the fact that these ıstitutions are legalised robbers and are moreover assisted by the tate in their efforts to pauperise the public as well as the profession t would however puzzle C W to point out an Act of Parliament which compels medical men to accept the posts of surgeons to such ıstitutions whilst *on the other hand* he would have no trouble n finding many proofs of the growing feeling in the profession hat the acceptance of such posts is detrimental to the honour f the medical profession as well as to the best interests of the ublic themselves Even the medical worm will claim its proverbial ight to turn long suffering though it has been Audi alteram artem once more Let me tell C W ' how I feel about the matter *nd assure him at the same time those feelings* are shared by a daily ncreasing majority of the profession Taking club practice in its ecuniary relation to the profession frankly it does not pay and owadays with persons in a decent position not only not ashamed o but eagerly demanding medical care at charity rates for men omen and children it is absolutely ruinous to general practice hould however a medical man have the temerity to protest gainst his daily bread being snatched *from him* 'what happens? C W *tells us (it is very simple) join together and starve him* ill he learns his place, that is what it amounts to and what is ractically attempted wherever these institutes are established

The friendly societies tried it on in Great Yarmouth but C W ill be glad to learn that they have not succeeded in injuring anybody ut themselves The local profession have been on the other hand enefited by the formation of the *institute* and *it is* the daily experi nce of the Yarmouth medical men to have the institute members ome to them as private patients in spite of the better attention and better drugs" offered by the institute This is simply due to the act that the Yarmouth medical men combined together and would not e crushed let the Rotherham medical men do the same and they ill find that they will be the gainers and not the losers by the ormation of the institute *In conclusion* one word more to C W " Once a club joins an institute amalgamation it loses ll control over its medical advisers (other than that exercised by ts representative on the institute committee) and were it not or this fact I am firmly of opinion that the majority of the clubs would gladly leave the Yarmouth Institute and return to their old medical advisers The argument advanced by C W that these institutions are self supporting because their members through the clubs subscribe to the hospitals is fallacious That this is so can be easily proved by looking at any hospital report when it will be found *that however largely the working classes subscribe (and they ought to* subscribe largely) they receive from the charity a great deal more than they subscribe to say nothing of the gratuitous medical and surgical help which is freely given by the very profession C W ' and his kind are so ready to trample on Until the rulers of our profession can see their way to condemn medical men for underselling their brethren and sacrificing their independence to the whims of 'C W s committees there is only one course for the profession to adopt and that is to leave the friendly societies and their medical aid institutions severely *alone* *I am Sirs yours faithfully,*

Great Yarmouth Dec 15th 1901 ALBAN HY MOXON

## THE CASE OF THE LATE MR R B ANDERSON

*To the Editors of* THE LANCET

SIRS —I shall be obliged if you will publish the inclosed list of *those who have been kind enough to respond to my appeal on behalf* of the fund for the benefit of the wife and family of the late R B Anderson F R C S There are still thousands of medical men who know of the circumstances of this case and who ought to feel it a privilege to send a few shillings to the fund The attitude of the men who are supposed to take an interest in medical politics is very disappointing How anyone of them can refrain from adding his mite in memory of the man who sacrificed everything in defending the honour and interests of the profession is a mystery to me Let me *implore them before* this fund is closed to do a little for the *credit of* the profession in this matter I am Sirs yours faithfully

Jan 7th 1902 ALFRED COX

| | £ | s | d | | £ | s | d |
|---|---|---|---|---|---|---|---|
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*To the Editors of* THE LANCET

SIRS —Owing to several requests and conditional promises of sub scriptions the committee has resolved to keep this fund open till the last day of February next instead of closing it to-day (Jan 8th) as previously announced

WALTER MORNINGTON *Honorary Secretary*

7 Fig tree-court Temple E C Jan 8th 1902

## A DISCLAIMER

WE have been requested by Mr James Startin to state that he is in no way connected with the letters that have appeared in the lay press under the *nom de plume* of a surgeon to the Roentgen Ray department of the *London Skin Hospital*

## A CASE FOR DIAGNOSIS

*To the Editors of* THE LANCET

SIRS —I should be *greatly obliged by suggestions as to the causation* and treatment of the following (to me) mysterious case A B went to bed about 1 A M in apparently better health and spirits than he had enjoyed for a month in fact feeling perfectly well He had during the previous three or four weeks suffered twinges of what appeared to be muscular rheumatism He was awakened from a sound sleep at about 3 30 to 4 A M by acute agony in the region of the throat accompanied by what might be *referred or echo pains through the whole of the head but particularly* in the jaws and neck He got up tried to examine his throat with a glass, but could see nothing, the agony rapidly becoming more severe In a few minutes the left eye became acutely inflamed with sharp pain and presently began to swell rapidly till the whole of the eyelids and surrounding tissues were bulging out to almost the size of an egg He attempted to relieve himself by *bathing his head* and eye and gargling his throat with hot water without any result The symptoms became so bad that suffocation threatened and the danger appeared so real and imminent that before calling for help he made pencil memoranda of various uncompleted business matters in the belief that he was dying The pains then seemed to spread more *or less throughout the body, but nothing like* so acute as in the head When help came hot fomentations were again *administered* as by this time the patient was incapable of helping himself, and a large dose of hot brandy and water was taken this seemed to cause relief or at least intoxication and pending the coming of a medical man another large dose of hot brandy and water was taken This resulted in a troubled and heavy sleep during which the patient

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Scientific Basis, opened by Dr. T. D. Acland and taken part in by Dr. Greenwood, Dr. S. Coupland, Dr. Eddowes, Dr L. Parkes, Mr. H. A. Stonham, Dr. A. E. Cope, Dr. J. Loane, and Prof. Sims Woodhead. Dr Copeman will illustrate his remarks by lantern slides to be shown on Zeiss's Epidiascope. (This will be the first public demonstration of the Epidiascope )

EDNESDAY (15th).—ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.).—8 P.M. *The President will deliver his Annual Address*

ROYAL METEOROLOGICAL SOCIETY (Institution of Civil Engineers, Great George street, S.W.) —7.45 P.M. Annual General Meeting.

HURSDAY (16th).—HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Titchborne street, Edgware-road, W.).—8 P.M. Annual General Meeting. Election of Officers. President's Address. Annual Conversazione.

GUTHRIE SOCIETY (Board Room, Westminster Hospital).—8 30 P M. Dr. Hall-Edwards: The X Rays in South Africa (illustrated by lantern slides).

RIDAY (17th).—EPIDEMIOLOGICAL SOCIETY (11, Chandos street, Cavendish-square, W.).—8 30 P.M. Meeting

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN (Evelina Hospital).—5 30 P M. Cases will be shown by Mr. A. H. Tubby, Mr. J. J. Clarke, Mr. Walter Edmunds, Dr. G. Carpenter, and Mr. F. C. Abbott. *Papers.—Dr. L. Marshall (Nottingham): A Case of Thyroid* Dislocation of the Hip in a Child.—Dr. L A. Milligan: A Note on a *Case of Chronic Granular Nephritis in a Child, aged seven years.*

## LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ONDAY (13th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P M. Dr. J. Galloway: Clinique (Skin.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.) —5 P.M. Mr. Baldwin. Surgical Emergencies

UESDAY (14th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.).—4 P.M. Dr. S. Taylor: Clinique. (Medical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Beddard. Traumatic Neurasthenia.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3 30 P.M Dr. Beevor. Muscular Atrophy.

EDNESDAY (15th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C ).—4 P.M. Mr. P. J. Freyer: Clinique. (Surgical.)

*POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-*road, W.).—5 P.M. Mr. McAdam Eccles: Lantern Demonstration *on Hernia.*

HURSDAY (16th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC *(22, Chenies-street, W.C.).—4 P M. Clinique (Surgical.)*

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W ).—5 P M. Mr. Dunn: Conjunctival Diseases.

CHARING-CROSS HOSPITAL.—4 P.M. Mr. Waterhouse: Surgical Cases. (Post-Graduate Course.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Garrod Demonstration of Selected Cases.

RIDAY (17th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.).—4 P.M. Mr. M. Gunn: Clinique. (Eye.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Diagnosis of Disease of Spinal Cord, illustrated by Cases.

## EDITORIAL NOTICES.

IT is most important that communications relating to the ditorial business of THE LANCET should be addressed *xclusively* "TO THE EDITORS," and not in any case to any entleman who may be supposed to be connected with the ditorial staff. It is urgently necessary that attention be iven to this notice.

*It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.*

*Lectures, original articles, and reports should be written on one side of the paper only,* AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

*Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.*

*We cannot prescribe or recommend practitioners.*

*Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."*

*Letters relating to the publication, sale, and advertising departments of* THE LANCET *should be addressed "To the Manager."*

*We cannot undertake to return MSS. not used.*

## MANAGER'S NOTICES.

### THE INDEX TO THE LANCET.

THE Index to Vol. II. of 1901, which was completed with the issue of Dec. 28th, and the Title-page to the Volume, were given in THE LANCET of Jan 4th.

### VOLUMES AND CASES.

VOLUMES for the second half of the year 1901 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra

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## METEOROLOGICAL READINGS.

*(Taken daily at 8.30 a m by Steward's Instruments )*

THE LANCET Office, Jan. 9th, 1902

| Date | Barometer reduced to Sea Level and 32° F | Direction of Wind. | Rain fall. | Solar Radia in Vacuo | Maximum Temp Shade. | Min. Temp | Wet Bulb | Dry Bulb | Remarks at 8.30 A.M. |
|---|---|---|---|---|---|---|---|---|---|
| Jan. 3 | 29 96 | W | ... | 56 | 52 | 43 | 43 | 44 | Hazy |
| " 4 | 29 91 | W | ... | 66 | 53 | 44 | 49 | 51 | Cloudy |
| " 5 | 29 99 | W. | 0·07 | 70 | 47 | 42 | 40 | 42 | Cloudy |
| " 6 | 30 41 | W | 0 10 | 66 | 52 | 40 | 44 | 46 | Cloudy |
| " 7 | 30 62 | N W | ... | 52 | 48 | 42 | 42 | 44 | Hazy |
| " 8 | 30 53 | W. | ... | 48 | 46 | 44 | 42 | 45 | Overcast |
| " 9 | 30 20 | W. | ... | 51 | 49 | 42 | 42 | 45 | Overcast |

**During the week marked copies of the following newspapers have been received:**—*Boston Independent, Macclesfield Times, Macclesfield Courier, Weekly Free Press (Aberdeen), Bristol Mercury, Scotsman, Brighton Guardian, Leighton Buzzard Observer, Madras Journal, Reading Mercury, Mining Journal, City Press, Hertfordshire Mercury, Local Government Chronicle, Sanitary Record, The Record, Torquay Times, Nuneaton Chronicle, Black and White, Derbyshire Courier, Surrey Advertiser, Local Government Journal, Carpenter and Builder, Rotherham Express, Bromley and West Telegraph, North Star (Darlington), Liverpool Daily Post, Sunday Times, Journal of Tropical Medicine, &c.*

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# A Post-Graduate Lecture

ON

# OCULAR PAIN: ITS SIGNIFICANCE, VARIETIES, AND TREATMENT.

*Delivered at the West London Post-Graduate College on June 17th, 1901,*

By PERCY DUNN, F.R.C.S. Eng.,

OPHTHALMIC SURGEON TO THE WEST LONDON HOSPITAL, LECTURER ON OPHTHALMOLOGY AT THE WEST LONDON POST-GRADUATE COLLEGE.

---

Gentlemen,—The ideal subject for a post-graduate lecture, as I have observed here on a former occasion, is one which does not trench upon the province of the text-book; one which has for its basis practical facts easily lending themselves to assimilation by others; and one which does not travel beyond the limits of ordinary experience, thus avoiding the risk of making the discourse an academic display of knowledge possessing but little practical utility In endeavouring, then, to fulfil this ideal I shall occupy your time this afternoon with a practical, and what I hope will prove to be profitable, discussion upon the subject of "Ocular Pain: its Significance, Varieties, and Treatment"

First let us briefly consider the channel by means of which the human eye is endowed with common sensation. In this connexion it seems to be a marvellous fact that the sensory nerve-supply of the eye should be solely derived from a small branch of the nasal nerve which, as you know, arises from the first division of the fifth pair. I say marvellous, for surely it might have been the case that an organ of such importance as the eye would have been provided with a special sensory nerve for itself, or at all events that more than one small sensory branch would have been supplied to it to ensure against the contingency of interruption of the main source of supply. We can only conclude, however, that nature in making things as they are knew her own business. Presumably it was not needful to establish a complicated system of inter-communication with sensory branches, while, on the other hand, in the interests of the eye itself it was merely essential to combine its sensory supply with that of the adjoining nasal cavity. The influence of this connexion is mainly manifested when the eye is exposed suddenly to a brilliant light Under ordinary circumstances the exposure of the eye to light is provided for by the contraction of the pupil, and such contraction is no doubt amply sufficient to protect the retina from harm. But let anyone turn his eyes upwards to the shining sun at noonday, and, as we know, the act is interrupted almost immediately by the occurrence of sneezing The explanation of this phenomenon I believe to be stimulation of the nerve-supply of the cornea This seems to be reasonable, for while the retina is protected from harm by the contracted pupil the cornea would soon suffer were the exposure to the sun to be continued. The strong sensory impression caused by the sun's rays upon the corneal plexus is conveyed by the ciliary nerves to the central nucleus in the brain, with the result that the reflex act of sneezing is induced—an act with which is associated involuntary closure of the lids, and consequently the cessation of the exposure of the eyes to the source of irritation But this reflex act is also, and with perhaps greater interest, illustrated when a child with acute blepharospasm is placed under chloroform for the purpose of having the eyes examined. In these cases you will recall that as soon as unconsciousness is induced and the eyelids are retracted so as to expose the cornea not infrequently sneezing follows Here, however, the light would be only relatively brilliant, inasmuch as the ordinary daylight in a room is sufficient to induce the sneezing. Nevertheless, it must be borne in mind that the child may not have had the eyes open for several days

I have alluded to the protection afforded the retina by the contraction of the pupil on the exposure of the eyes to light, and it is not without interest to recall how this contraction takes place. It is, of course, a reflex act; the optic nerve is stimulated by light and the pupil contracts by the impression being transmitted to the motor oculi. That is to say, the optic nerve, although a nerve of special sense, plays the part of one of common sensation. There cannot, however, be any sensory fibres, so-called, in the optic nerve, otherwise we would expect that papillitis and other inflammatory conditions of the nerve would be accompanied by pain. Thus it is of interest to note in this connexion that a nerve of special sense has been endowed with the characteristics of one of common sensation without possessing any sensory fibres How duly in accord, however, with ordinary physiological principles it would have been had this reflex act been dependent upon stimulation of the corneal plexus: the afferent and efferent paths of the nerve impulse would then be distinctly plain, and the result doubtless would be just as satisfactory as that which now obtains. These observations might seem to suggest that nature had failed to be as wise as she might have been in regard to these pupillary arrangements Therefore, to pursue this matter farther would be merely equivalent to indulging in unprofitable speculation.

Generally speaking, it may be said that pain is an invaluable symptom, and oftentimes the saving clause, in an eye which is the subject of disease. Without it, as I shall proceed to show, patients would, indeed, fare badly. It teaches us many important lessons and provides us with many a clue to treatment Take, for example, a case of acute glaucoma It is not the loss of vision which compels the patients in these cases to seek advice; that is to them of secondary importance in comparison with the intense and agonising suffering with which the disease is commonly associated. Moreover, the surgeon knows that the greater the pain the more serious is the case and the greater the need for immediate interference. Thus the pain of a glaucomatous attack is the index of the peril to which the eye is subjected and marks out the line of treatment. Then, too, in the case of iritis, as long as the pain continues in these cases no improvement can be expected; on the other hand, the cessation of pain indicates the commencement of the retrocession of the disease and the progress towards recovery. Thus it is with most ocular affections—so much so that apart from diseases of the fundus, which are not painful, it may be said generally that the absence of pain in inflammatory conditions of the eye may be regarded as a favourable sign

So much, then, for the significance of ocular pain. I have now to consider its varieties, and I mean by this the different diseases of the eye in which pain is a prominent symptom Ocular pain varies in intensity and it varies with the disease, for example, very little pain occurs in connexion with conjunctival affections—a fact which is not difficult of explanation. The conjunctiva is only sparsely endowed with common sensation Moreover, it is a very distensile membrane which, when inflamed, is capable of being easily stretched. Thus the sensory branches distributed to it are not compressed in any way and are consequently not irritated The sensory nerve-supply of the conjunctiva is derived almost entirely from the lacrymal branch of the ophthalmic division of the fifth, and it is not without significance to note that no direct communication appears to exist between the nerve supply of this membrane and that of the intraocular tissues. Perhaps we may assume that nature designedly kept the two sensory sources separate and distinct Reflect for a moment what the result would be were the ciliary nerves, after supplying the ciliary body and the iris, to be continued onwards into the conjunctiva. Obviously upon every occasion that the conjunctiva was exposed to irritation and became inflamed the ciliary nerves could not fail to be involved in the disturbing or morbid process, as well as the structures to which they were distributed, thus exposing the eye and the vision to repeated and serious risks. Again, the fact that this separate sensory nerve-supply exists is significant in view of the free communication which prevails between both the extra-ocular and intra-ocular lymphatic systems. The lymph spaces of the conjunctiva freely communicate with those of the cornea, and it is doubtless through these lymph channels that solutions of atropine and other drugs, when instilled into the conjunctival sac, reach the anterior chamber. Furthermore, the blood-vessels of the conjunctiva freely anastomose with the ciliary arteries, thus establishing the union between the extra-ocular and intra-ocular vascular systems.

The next structure to be considered in connexion with ocular pain is the cornea. There is, perhaps, no other tissue in the body so richly endowed with common sensation as is this The cornea has been well described as the object lens of the ocular camera The importance, therefore, of its unction is such that nature has taken especial care to rotect it from harm by enabling it to resent the slightest isturbance of its integrity. The simplest example of this igilance displayed by the cornea is when a foreign body nds its way under the upper lid. In these cases often acute ain is felt, and the pain is an invaluable symptom inasmuch s it leads to the immediate detection of the trouble and thus ecures the removal of a source of danger to the cornea. The same is true in cases in which a foreign body becomes ixed upon the corneal surface. No relief is obtained until he foreign substance has been removed and the cornea is xposed to various risks until that has been accomplished. Nevertheless, sometimes it happens that the presence of the foreign body is overlooked owing to its minuteness, and the symptoms are attributed to an attack of conjunctivitis. Nothing but the exercise of extreme care in the examination of the cornea can guard against a wrongful diagnosis of this nature, while it should also be borne in mind that conjunctivitis is not usually a monocular affection. The best method of examination for foreign bodies on the cornea is that of focal illumination, but in all cases of doubt the corneal surface should also be carefully inspected with an achromatic lens of high power.

The next class of cases to be considered in which a corneal lesion gives rise to pain is that in which photophobia is present. In children of the lower classes this photophobia usually results in blepharospasm, sometimes to such a pronounced degree as to render it impossible for the surgeon to examine the eyes without the aid of a general anæsthetic. But the symptoms in these cases are altogether out of proportion to the lesion which causes them. That is to say, when the cornea comes to be examined in the vast majority of instances nothing is to be found save a minute ulcer. Such lesion would seem to be a natural explanation of the phenomena. But there are some who profess to see a difficulty as to the causation of the photophobia. Indeed, it has even been said that photophobia is scarcely explicable physiologically. Let us inquire what the difficulty is. First, it is contended that the nerve-fibres of the cornea are not sensitive to light, a contention, I submit, which is not particularly concerned in this case. Furthermore, according to Nuel,[1] "the theory is advanced that in cases of keratitis accompanied by photophobia superficial inflammation of the sensory nerves of the cornea provokes hyperæsthesia of the optic nerve, or rather of its central termination, just as ordinary light gives rise to a painful sensation in the optic nerve apparatus." But against this theory it is necessary to bear in mind, as Nuel points out, that inflammation of the retina and optic nerve is not accompanied by pain. Thus it would seem that a difficulty has been raised where no difficulty exists. The explanation of photophobia appears to be simple enough; the sequence of events in its causation is, presumably, as follows. First, there is some loss by ulceration of the superficial corneal layers; this leads to the exposure of some filaments of the corneal plexus, and whenever these exposed filaments are subjected to any stimulation pain is caused. Probably it is not exposure to the light, but exposure to the air, which excites the phenomena of photophobia. An exact parallel in this connexion is to be found in the cases of irritable ulcers of the skin, the acute tenderness of which, as was pointed out by Hilton,[2] is due to nerve filaments lying exposed in some part of the ulcerated area. "Of course," he says, "it is quite clear that every ulcer must have nerves more or less exposed on the surface, but in the case of an irritable ulcer it seems probable that the sheath of the nerve is destroyed and that the end of the true nerve-fibre remains denuded and so causes the exquisitely sensitive and painful character of the ulcer." He describes some cases of irritable ulcer in which acute suffering was caused by merely blowing a breath of air upon them. Thus, in view of the delicate nerve-supply of the cornea, it is easy to comprehend that during a process of ulceration nerve filaments are so exposed as to give rise to acute pain whenever they are subjected to stimulation from air or other cause, and that absolute closure of the lids is essential to their protection under such circumstances. Without, however, discussing this matter further it may be noted that for the most part it is the superficial ulcers of the cornea in association with which photophobia is most apt to occur, leading to the inference that in deep ulcers thereof the destruction of nerve-tissue is more complete and the liability to pain and photophobia is correspondingly reduced. Mention may here be made of the fact that the blepharospasm and photophobia have been attributed to a conjunctival source. Having regard, however, to the nerve-supply of the conjunctiva this theory does not appear to have much to support it.

In the treatment of these cases of photophobia and blepharospasm a point of special moment is to encourage the child as much as possible to open the eyes voluntarily. Instinctively by many a little furtive movement a child with photophobia will be seen to make every effort to open the eyes at the earliest moment. The patient should therefore be placed in a cot or bed with the light coming from behind and a large shade should be provided to cover the forehead. Finding itself thus protected from the light the child soon begins to try to open the lids. Another point to bear in mind is that the patients are, for the most part, underfed, anæmic, or suffering from the effects of one of the exanthemata. A full nourishing diet, therefore, is an essential in the treatment, even to including a little port wine daily. Locally the eyes should be cleansed twice daily with a warm chinosol solution (1 in 4000), and atropine and cocaine drops should be at the same time instilled. Many drugs have been suggested for administration in these cases, but I have frequently found that a mixture of arsenic and quinine, in dosage according to age, acts like a charm. Under this treatment satisfactory results can always be obtained. I have never experienced the necessity of resorting to such heroic measures as may be exemplified by that of plunging the child, upside down, into a pail of cold water. In these days of scientific methods of treatment this can scarcely be commended, and how distressing it would be to a parent should she happen to witness the half-drowning of her child which the procedure practically involves. And what about the child who is thus subjected to a severe shock to the nervous system? Although the forcible and persistent closure of the lids in bad cases may indicate a serious condition of affairs there is usually, as I have already indicated, nothing further than a slight disturbance of the corneal epithelium. In other words, no apprehension need be felt that the cornea is in any danger of sloughing or that the ulceration present will proceed to perforation. Possibly the protecting warmth afforded by the closed lids largely assists in the maintenance of the nutrition of the cornea, and so prevents the ulceration from becoming progressive.

A structure so richly endowed with nerves as is the iris would naturally lead us to expect that whenever it became inflamed much pain would be experienced. The surprising fact, however, is that it does not always happen that an acute iritis is accompanied by pain. The pain, indeed, in a certain proportion of cases may be very slight or scarcely noticeable and yet a high degree of inflammation may be present. The conclusion, therefore, is obvious that the degree of pain present in a case of iritis is not always an indication of the severity of the attack. But another point must be borne in mind—namely, that the intimate connexion subsisting between the nerve-supply and the blood-supply of the iris and ciliary body establishes the fact that inflammation of the one may mean inflammation of the other. No rule, however, exists as to this; in other words, it is quite possible for the iritic inflammation to remain confined to that structure. When, on the other hand, the inflammation extends to and involves the ciliary body, then in addition to the increased ciliary injection of the globe another symptom becomes manifest—namely, a distinct tenderness of the globe on palpation. In an uncomplicated iritis the patient does not experience pain when the globe is touched; on the other hand, tenderness is always present when inflammation of the ciliary body has supervened.

In regard to the pain associated with iritis, the systemic cause of which is either syphilis or rheumatism, certain points may be noted. First, with reference to syphilis. In passing I may reiterate my belief that iritis dependent upon a syphilitic origin is becoming less and less frequent, for reasons which I have already advanced in a published paper.[3] The pain in syphilitic iritis is very variable, sometimes being scarcely noticeable, at other times being of the acutest description. Generally it is persistent—that is, it continues

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[1] Norris and Oliver: System of Diseases of the Eye, vol. iv., p. 184.

[2] Rest and Pain, second edition, p. 131.

[3] Clinical Journal, July 19th, 1899.

# A Post-Graduate Lecture

ON

# OCULAR PAIN: ITS SIGNIFICANCE, VARIETIES, AND TREATMENT.

*Delivered at the West London Post-Graduate College on June 17th, 1901,*

By PERCY DUNN, F.R.C.S. Eng.,

OPHTHALMIC SURGEON TO THE WEST LONDON HOSPITAL; LECTURER ON OPHTHALMOLOGY AT THE WEST LONDON POST-GRADUATE COLLEGE.

GENTLEMEN,—The ideal subject for a post-graduate lecture, as I have observed here on a former occasion, is one which does not trench upon the province of the text-book; one which has for its basis practical facts easily lending themselves to assimilation by others; and one which does not travel beyond the limits of ordinary experience, thus avoiding the risk of making the discourse an academic display of knowledge possessing but little practical utility In endeavouring, then, to fulfil this ideal I shall occupy your time this afternoon with a practical, and what I hope will prove to be profitable, discussion upon the subject of "Ocular Pain: its Significance, Varieties, and Treatment."

First let us briefly consider the channel by means of which the human eye is endowed with common sensation. In this connexion it seems to be a marvellous fact that the sensory nerve-supply of the eye should be solely derived from a small branch of the nasal nerve which, as you know, arises from the first division of the fifth pair. I say marvellous, for surely it might have been the case that an organ of such importance as the eye would have been provided with a special sensory nerve for itself, or at all events that more than one small sensory branch would have been supplied to it to ensure against the contingency of interruption of the main source of supply. We can only conclude, however, that nature in making things as they are knew her own business. Presumably it was not needful to establish a complicated system of inter-communication with sensory branches, while, on the other hand, in the interests of the eye itself it was merely essential to combine its sensory supply with that of the adjoining nasal cavity. The influence of this connexion is mainly manifested when the eye is exposed suddenly to a brilliant light. Under ordinary circumstances the exposure of the eye to light is provided for by the contraction of the pupil, and such contraction is no doubt amply sufficient to protect the retina from harm. But let anyone turn his eyes upwards to the shining sun at noonday, and, as we know, the act is interrupted almost immediately by the occurrence of sneezing The explanation of this phenomenon I believe to be stimulation of the nerve-supply of the cornea. This seems to be reasonable, for while the retina is protected from harm by the contracted pupil the cornea would soon suffer were the exposure to the sun to be continued. The strong sensory impression caused by the sun's rays upon the corneal plexus is conveyed by the ciliary nerves to the central nucleus in the brain, with the result that the reflex act of sneezing is induced—an act with which is associated involuntary closure of the lids, and consequently the cessation of the exposure of the eyes to the source of irritation But this reflex act is also, and with perhaps greater interest, illustrated when a child with acute blepharospasm is placed under chloroform for the purpose of having the eyes examined. In these cases you will recall that as soon as unconsciousness is induced and the eyelids are retracted so as to expose the cornea not infrequently sneezing follows. Here, however, the light would be only relatively brilliant, inasmuch as the ordinary daylight in a room is sufficient to induce the sneezing. Nevertheless, it must be borne in mind that the child may not have had the eyes open for several days

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Generally speaking, it may be said that pain is an invaluable symptom, and oftentimes the saving clause, in an eye which is the subject of disease Without it, as I shall proceed to show, patients would, indeed, fare badly. It teaches us many important lessons and provides us with many a clue to treatment. Take, for example, a case of acute glaucoma. It is not the loss of vision which compels the patients in these cases to seek advice; that is to them of secondary importance in comparison with the intense and agonising suffering with which the disease is commonly associated. Moreover, the surgeon knows that the greater the pain the more serious is the case and the greater the need for immediate interference. Thus the pain of a glaucomatous attack is the index of the peril to which the eye is subjected and marks out the line of treatment. Then, too, in the case of iritis, as long as the pain continues in these cases no improvement can be expected; on the other hand, the cessation of pain indicates the commencement of the retrocession of the disease and the progress towards recovery. Thus it is with most ocular affections—so much so that apart from diseases of the fundus, which are not painful, it may be said generally that the absence of pain in inflammatory conditions of the eye may be regarded as a favourable sign

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The next structure to be considered in connexion with ocular pain is the cornea. There is, perhaps, no other tissue in the body so richly endowed with common sensation as is this. The cornea has been well described as the object lens of the ocular camera The importance, therefore, of its

Edinburgh and East of Scotland Hospital in South Africa the mortality was 10·7 per cent. In considering mortality the age and condition of the patient must be borne in mind. Most of our patients were young adults, in whom the disease is less severe than in older people but more severe than in children, and many of them had suffered from considerable fatigue and privation not only before but even after they had been attacked. Our mortality (13·7 per cent.) is practically the same as that of the Metropolitan Asylums Board hospitals during 1900 and as that of the Worthing epidemic; it is almost double that of the Maidstone epidemic and the Johns Hopkins Hospital cases.

*Relapses.*—61 of our 262 patients suffered from relapse, but in 36 of these relapse arose either immediately or shortly after admission, the primary attack having occurred elsewhere. Subtracting these cases, there remain 25 out of 226 patients who relapsed in the hospital, an incidence of 11 per cent. Dr. Osler, in 829 cases at the Johns Hopkins Hospital, gives an incidence of 10 per cent.; Dr. Goodall and Dr. J. W. Washbourn, in 506 cases at the Eastern Fever Hospital, an incidence of 13 per cent.; Dr. Caiger and Dr. Goodall, in 611 cases, an incidence of 11·9 per cent. Dr. Rolleston, in an analysis of 244 cases at the Imperial Yeomanry Hospital at Pretoria, gives an incidence of 21 per cent. He, however, informs us that there are included among his cases a certain number of patients who had suffered from the primary attack elsewhere, which, we think, will account for the high incidence. At the Edinburgh and East of Scotland Hospital in South Africa in 150 cases the incidence was only 5·3 per cent. Possibly this low rate may be due to the early transfer of cases to other hospitals. It will thus be seen that our incidence of relapse corresponds with the average in England and America. We have no doubt that the too early removal of patients predisposes to relapse. 36 of our cases relapsed either immediately or shortly after admission, which we believe was due in many cases to too early removal and improper food on the journey. Of the 25 cases of relapse the shortest interval that elapsed between the end of the primary attack and the commencement of the relapse was 1 day; the longest interval was 31 days; the average being 10·8 days. In Dr. Poole's cases the longest interval was 24 days and the average 9 days. Of 53 cases of Murchison quoted by Dr. Osler the average interval was 11 days. In the Johns Hopkins Hospital cases the longest interval was 36 days, the average being 8·2 days. The shortest duration of the relapse was six days and the longest 23 days, the average duration being 13·5 days. In Murchison's cases the average was 15 days. Two of our cases suffered from two relapses, and one from three. We had no deaths among the 25 cases of relapse included in these statistics, which bears out the general experience of low mortality among relapses.

*Second attacks.*—In 12 of our 262 cases there was a history of a previous attack, an incidence of 4·5 per cent. There were actually only 99 cases in which it was definitely stated in the notes whether the patient had or had not suffered from a previous attack. This would give a much higher incidence of second attacks, but as the fact of a previous attack not having occurred might not have been noted we prefer to accept the percentage upon the whole of the cases. Dr. J. Dreschfeld in his article in Clifford Allbutt's "System of Medicine" states that at the Hamburg General Hospital, out of 2000 cases there were 14 in which there had been one previous attack and one case in which there had been two previous attacks, or an incidence of 0·75 per cent.; while Berg only found one second attack in 1624 cases, or an incidence of 0·06 per cent. Our incidence is therefore extremely high and this appears to correspond with the experience of others who have worked in South Africa. Brigade-Surgeon-Lieutenant-Colonel Alexander Crombie,[6] for instance, in the discussion upon Dr. Tooth's paper at the Clinical Society of London, states that of 150 officers who had returned invalided from South Africa for enteric fever 6 per cent. had suffered from previous attacks. The frequency of second attacks in South Africa appears to be chiefly due to the intensity and frequency of exposure to infection. In England individuals are probably not often exposed to infection. The fatigue and privation experienced in South Africa would also be a predisposing factor in rendering individuals liable to infection. One of our patients had suffered from two previous attacks and died during the third. The remaining patients recovered. The following is a short account of these cases.

No. 28.—The previous attack occurred seven years ago. The present attack was followed by relapse. The patient recovered.

No. 84.—The patient was an officer. The date of previous attack was not stated. The patient was admitted towards the termination of the attack, which was followed by empyema. The patient recovered.

No. 103.—The previous attack was 15 years ago. The present attack was attended by diarrhœa, spots, and enlargement of the spleen. The patient recovered.

No. 104.—The previous attack occurred when the patient was a child. The present attack was attended by enlargement of the spleen and by spots, and was complicated by otitis media. The patient recovered.

No. 160.—The patient was an officer. The previous attack occurred three or four years ago. The present attack lasted for 26 days and gave the serum reaction. The patient recovered.

No. 206.—The patient had had one previous attack as a schoolboy and another during the campaign. The present attack was very severe and the patient died.

No. 222.—The previous attack occurred one year ago. The present attack was attended by enlargement of the spleen and spots. The patient recovered.

No. 232.—The previous attack occurred in India 11 years ago. The present attack was mild. The patient recovered.

No. 243.—The previous attack occurred three years ago, and the patient had been inoculated three times just before the onset. The previous attack was due to the accidental ingestion of the typhoid bacillus in experimental work. The present attack was severe. The patient recovered.

No. 279.—The previous attack occurred in Egypt eight years ago. The present attack was accompanied by spots. The patient recovered.

No. 300.—The previous attack was in April, 1900. The patient was inoculated in January, 1900. The present attack was sharp and was accompanied by enlargement of the spleen, by diarrhœa, and by copious spots. The patient recovered.

No. 54.—The previous attack occurred four or five years ago. The present attack was followed by definite relapse The patient recovered.

*The influence of inoculation upon the course of the disease.*—In 211 of our cases it was definitely recorded whether the patient had been inoculated or not. 186 of these cases had not been inoculated, with 20 deaths, or a mortality of 10·7 per cent. 25 had been inoculated with 4 deaths, or a mortality of 16 per cent. The mortality was thus higher among the inoculated than among the non-inoculated. At the Portland Hospital 54 cases were inoculated with 4 deaths, and 178 not inoculated with 25 deaths. At the Imperial Yeomanry Hospital in Pretoria there were 27 cases inoculated with no deaths, and 115 cases not inoculated with 6 deaths. At the Scottish Hospital there were 15 inoculated with one death, and "about" 77 not inoculated with 10 deaths. At the Edinburgh and East of Scotland Hospital there were 18 cases inoculated with no deaths, but it is not definitely stated how many patients died among the non-inoculated. Adding together the cases at Deelfontein, Pretoria, the Scottish Hospital, and the Portland Hospital we find that there were in all 121 cases inoculated with nine deaths, a mortality of 7·4 per cent.; and 556 not inoculated with 61 deaths, a mortality of 10 9 per cent. In dealing with such small numbers the difference between 10 9 per cent. and 7·4 per cent. is too slight to point to any marked beneficial influence of inoculation upon the course of the disease. In our own series the mortality is greater among the inoculated than among the non-inoculated.

*The influence of inoculation upon the incidence of the disease.*—In our staff there were 44 nursing sisters; of these, 40 were inoculated and 2 contracted enteric fever, 4 were not inoculated and none contracted the disease. There were 10 ward-maids, all of whom were inoculated and 1 contracted enteric fever. There were 20 medical officers; of these, 9 were inoculated and 1 contracted enteric fever; 11 were not inoculated and none of these contracted the disease. There were 10 dressers, none of whom were inoculated and 4 contracted enteric fever. Taking the staff altogether there were 59 inoculated, of whom 4 contracted enteric fever, and there were 25 not inoculated, of whom 4 also contracted the disease. It will be noted that the 4 of the non-inoculated who contracted the disease came from throughout the day and night until relieved by local treatment. The most effectual treatment in the acute cases is local abstraction of blood by means of leeches, two of which may be applied to the temple on the affected side. For the most part it happens when the pain of a syphilitic iritis has been once relieved that there is no recurrence. Since in syphilitic iritis the inflammation is associated with the exudation of plastic lymph the pupil must be brought under the influence of atropine as quickly as possible. Unless this be done *there is great liability for the iris to be bound down by* posterior synechiæ to the anterior capsule of the lens, with the possibility of the eyes being irretrievably damaged. Of course, the patient must be placed at the same time upon a course of mercurial treatment.

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[6] The Lancet, March 30th, 1901, p. 933

Next, in rheumatic iritis pain of marked degree is usually present, but it is mostly at night-time that the chief discomfort arises from this cause. These nocturnal exacerbations of pain are characteristic of iritis of rheumatic origin. During the day the patient is commonly almost free from pain. Again, the pain throughout is of a neuralgic character, thus *differing from the throbbing inflammatory* form, so to speak, associated with the intense vascularity of the globe observed in the syphilitic variety of the disease. The subsidence of the pain in rheumatic iritis is generally the first indication that the attack is passing off. Nevertheless, it is significant to remember that there may be frequent recurrences *of this* symptom. *The best* method of dealing locally with the pain in these cases is to apply dry heat. Nothing acts so well in this regard as the old-fashioned bran poultice. A large one is made, heated thoroughly in the oven, and placed over the affected eye. *The pain is soon relieved and the patient falls asleep with* the poultice in position. Leeching is not necessary, nor are sedative drugs in any form.

I now come to a class of cases in which the presence of pain is again of valuable import—namely, those cases in which the symptom is present in globes which have passed into an atrophic condition. In these cases tenderness on palpation and a dull aching pain are experienced in the lost eye—symptoms which, when accompanied by injection of the globe, definitely indicate that advanced degenerative changes, usually of the nature of ossification or calcification of the choroid, *have supervened*, and have involved such as is left of the ciliary region. The essential and imperative treatment under these circumstances is enucleation of the atrophied organ, the old belief being that such globes are a source of danger owing to their liability to set-up sympathetic ophthalmia in the fellow eye. I will not discuss here whether this belief accords with the latest ideas regarding the pathology of the disease beyond stating that in order to accept it as correct we should have to stretch our imagination far beyond the range of scientific facts and to take shelter behind *transcendental conjectures* quite at variance with scientific research. Nevertheless, apart from these considerations, no question can be raised as to the expediency of removing a lost eye which has become painful and injected. However, it will not always be found to be an easy matter to obtain the consent of elderly patients to undergo enucleation in these cases. The difficulty which they cannot understand is that an eye, or the remains of one, which has caused them no trouble for 20 years or more should ever require to be removed. In some instances it is apparent that an affection has been conceived for the damaged organ, and the refusal to part with it is based upon grounds of illogical sentiment.

I have briefly alluded to the pain associated with acute glaucoma. I *now propose* to discuss this more fully. *First*, how is the pain in glaucoma caused? Upon this point several details of interest arise for discussion. Perhaps the most natural reply to the question is that the pain is due to the stretching of the ocular tunics in consequence of the increase in tension. Presumably much of the pain may be explained in this way, but all of it cannot be so accounted for. Indeed, it is suggested that the raised tension gives rise to paralytic symptoms within the eye, thus accounting for the dilatation and immobility of the pupil and the *diminished* sensitiveness of the cornea, these symptoms being *attributed* to the compression of the ciliary nerves as they pass forward in the supra-choroidea. By some, on the other hand, it is believed that dilatation of the pupil depends upon vascular changes by which the circulation through the iris is wholly or partially arrested. That stretching of the sclera should be a painful process can be readily understood, in view of the nerve-supply of this structure. According to Baker, "the nerves of the sclera are derived from the ciliary nerves. Within the substance of the tunic they first lose their medullary sheaths; they break up into fine fibrillæ that appear to end like the nerves of the cornea in pointed filaments between the bundles of the connective tissue fibres." Another point is that the pain in glaucoma is proportional to the degree of vascularity present and the vascularity depends upon the tension, for the higher the tension the greater is the vascularity.

But it is impossible to believe that the intense suffering of an acute glaucomatous attack can merely or solely be due to stretching of the sclera; we must therefore look further afield for the solution of this problem. The most reasonable explanation appears to be the suggestion that much of the pain is due to the compression to which the ciliary processes are subjected during the progress of the attack. Again, in addition to their compression the ciliary processes, *owing to* the disturbance caused to the intra-ocular circulation, are distended with blood. Having regard, then, to the fact that next to the cornea the ciliary processes are the most sensitive part of the eye, it is not difficult to comprehend, under the conditions above mentioned, that they should be the seat of intense pain in the course of an attack of acute glaucoma. So far as the treatment of this serious disease is concerned the only method in which any confidence can be placed is that of iridectomy.

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# TYPHOID FEVER IN SOUTH AFRICA.[1]

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A LARGE number of the cases of typhoid fever admitted *into the Imperial Yeomanry Hospital at Deelfontein during* the year from March, 1900, to March, 1901, were convalescent on arrival, and the notes of others have been lost. We have, however, collected 262 cases, all of which were in the acute stage when in the hospital, and of which detailed notes were available. We have analysed these cases and have compared them with the following:—1. A series of cases which were admitted into the emergency hospital during the epidemic of enteric fever at Maidstone in the year 1897. These cases, 210 in all, have been carefully analysed by Dr. T. B. Poole.[2] 2. Statistics of 611 cases analysed by Dr. F. F. Caiger and Dr. E. W. Goodall.[3] 3. An analysis by Dr. W. Osler[4] of 829 cases treated in the Johns Hopkins Hospital during the years 1889 to 1899. 4. Statistics of 506 cases at the Eastern Fever Hospital during the years 1892–1894.[5] 5. Other accounts of typhoid fever during the campaign by Dr. H. H. Tooth, Dr. H. D. Rolleston, and Dr. F. D. Boyd. Our chief object has been to point out the main features of the typhoid fever occurring in South Africa and to ascertain whether it differs from that met with in England and America. At the same time we have considered the influence of inoculation upon the course and *the incidence of the disease, and* we have given a brief account of a few cases of special interest.

*Mortality*.—There were 36 deaths in our 262 cases, or a mortality of 13·7 per cent. At the Metropolitan Asylums Board Hospitals in 15,632 cases during the years from 1871 to 1900 the mortality was 18·44 per cent., while in 1900 the mortality was 14·09 per cent. In the Worthing epidemic in 1894 there were 2257 cases, with a mortality of 13 per cent. During the Maidstone epidemic 1847 cases were notified, with a mortality of 7·14 per cent. Dr. Osler in his text-book gives a mortality of 11·2 per cent. at the Montreal Hospital for 20 years and at the Johns Hopkins Hospital a mortality of 7·5 per cent. in the 829 cases analysed. At the

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[1] A paper read before the Medical Society of London.

[2] Guy's Hospital Reports, vol. liii.

[3] Metropolitan Asylums Board Reports, 1896.

[4] Johns Hopkins Hospital Reports, vol. viii., Nos. 5 to 9, 1900.

[5] Quoted in Goodall and Washbourn's "Manual of Infectious Diseases."

the parotitis was double and suppurative; the patient died. The other 2 cases were unilateral, one being suppurative and the other non-suppurative; both recovered.

*Pharyngo tonsillitis.*—There were 10 cases, an incidence of 3·05 per cent. In some of the cases there was exudation upon the tonsils of a follicular character.

*Abscesses.*—In 1 case two small abscesses developed, one in the right inguinal region and the other in the peri-anal tissue.

*Gangrene of the skin.*—In 1 case local necrosis of about the size of a florin occurred in two places—on the anterior surface of the right thigh and over the right tibia. The patient recovered.

*Appendicitis.*—In 2 cases enteric fever immediately followed a definite attack of appendicitis. In 1 case the patient recovered, but the other was fatal. Post mortem adhesions around an appendix distended with muco-pus were found in addition to the typhoid lesions. In another case, not included in our statistics, suppurative appendicitis followed an attack of enteric fever. Recovery ensued after operation. In the Edinburgh and East of Scotland Hospital a mild attack of appendicitis supervened in 1 case.

*Eruptions.*—In some of the cases the typhoid eruption was exceptionally profuse. In 2 cases a scarlatiniform eruption occurred which was attributed to an enema. In 2 cases there was a distinct *tache bleuâtre.* In 6 cases purpuric spots appeared on the skin, especially on the limbs; 3 of these cases were associated with spongy gums, and in 1 case there was frequent and profuse hæmorrhage.

*Secondary fever.*—Temporary rises of temperature occurred in a large number of cases. In many of these cases the fever appeared to be due to constipation.

*Otitis media.*—There were 4 cases, an incidence of 1·5 per cent.

*Pericarditis.*—There were 3 cases, an incidence of 1·1 per cent.

*Hepatitis.*—In 1 case there was hepatitis. The patient had a great and uniform enlargement of the liver during the pyrexial period. Abscess was suspected, but the enlargement subsided with the defervescence. The patient had not suffered from dysentery previously. Dr. Rolleston mentions a case of solitary liver abscess following enteric fever in a patient who had not previously suffered from dysentery and who recovered after operation. Dr. Osler reports a case of enlargement of the liver which subsided and ended in recovery.

*Jaundice.*—This occurred in only 1 case and was associated with fatal pneumonia.

*Orchitis.*—There were no cases of orchitis.

*Dysentery.*—There were 21 cases of dysentery occurring either during the attack of enteric fever or shortly before or after it. In 6 of these cases the dysentery preceded the attack, and all of the patients recovered; in 4 cases the dysentery occurred during the attack, and 2 of the patients died; while in 11 cases the dysentery occurred during convalescence, and 4 of the patients died. It would thus appear that dysentery arising either during the attack or during convalescence is of serious signification, the mortality being 33·3 per cent.

*Malaria and rigors.*—In 11 cases definite rigors occurred during the attack. In 2 cases the malaria plasmodium was found, and probably was present in a third, the patients at the same time giving the serum reaction. Dr. Poole noticed rigors in 8 of his cases, an incidence of 3·8 per cent., and Dr. Osler has specially called attention to their occurrence. Omitting the definite malaria cases, our incidence was 3·05 per cent. The following is a history of the 11 cases:—

Case 1.—This was a severe and prolonged attack of enteric fever, the pyrexia lasting for nine weeks. During the fourth week there were daily rigors without apparent cause. The patient was attacked with phlebitis three weeks after the first rigor. The patient recovered.

Case 2.—This was a severe attack, the pyrexia lasting for 25 days. There were rigors on the sixth, seventh, and eighth days of the disease. Pneumonia developed nine days after the first rigor and phlebitis nine days later. This patient had had malaria before. The patient recovered.

Case 3.—The patient had been ill for several weeks before his admission and he died on the sixth day after admission. While in the hospital he had several rigors.

Case 4.—This was a severe attack, the fever lasting for four weeks. Rigors occurred on the last day of pyrexia and again on the fourth, seventh, and tenth days of convalescence. The patient recovered.

Case 5.—This was a severe attack, lasting for 63 days. Several rigors occurred during the attack without definite cause. The patient recovered.

Case 6.—This was a moderately severe attack, lasting for 27 days. Several rigors occurred nine days after phlebitis had developed. Nine days later the patient was attacked with otitis media. The patient recovered.

Case 7.—Rigors occurred during an ordinary attack without any definite cause. The patient recovered.

Case 8.—The patient died from fever at the end of 21 days. Several rigors occurred during the attack.

Case 9.—This was a mild attack, the fever lasting about 11 days. There were rigors on the last two days of pyrexia. Doubtful malaria parasites were found in the blood. The patient recovered.

Case 10.—This was a severe attack, the pyrexia lasting for 59 days. The patient had had several rigors, and malaria parasites were found in the blood. He had suffered previously from malaria on the West Coast of Africa.

Case 11.—The patient had been ill for some weeks before admission into the hospital, where he suffered from pyrexia for 18 days. Malaria parasites were found in the blood, and it gave the serum reaction. The patient recovered.

*Arthritis.*—There were 8 cases of arthritis, an incidence of 3·05 per cent. In 1 case there was effusion. The following is a short account of these 8 cases:—

Case 1.—On the third day of convalescence there was pain in the fingers, shoulders, and knees, without effusion and without rise of temperature. Similar pain recurred on the nineteenth day of convalescence.

Case 2.—There was pain in the hips and ankles occurring on the ninth day of convalescence; this subsided in a few days.

Case 3.—This was a severe attack of enteric fever with petechiæ and spongy gums, followed by a relapse. Pain occurred in the right elbow with effusion and redness. The temperature went up to 104·2° F. and there was slight fever for the next two days. The inflammation subsided in about a week.

Case 4.—On the fourteenth day of convalescence pain occurred in the left shoulder and arm, with slight pyrexia lasting for two or three days.

Case 5.—On the twelfth day of convalescence there was pain in the right arm, hand, and ankle, the temperature being 103° F. Pyrexia lasted for about six days. There was a similar attack a month later which lasted for seven days.

Case 6.—On the last few days of the pyrexial stage pains occurred in the knees and elbows, lasting for several days.

Case 7.—During the pyrexial stage pains occurred in the back, shoulder, and ankle and lasted for two or three days. This patient had had rheumatic fever before.

Case 8.—During convalescence rheumatic pains occurred in the right arm. This patient had previously suffered from rheumatic fever.

It will be observed that in the last two cases the patients had previously suffered from rheumatic fever, which was doubtless the cause of the arthritis. But in the others no other cause than the enteric fever could be ascertained. Most of them occurred during early convalescence. The arthritis may be compared to that arising in scarlet fever—a comparison which is supported by the occurrence of suppurative arthritis in a case of which we have only the notes of the post-mortem examination.

*Epistaxis.*—Epistaxis was very frequent during the early stage.

*Tender toes.*—There were a good many cases of tender toes, such as have been described by Dr. Handford. The toes were excessively tender, requiring a cradle to keep off the pressure of the bed-clothes. There was no swelling and they all recovered.

*Conclusions.*—The conclusions which we draw from the analysis of these cases is that the type of typhoid fever met with in South Africa does not differ in any essential respects from that met with in England and America. The mortality and the incidence of complications are much the same as in the variations which are met with elsewhere. The only complication which appears to be specially prominent is phlebitis, which occurred in 5·6 per cent. of our cases. This was not very much higher than in Dr. Poole's cases at Maidstone, and in Dr. Caiger and Dr. Goodall's cases at the Metropolitan Asylums Board hospitals, which were 3·8 per cent. and 3·4 per cent. respectively. We do not feel that inoculation has any marked influence either in preventing or in modifying the disease.

among the dressers who were younger than the rest of the staff. At the Irish Hospital, quoted by Professor A. E. Wright, 64 of the staff were inoculated and 2 contracted enteric fever; 4 were not inoculated and none of these contracted it. At the Imperial Yeomanry Hospital, Pretoria, 35 persons were inoculated and 6 contracted enteric fever; 115 were not inoculated and 16 contracted the disease. At the Portland Hospital 28 were inoculated and 7 contracted enteric fever, 13 were not inoculated and 3 contracted the disease. At the Edinburgh and East of Scotland Hospital all—namely, 58—were inoculated and 9 contracted enteric fever. Taking all of these together, we find that there were 244 inoculated, with 28 cases, an incidence of 11·4 per cent., while there were 157 not inoculated, with 23 cases, an incidence of 14·6 per cent. The difference between the incidence of enteric fever amongst the inoculated and the non-inoculated is too small to be ascribed to any protective influence exerted by inoculation. We have not included the statistics of the Scottish Hospital, as the exact number of inoculated and non-inoculated is not definitely stated. The not infrequent occurrence of second attacks of enteric fever renders us doubtful of the prospect of successful inoculation in the future. The considerable risks of contracting enteric fever incurred in hospital work during this campaign are well exemplified by the above figures. Of a total of 401 persons engaged in attending the sick, 51 suffered from the disease, an incidence of 12·7 per cent.

*Hæmorrhage.*—We have included under hæmorrhage only those cases in which several ounces of blood were passed. There were in all 16 cases, an incidence of 6·1 per cent. At the Imperial Yeomanry Hospital in Pretoria there was an incidence of 8·7 per cent.; in Dr. Osler's cases 6 per cent.; in Dr. Goodall and Dr. Washbourn's cases 7·9 per cent., in Dr. Caiger and Dr. Goodall's cases 8·6 per cent., and in the Maidstone cases 5·5 per cent. Our incidence appears thus to be about the average. Of our 16 cases 8 died, a mortality of 50 per cent., and five others were noted as being exceedingly severe cases. Dr. Rolleston states that of 21 cases at the Pretoria Hospital 16 died, a mortality of 76 per cent. It thus follows that in South Africa hæmorrhage in enteric fever is a symptom of grave signification. In England and America the mortality does not appear to be so high; in Dr. Poole's cases there were two deaths, a mortality of 20 per cent., and in Dr. Osler's cases the mortality was 10 per cent. In the majority of our cases—namely, in 13 out of 16—the patients suffered from diarrhœa.

*Phlebitis.*—There were 15 cases of phlebitis, an incidence of 5·6 per cent. At the Edinburgh and East of Scotland Hospital the incidence was 6 per cent. Lieutenant-Colonel Crombie states that 25 per cent. of his cases suffered from phlebitis, but this high incidence appears to be due to the fact that many of his cases were invalided home on account of the supervention of this complication—a circumstance which vitiates his statistics. In Dr. Poole's cases the incidence was 3·8 per cent., in Dr. Caiger and Dr. Goodall's cases 3·4 per cent., and in Dr. Osler's cases 1·9 per cent. It thus follows that the incidence of phlebitis in South Africa is greater than in England or America. In our cases the left leg was affected 10 times, the right leg 4 times, and both legs twice. The phlebitis ensued during convalescence 8 times, during the pyrexial stage of the primary attack 4 times, during a relapse twice, and in one case the date was not noted. When occurring during the pyrexial stage it was towards the end of that period, the earliest appearance being on the sixteenth day. The latest date of its appearance after the end of the pyrexial stage was 30 days. It is probable that some cases developed phlebitis after leaving the hospital, but of these we have no record.

*Pneumonia.*—There were 10 cases of pneumonia, an incidence of 3·05 per cent. In Dr. Caiger and Dr. Goodall's statistics the incidence was 3·2 per cent., in Dr. Osler's statistics it was apparently 2·05 per cent., at the Pretoria Hospital it was 2·2 per cent., and at the Edinburgh and East of Scotland Hospital it was 1·3 per cent. The incidence thus appears to be about the same as in other statistics. Of our 10 cases 5 died, a mortality of 50 per cent., and at the Pretoria Hospital there was a similar mortality—namely, 2 deaths out of 4 cases.

*Pleurisy.*—There were 10 cases of pleurisy, an incidence of 3·05 per cent. In one of these cases there was effusion, which resolved, and in another case an empyema developed which had to be operated upon. In the Maidstone epidemic the incidence of pleurisy was 2·2 per cent. and in Dr. Caiger and Dr. Goodall's cases it was 2·6 per cent.

*Bronchitis.*—Bronchitis was not a marked feature of the attack. In 8 cases it was sufficiently severe to be specially noted.

*Periostitis.*—There were 6 cases of periostitis, an incidence of 2·2 per cent. In the Maidstone cases the incidence was 5 per cent.; in Dr. Caiger and Dr. Goodall's cases it was 1·1 per cent. In 3 of the cases the tibia was affected, in 1 the femur, in 1 the index finger, and in 1 the transverse process of the atlas. They all occurred during convalescence, except 1 case which occurred at the end of the pyrexial stage. The case in which the atlas was affected was an interesting one. A painful swelling appeared in the parotid region, which was at first considered to be a parotitis. When opened by Mr. H. A. Ballance the transverse process of the atlas was felt to be bare. The patient made a good recovery.

*Condition of the bowels.*—Of the 234 cases in which the condition of the bowels is clearly stated in 100 there was constipation, in 84 diarrhœa, in 41 alternate constipation and diarrhœa, and in 9 the bowels were regular. It will thus be seen that in 42·7 per cent. cases there was constipation throughout the attack. Dr. Poole states that 50 per cent. of his patients at Maidstone suffered from constipation, and Dr. Osler in his analysis of 829 cases at the Johns Hopkins Hospital states that 34 per cent. suffered from constipation. In the Edinburgh and East of Scotland Hospital 37 per cent. suffered from constipation. From these figures it would appear that constipation, not only in South Africa, but also in England and America, is much more common than is usually imagined. In the severe cases diarrhœa was most frequent, and of 35 of our fatal cases there was diarrhœa in 29, constipation in 4, and alternating constipation and diarrhœa in 2.

*Perforation.*—There were 6 cases of perforation—an incidence of 2·2 per cent. Dr. Dreschfeld gives an incidence of from 2·5 per cent. to 3 per cent.; Dr. Caiger and Dr. Goodall, 4·9 per cent.; Dr. Goodall and Dr. Washbourn, 3·1 per cent.; Dr. Osler, 2·7 per cent.; and at the Edinburgh and East of Scotland Hospital the incidence was 2 per cent.

*Cardiac complications.*—In many cases the pulse was exceedingly rapid and the patient suffered from cardiac collapse out of proportion to the severity of the attack. We attributed these cases to previous fatigue. Dr. Rolleston calls attention to the rapidity of the heart occurring during convalescence in patients who have been over-fatigued before the attack. We have also noticed the same during convalescence.

*Convulsions.*—In 2 cases there were well-marked convulsions, one of which we attributed to the administration of strychnine.

CASE 1.—The patient died at the end of the second week of a severe attack. On the day preceding death there were pharyngeal spasm and retraction of the head. Nasal feeding, which was attempted, brought on general convulsions. No necropsy was made.

CASE 2.—The patient died on the fifteenth day of the attack. On the eighth day there were general convulsions with opisthotonos and trismus, which subsided under morphia and chloroform. He had been taking for the previous 36 hours five minims of solution of strychnine every four hours. We attributed the convulsions to the strychnine. (Dr. Osler has described cases of convulsions occurring during enteric fever.)

*Abdominal pain.*—In 15 cases a special note was made of the occurrence of abdominal pain during the attack. The pain was at some time so acute as to suggest perforation, and, indeed, in one case the abdomen was opened under this belief. The peritoneum was found to be perfectly healthy and the patient made a good recovery. Most of these cases appear to be simple colic. It is possible that in some of them there was slight peritonitis. Dr. Caiger and Dr. Goodall state that in 2·2 per cent. of the cases analysed by them the patients suffered from peritonitis without perforation.

*Bladder trouble.*—Difficulty in micturition was noted in 5 cases at a time when the mental condition of the patient was perfectly good and in some cases quite early in the disease. In 1 of the cases a catheter had to be used all through the attack and in 3 cases on several occasions. In 2 other cases there was distinct cystitis. This list does not include the cases in which retention occurred while the patient was unconscious.

*Parotitis.*—There were 3 cases of parotitis, an incidence of 1·1 per cent. Dr. Caiger and Dr. Goodall give an incidence of 0·6 per cent., Dr. Poole an incidence of 0·5 per cent., Dr. Osler an incidence of 1·4 per cent., and at the Pretoria Hospital the incidence was 1·1 per cent. In 1 of our cases

It was for a long time my impression that the advocates of the first view were correct, but circumstances have now convinced me to the contrary, and the appendix should be removed as soon as possible after the healing of the abscess. My faith in the value of the general statement that removal is unnecessary was shaken, in the first place, by the formation of a second abscess (some months after the first had been treated by me) in the case of a boy, aged 16 years. The first abscess was a large subacute one with much surrounding exudation, and the pus was already making its way through the abdominal wall when the abscess was incised. Relying on the prognosis which I had been taught was the correct one I had given his parents the assurance of his freedom from further trouble of the kind. Some time after this, when I was passing by the theatre of the hospital, a young female patient was being taken in for operation. As the expression of her face indicated acute abdominal mischief I made further inquiry and waited for the operation. She had had a perityphlitic abscess treated six months before in a large hospital. The appendix was now in a condition of acute inflammation, with sloughing, but contained no concretion. She had diffused septic peritonitis secondary to this state of the appendix and died some hours after the operation. A valuable life would probably have been saved had the appendix been removed in the quiet period.

The advisability of this course is well illustrated by the following case in which the necessity of removal of the appendix was carefully impressed on the parents.

CASE 1.—In April, 1901, I saw a boy with my friend Dr. A. A. Brockatt of Malvern. His illness had commenced four days before with pain in the abdomen and sickness, the pain not being of a very severe character or the vomiting urgent. He had a temperature of over 101° F. and did not look very ill, but his pulse was remarkably soft and compressible. The abdomen was much distended; there was some dulness in the flanks; it was tender on pressure, especially about the right iliac fossa, and did not move well with respiration. Next day there was rather less distension of the abdomen and the dulness was mostly on the right side, where fluctuation was detected. An incision through the abdominal wall at the most prominent part gave exit to brownish, very offensive pus. As the coils of intestine were recently adherent and the appendix was not easily found it was not deemed advisable to make a prolonged search. The parents were advised to have the appendix removed, but from some cause or other this was not done, and in June an acute abscess developed in the same situation. The surgeon who was called in to operate on June 11th removed the appendix and drained the abscess, but the operation was a difficult one and the illness which followed was prolonged and complicated by the formation of a fæcal fistula. The appendix was enlarged and dusky red; in it there was the scar of an old perforation. (I am indebted for these notes to Dr. W. O'Donnell who kindly wrote to me about the case.) Here a second attack of suppuration, which might have been prevented, followed within three months; the boy suffered most severely and ran great risk.

Even if the appendix does not induce a second attack of suppuration it may cause a renewal of attacks which have made the patient's life a burden at times and prevented his following his employment, as shown by the following accounts. In both the attacks recurred after the abscess healed and suppuration, localised and diffused, might have ensued.

CASE 2.—In 1899 I was asked to see a medical man who was suffering from appendicitis. He had had several attacks during the preceding 10 years, some of them severe, and they had interfered very much with his practice. There was a hard mass in the right iliac fossa which extended to about the mid-line. In this there was evidence of fluctuation, whilst the temperature and other symptoms also pointed unmistakably to abscess. He was removed to a surgical home and preparations were made for operation. But after the administration of the anæsthetic and incision through the skin it was noticed that the tension of the abscess was much less, and when examination of the rectum was made pus was found showing that the abscess had burst through the wall of the rectum. He was examined per rectum before the operation was commenced and beyond adhesion and softening of the wall there was nothing to show a tendency to perforate. The patient was sent back to bed and in three weeks he had recovered from the rectal discharge. A small abscess required incision in the line of the recent scar in front after his return home. He did not recover his strength very quickly and in a few months began to complain again of pain in the region of the appendix and at his request this was removed. The operation was an easy one, there being no adhesions. The appendix was the subject of a chronic catarrhal inflammation with some stricturing towards the proximal end. He has continued well since and resumed active practice.

CASE 3.—On Oct. 18th, 1901, I saw a clergyman, aged 43 years, with my friend, Dr. A. E. Godfrey, who gave the following history. At Christmas, 1897, he had an attack of appendicitis and was ill for six weeks. An abscess formed which discharged per rectum, the discharge continuing for from 10 to 14 days. A band could be felt crossing the lower part of the abdomen on palpation. In October, 1899, he had an attack of sharp pain in the abdomen which lasted for three days, for which he was obliged to keep his bed. In the summer of 1900 he was ill for some days and was ill again a few weeks after that. In February, July, and September (1901) he had other attacks, being ill for ten days on each occasion. He suffered from sudden pain in the right side of the abdomen and vomiting. In February the vomiting was severe, and in September the pain was most troublesome, lasting longer than usual. At the operation, on Oct. 26th, for removal of the appendix nothing could be seen of it when the peritoneum was opened. There was no undue resistance or fold to mark its position, and it was only on separating the cæcum from the peritoneum of the iliac fossa that its proximal end could be discovered. It ran inwards and was adherent to the rectum by its tip, whilst lying concealed in a bed of adhesions. It was somewhat difficult to separate, the adhesions being firm and vascular. After removal it was found to be sausage-shaped, elongated, and thickened, contained muco-pus, and showed a tight stricture near the proximal end, about half an inch in extent. It appeared rather tense and fluctuating and suggested the near approach of another attack. There was a strong adhesion of the omentum to the peritoneum in the iliac fossa. The operation was done after displacement of the rectus to one side; the result was most satisfactory. He is no longer afraid to eat ordinary articles of diet which previously so often caused pain. This patient had been dissuaded from undergoing operation before he consulted Dr. Godfrey.

It may be considered that if a fæcal concretion is found in the abscess cavity the removal of the appendix need not be so strongly urged. It must, however, be remembered that there may be more than one concretion in the appendix and all of them may not have escaped out of the ulcerated opening. Of the average number of concretions in an appendix we have, so far as I know, very little information. There is an opinion that as a rule there is only one; but Dr. A. E. Russell, our resident assistant physician, who is a very careful observer, informs me that it is not at all uncommon to meet with two or three. The difficulty in getting the patient well in Case 4 was explained ultimately in this manner; two concretions were removed from the abscess with the pus, but a third remained behind and caused repeated abscess.

CASE 4.—A labourer, aged 40 years, was transferred from a medical ward to my care on July 10th, 1899. It was noted that he had been taken ill on June 28th with abdominal pain and vomiting. There was also a history of attacks of pain in the side of the abdomen, which he called "stitch," for a period of four years. On admission a swelling was present in the right iliac fossa, evidently an abscess. At the operation an incision was made through the right rectus sheath and the muscle displaced inwards. The abscess extended up behind the cæcum and the ascending colon, being shut off by adhesions from the general peritoneal cavity. Two fæcal concretions were removed from the abscess cavity which was irrigated and drained. The appendix was not found. He had still a sinus when sent to a convalescent home on July 26th. He was re-admitted in September, 1899, and a stitch was removed; the sinus was also scraped. The sinus closed, but he was re-admitted in November with another abscess which was opened. He was again admitted on Feb. 2nd, 1900, for a sinus which had followed a recent abscess in the old situation. On Feb. 22nd the appendix was excised; it was adherent to the pelvic wall and was separated with some difficulty, its walls were much thickened and in some parts cicatrised, and it contained a fæcal concretion. The wound was closed without drainage and healed without suppuration.

# NOTE ON THE "BLOOD RELATIONSHIP" OF MAN AND THE ANTHROPOID APES.[1]

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THE new biological test for blood, depending on the investigations of many workers but brought into prominence and practical use by the experiments of Friedenthal,[2] of Deutsch,[3] and of Uhlenhuth,[4] has been pursued with much vigour, in this country more especially by Nuttall.[5] Having had the good fortune to obtain considerable quantities of the blood of three anthropoid apes—viz., the gorilla, the orang, and the chimpanzee—I am able to add a few new and, I venture to think, interesting facts to those already recorded.

The following brief recapitulation of what is already known is rendered necessary by the newness of the subject. In a general way it may be said that the serum from an animal—e.g., a rabbit—which has been injected intraperitoneally several times with any given organic fluid will, if mixed in small quantity with a dilute solution of the fluid used for injection, produce a more or less marked precipitate. To such a serum has been given the name "anti-serum." Hence the serum from a rabbit that has been treated in this way with human blood which gives a precipitate with human blood may be, although somewhat paradoxically, called "human anti-serum."[6] Such a serum has, to use the term applied by Durham to agglutinating sera, a "special" although not a "specific" action. For instance, my "chimpanzee anti-serum" gave a *slight* but distinct turbidity after a few hours with horse blood.

Other observers have already pointed out that "human anti-serum" precipitates the lower-monkeys' blood to a slight extent. Adopting the general mode of application of the test, I find that "human anti-serum" gives a precipitate with all three species of anthropoid apes already named, and to me this precipitate is practically indistinguishable from that obtained with human blood either in quality or quantity. Occasionally it has seemed that the blood of the orang gave a more gelatinous precipitate as compared with the granular precipitate of the other bloods, but this may have been due to accidental circumstances. The granular precipitates from other bloods are also liable to become sticky when shaken up. But it is not only by the action of "human anti-serum" on anthropoid blood that this close relationship of the various bloods may be demonstrated. I have prepared gorilla, orang, and chimpanzee anti-serum. Tested in the way described they all react, not only with their own blood but with each of the others, *and also with human blood.* Here again, in the absence of definite standards, I am unable to assert that there is any difference of reaction amongst the many combinations of anti-serum and blood which can be made with the four above-mentioned bloods and sera.

I have not noticed any record of a microscopical application of this test applied in the same way as in serum diagnosis. By this method, using one drop of 1 per cent blood solution with one drop of anti-serum, a result is produced reminding one very much of the clumping of bacteria, and in this way, too, it is possible to differentiate human and anthropoid blood, because there is an earlier and more complete reaction when the anti-serum is used on its own blood. By suitable dilution also of the anti-serum it should be possible to improve the utility of the microscopical method. I hope that the question of a quantitative method will receive the attention of workers in this field.

Pressure of other work prevents any present further investigation on my part in this direction and induces me to record at this stage the few results already obtained.

Liverpool, November, 1901.

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[1] Most of the facts here recorded were demonstrated to a meeting of the Liverpool Medical Institution on Nov. 14th, 1901.

[2] Archiv für Anatomie und Physiologie, 1900, p. 494. The investigations of this talented physiologist seem to have been generally overlooked.

[3] Bulletin Médical, Sept 8th, 1900, and Centralblatt für Bakteriologie, Band xxix., p. 661.

[4] Deutsche Medicinische Wochenschrift, 1901, Nos 6, 17, and 45.

[5] Journal of Hygiene, vol. i., 1901, p. 367.

[6] For the sake of uniformity the serum of an animal immunised against human blood is termed "human anti-serum," against chimpanzee blood "chimpanzee anti serum," and so on.

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# ON THE ADVISABILITY OF REMOVING THE APPENDIX VERMIFORMIS AFTER SUPPURATION CAUSED BY APPENDICITIS.

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FOR some time the question has occupied my attention as to whether the appendix vermiformis should be removed after suppuration has been caused by its disease—that is, in cases where for some reason or another it was not removed at the time operation for the evacuation of pus was performed. The opinions held which govern the treatment of the appendix in these cases are much opposed. The first is that if a patient has an abscess the result of appendicitis there is such a profound destruction of parts as a consequence that the surgeon need trouble no more about the case—when once the abscess is closed the patient is cured as the appendix is obliterated. This view I have found, in conversation with various members of the profession, is rather generally held at the present time.

By a statement in his admirable work on the diseases of the appendix vermiformis Dr. H. P. Hawkins lent some support to this view when he stated "that eight out of 38 cases of perityphlitic abscess had a history of previous attacks of non-suppurative appendicitis, and in three of them a concretion was found." He had only met with one instance of second perityphlitic abscess Quite recently a well-known surgeon, Sir W. Mitchell Banks, is reported to have said,[1] when taking part in a discussion on appendicitis: "As soon as the suppurative stage had been diagnosed the pus should be evacuated, when the appendix was practically destroyed, and such patients had no return of appendical trouble."

The second view held by some is exactly the opposite of the first and may be summarised as follows, that in every case of perityphlitic abscess the appendix should be removed at the time of the operation.

Mr. Rutherford Morison[2] has devised a method of operating which he has successfully practised on several occasions, by means of which he considers this should be done, and of which, he says, the mortality is small. It involves an extensive incision of the abdominal wall and even to surgeons of large hospital experience appears somewhat formidable, and if attempted by one of slight operative skill might prove rather disastrous, whilst one cannot regard it as free from great risk of subsequent hernia There is another thing against it, and it is this, that in pelvic cases it may not be possible to remove the appendix. The operation will not succeed in all cases

Again, other surgeons hold the opinion that whilst it is advisable to remove the appendix when the abscess is opened there are cases in which such a procedure would involve unnecessary risk to the patient. There are many conditions any one of which in a particular case may appear so important as to induce the operator to postpone the removal of the appendix. For instance, the patient may be to ill to permit such a prolongation of the operation as might be required, the appendix may be so placed that it cannot be found; it may be considered that removal would involve too rough manipulation of bowel already softened by inflammation, the adhesions being very firm; or some areas of healthy peritoneum might be opened to infection from the abscess cavity. My experience has been in favour of the opinion last mentioned and tells against the view of non-interference. There appears to be a want of unanimity regarding the necessity for getting rid of the appendix if it has not been excised at the first operation, but some cases described below strongly emphasise, to my mind, the advisability of doing so.

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[1] THE LANCET, Feb. 23rd, 1901, p 664

[2] THE LANCET, Feb. 23rd, 1901, p. 533.

does form it should be subjected to operation, when, if the appendix has not been taken away, removal can be done through the old scar and the opening closed. I was able to do this for a girl, aged 14 years, admitted to St. Thomas's Hospital in 1901 for hernia after abscess. The appendix was in a condition of chronic catarrh.

Harley-street, W.

## IZAL IN THE TREATMENT OF PHTHISIS.

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AT the present time any treatment of consumption other than fresh air and forced feeding is apt to receive but scanty attention at the hands of the profession. The reasons for this paper are two-fold Firstly, I am convinced that the treatment of certain cases of phthisis by antiseptics is productive of excellent results; and, secondly, there can be no objection to the use of drugs in combination with general hygienic treatment. At a recent International Congress on Tuberculosis at Berlin the exact position of drugs was well defined by Professor Kobert. Speaking from the fulness of his experience at Görbersdorf he said: "The fact that we possess no specific remedy in phthisis is far from the same thing as not possessing any useful drug. We possess no specific climate in phthisis but many useful ones." Nowadays it seems also fashionable to lay the chief stress in phthisis upon those drugs which exert a beneficial influence upon the digestive functions, even those acting on the pulmonary secretions being regarded as of secondary importance. This is presumably with a view of increasing the stock of energy (using this term in the physical sense) at the patient's command. A little oil often saves a good deal of coal. Truly an increase in assimilated food means an increased intake of energy. The effort necessary to expectorate a lump of sticky phlegm uses up, however, many calories. By making the phlegm less, or less sticky, by the exhibition of a suitable antiseptic or expectorant, the effort could have been lessened and thus energy saved. In this latter case, even had less nourishment been taken previously, the balance of energy remaining with the patient after the effort might well be greater than the one accruing in the case of the richer in-take. That we can cure early cases of phthisis without the use of any drug at all is undoubtedly true, but such a cure must be regarded as a *tour de force*, and is neither more nor less interesting than the sole use by a microscopist of a microscope made by himself.

Experiments made upon the tubercle bacillus with izal[1] have shown that in appropriate quantities it renders this organism incapable of producing either local or general tuberculosis when injected into animals. There have been further numerous experiments showing its antiseptic action *in vitro*.[2] This, however, is not sufficient to justify the physician in prescribing it in phthisis. The probability of the usefulness of an antiseptic *in vivo* depends, as Bouchard[3] has shown, not only upon its antiseptic power but upon the relation of this to its toxicity—i.e., upon its "*equivalent toxique.*" The antiseptic power of izal is relatively high and its toxicity is relatively low. An exhaustive series of experiments[4] on the pharmacology of izal have shown that this substance in appropriate doses exerts no injurious action upon the higher animals. It has also been shown elsewhere that izal when introduced into the alimentary tract exerts there its specific antiseptic action and can be demonstrated in the fæces. It has been further shown that one of its paths of excretion is the pulmonary mucous membrane, and it was inferred that it would exert there its antiseptic action. These experiments fixed provisionally the dose of the pure izal medical oil at about 10 minims. The following observations must be regarded as the clinical adaptation of the above pharmacological facts.

The izal was administered to the patients in two forms simultaneously. Capsules containing from 2 to 10 minims of izal oil with about five minims of cod-liver oil were given by the mouth after meals twice a day. At first one capsule was given—i.e., five minims of izal oil after dinner and supper—the dose was then increased to three capsules a day, and so on. More than 15 minims of izal oil per diem, was, however, never given. At first some of the patients complained that they tasted the drug for some time after swallowing it, but this soon passed off. One day's pause in four was always allowed from the treatment. The patient was directed further to sleep with an izal lamp burning all night by the side of his bed. By this means he breathed during the night air charged with izal vapour. This is rendered possible by means of a special lamp which consists essentially of a night-light burning under a tray containing izal. In all cases the izal treatment was adopted in addition to the so-called hygienic treatment The patients were with a few exceptions the better-class out-patients of a London chest hospital. The observations extended over two summers and almost two winters. Patients having evening temperatures of over 100·5° F. were told to stay in bed, with the windows open, or to rest in the open air. They were all enjoined to take as much milk and digestible food as they could. In no case, however, was any form of morphia given or any expectorant or so-called gastric tonic. The shortest time during which a patient undergoing the izal treatment was kept under observation was 12 weeks. The cases will be divided into classes.

*The first class* was formed of early cases with a history of, and a tendency to, hæmorrhage, but without fever. The physical signs in these cases were confined to crepitations at one or both apices with increased expiratory and diminished inspiratory murmur. The symptoms complained of were dry hacking cough, scanty blood-stained phlegm, loss of flesh, and weakness. In these cases the pulse was usually rapid, from 80 to 120, and the individuals might be described as being of the vaso-motor type. Ten of these patients were treated. At the end of six months six, in whom only one apex was affected, had lost their cough, all expectoration, and had put on from six pounds to one stone. The only physical sign remaining in four of these six was a slightly diminished inspiratory murmur. In the other two cases the inspiratory murmur was still distinctly diminished in the area of lung corresponding to the original seat of the disease. In all six cases tubercle bacilli, originally present, disappeared from the sputum. Of the remaining four patients belonging to this category one, after four weeks, became the subject of a severe hæmoptysis and was treated in the usual manner for six weeks and then resumed the izal treatment. After four months one apex had cleared up but the other still showed marked catarrhal signs. His cough had improved and he had gained weight. He is still under treatment. The remaining three cases were unfortunately only observed for three months. During this time the patients gained weight and improved generally. The physical signs, although much less distinct, had not in this time disappeared. In two of these three cases, at the end of two months and six weeks respectively, the tubercle bacilli had disappeared.

If the effect of the treatment in the above class of case be reviewed it will be seen that izal had a distinct salutary influence on the progress of the arrest of the disease.

*The second class* of case treated was of a much severer type. It is always a matter of some difficulty to classify cases of phthisis at all as they differ so largely *inter se*. When, however, the effect of some new remedy is being investigated some attempt at classification must be made. The following 15 cases had these features in common: fever, troublesome cough with lumpy purulent expectoration, a considerable area of one or both lungs presenting the physical signs of consolidation, and, in some parts, softening. The microscopic examination of the sputum showed the presence of both tubercle bacilli and pyogenic micrococci. Added to these signs were the more or less marked general symptoms of consumption. These consisted of loss of flesh, night sweats, anorexia, and diarrhœa. This last symptom was with regard to this method of treatment of special interest. In no case, however, was pronounced excavation of lung tissue present and this feature distinguishes this class from the following one. The patients with fever were kept in bed, or at least were

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[1] Delépine: Report on the Disinfecting and Antiseptic Properties of Izal. Medical Chronicle, Sept. 4th, 1895.

[2] Klein: Experiments on Izal, 1892. Also Overbeck de Megen, Report on Disinfecting Properties of Izal.

[3] Comptes Rendus, vol. cv., p. 702.

[4] The Pharmacology of Izal, Pharmaceutical Journal, April 18th, 1895.

In yet another case a concretion left in the appendix was found to have been the cause of repeated attacks of suppuration, two of which were not clearly localised and both were very dangerous. The recovery from the first attack without sinus, with an appendix left *in situ*, containing a fæcal concretion, over which ulceration and perforation had probably taken place, is especially worthy of notice. It should certainly have been removed, but the surgeon had no doubt good reasons for not prolonging the first operation, and his decision was justified by the recovery of the patient.

CASE 5.—A girl, aged 14 years, was admitted into Beatrice Ward of St. Thomas's Hospital on Dec. 21st, 1900. It was stated that she had had an operation for peritonitis in May of that year, that on recovery from this she was sent down to a Brighton convalescent home, where in July she had an abscess of the right side of the abdomen. She was taken ill again four days before admission to St. Thomas's Hospital with abdominal pains and vomiting. The pain had not been very severe nor was the vomiting distressing. The abdomen was not rigid or distended and moved well on respiration. She said that she had pain which she referred to the right side of the lower abdomen underneath the right rectus; this pain was increased on pressure and there was some rigidity of muscle induced by firm pressure. The pulse was good, the temperature was 100·2° F., the tongue was clean, and the bowels had acted after a dose of castor oil. There were two scars in the lower abdomen—one made at the first operation in the middle line below the umbilicus, the other in the right linea semilunaris. With such a history, and in spite of the slightness of her symptoms, I thought immediate operation indicated. About two hours after admission the appendix was removed through an incision to the inner side of the outer of the two scars, the rectus muscle being displaced inwards. On opening the peritoneum a quantity of thin pus of dirty yellow colour and fæcal odour escaped. There were no recent adhesions; the neighbourhood of the appendix was washed with saline sterilised water, and the abdomen was closed. The appendix, which was bound down with old adhesions, was somewhat difficult to find and to separate; it contained a fæcal concretion and over it there was a ragged ulcer communicating freely with the peritoneal cavity. The scar in the linea semilunaris gave way a week later and discharged a small quantity of offensive pus for about a week, otherwise convalescence was not retarded in any way.

If the concretion which first caused the outbreak of suppuration remains in the appendix it may be the cause of a fæcal sinus, as it was in the following case. It is rather interesting, however, to note that the ulceration had healed and the sinus did not lead directly into the appendix at the time of operation. Yet who can doubt that other attacks of inflammation and possibly suppuration would have followed escape of the concretion, had it been able to get away, when there was in addition such a definite stricture of the appendix near the opening into the cæcum? Should the concretion escape from the appendix but not come away with the pus it may cause the formation of a sinus which will not heal until the concretion is removed. Some years ago I operated on a pelvic abscess in a young girl and could not find the appendix or any cause for the abscess. A sinus formed in the lower part of the wound and persisted for some months. Thinking this was possibly due to a concretion which had been caught in the drainage track the sinus was carefully sounded. A concretion was struck, the urethral forceps were introduced, and with some difficulty it was extracted in fragments After this the sinus rapidly closed.

CASE 6.—A man, aged 22 years, a soldier, was admitted under my care into St Thomas's Hospital suffering from intestinal fistula on July 31st, 1899 He had had attacks of appendicitis in March and August, and later, in November of 1898, he had been landed at Port Said from a troopship and been treated in the Lady Strangford Hospital for abscess. The appendix was not found when the abscess was opened. The following day the dressings were saturated with fæces and pus A fortnight later he also passed pus by the rectum. Convalescence was retarded, but with the exception of the fistula he was in fair health when he left the care of Dr. E. Cuffey (to whom I am indebted for the notes). The discharge from the fistula was usually small in amount, but excess in diet or undue exercise was punished by a profuse discharge, yellow in colour A hard collar-like lump could be felt under the scar in the right iliac fossa, and to this the probe directly passed. The operation was not performed until other methods had been tried without benefit. The appendix contained a fæcal concretion, of about the size of a cherry-stone, situated about a quarter of an inch from the base, whilst to its proximal side there was a complete stricture. The wound was sutured in layers so as to remedy the weakness of the scar which showed itself as a result of the prolonged suppuration, and he made a rapid recovery, the abdominal wall being without weakness some months later.

When a fistula which is not fæcal persists it is most commonly the result of irritation from a ligature or suture, and removal of this by means of a scraper with subsequent packing of the wound will suffice to cure it. Here there is not necessarily disease of the appendix. In the following case the sinus persisted until the appendix had been removed. The sharp bend in it caused by the angle at which it was adherent to the abdominal wall produced the same effect as that of a stricture of its lumen.

CASE 7.—A carman, aged 22 years, was transferred from the care of Dr. Hector Mackenzie to my ward in St. Thomas's Hospital on March 1st, 1901, for a large abscess in the right side of the abdomen, in which situation the patient had complained of pain for a period of six weeks. The pain had not been sufficiently severe to prevent his doing his work, although it had been fairly continuous until a fortnight ago, when it became severe and he had rigors and vomiting. The swelling extended from the middle of the iliac fossa to the lower ribs and backwards into the loin. It was very tender and fluctuating. Incision was made in the lumbar region and a large amount of very offensive pus was evacuated. The cavity was washed out with saline fluid and a drainage-tube was inserted. He left the hospital well on March 20th excepting for a sinus in the lumbar region, from which there was little discharge He returned to have the sinus scraped in April, but little benefit resulted from this and he entered the ward for removal of the appendix on May 15th. The oblique incision with displacement of the rectus was used. The appendix was adherent to the abdominal wall about four inches above the anterior superior spine. The omentum was adherent in the iliac fossa. A bullet probe was passed to the point at which there was adhesion of the appendix, but did not penetrate the entire thickness of the wall. The adhesions were dense and required a long incision to deal with them, the lowermost linea transversa requiring separation. The appendix was thinned where adherent to the wall, the subject of chronic catarrh and bulbous in shape, curled up on itself. In order to remove it, it was divided near the cæcum, turned up, and dissected out. He had a good deal of vomiting after the operation and some stitches in the anterior part of the wound gave way, but he left on June 20th, having quite recovered.

It will be observed that the opening at the tip of the appendix had closed before it was removed. This was after the prolonged rest in bed and careful dieting. Few doubted who saw the appendix that indiscretion in diet or over-exertion would have brought on another attack of inflammation.

I think there is only one exception to the rule that the appendix should be excised in all cases after the patient has recovered from the suppuration, if it was not found possible or advisable to remove it when the abscess was opened. This exception is when the appendix has sloughed off and is lying free in the pus or comes away during the healing of the abscess—not a very common occurrence when the suppuration is localised, but I have found it. It has been pointed out that there is not infrequently more than one concretion and there is no way of proving the exact condition of things without removal of the appendix and examination of its interior. These concretions are not faceted like gall-stones, so that it is not possible to say from the examination of one whether others are left or not.

It may be held, I think, that the evacuation of pus from an appendix abscess may be safely done through the ordinary incision; that it is not necessary to complicate the operation by any procedure which increases the risk; and that the removal of the appendix at a second operation, when the parts are quiet, will give a better chance to the patient in many, if not most, of the cases than a removal unwisely attempted or persisted in at the first operation. The adhesions forming after the inflammation of the surface of the opposed coils of intestine are not necessarily numerous, strong, or vascular; indeed, it is a matter for surprise to find so little change in the normal condition of the parts in many cases.

The question of the formation of hernia after incision for appendix abscess is not now under consideration. If hernia the fact that it exerted practically no action upon the circulation.

*The fourth class* of case treated in the above manner is numerically small—it consists only of two patients. Each of these patients had a large foul cavity at the base of the left lung. It probably in both cases arose from a localised breaking-down after pneumonia. Both the patients gave a history of pneumonia over the area in question. The expectoration was greenish, abundant, and very offensive. No tubercle bacilli were found in it. In each case there was slight evening pyrexia (about 99·5°) and in one case peptonuria. In these two cases the izal was administered in three different ways—viz., by inhalation two or three times a day, by means of the izal lamp at night, and by the mouth. The patients were observed for six months and are still continuing the treatment. In both cases during this time a considerable improvement has taken place. At first the expectoration was somewhat increased in quantity, but almost immediately after the administration of the antiseptic it became less fœtid and the putrefactive organisms became less numerous. This was followed by an actual diminution in its quantity which has continued up to the present time. *Pari passu* with this [illegible]turn to a more healthy type and diminution in the quantity [illegible] the expectoration, an amelioration in the general con[illegible]tion took place. The slight fever disappeared, as did also, [illegible] the one case, the peptonuria.

Summarising the foregoing results it may be said that so long as the individual differences in cases of phthisis remain so manifold, so long must we greet any addition to our non-irritating antiseptics with thankfulness. Of the efficacy of carbonate of guaiacol in certain cases nobody with any experience of it can have any reasonable doubt. The expense, however, of a prolonged treatment with this drug in many cases absolutely contra-indicates it. In spite of many requests from the profession the makers have been unable to reduce materially its price. Some few years ago, in conjunction with Dr. T. H. Arnold Chaplin,[6] the author introduced guaiacolate of piperidine in phthisis, but this, although possessing certain advantages, is also necessarily relatively expensive. In izal we appear to have a cheap and efficacious drug. The best results are to be obtained with it in cases of active pulmonary tuberculosis and of old cavities with abundant fœtid expectoration. According to my experience it seems to exert a beneficial influence in cases in which diarrhœa is present, whether this be due merely to decomposition of the intestinal contents or to actual tuberculous lesion of the intestine. In those cases in which the bronchitic element is well marked it is, as was *a priori* to be expected, less useful.

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# OBSERVATIONS ON THE NATURE AND TREATMENT OF PERNICIOUS ANÆMIA.[1]

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MANY causes and conditions have been adduced to account for the occurrence of pernicious anæmia, but none of them is satisfactory—nothing definite is known as to the actual cause. This unknown factor is generally believed to be a toxin; on this theory only can the phenomena be accounted for. Among the English-speaking profession generally the toxin is looked upon as of gastro-intestinal origin and that it acts on the blood of the portal system especially, causing rapid hæmolysis, and that the other effects produced are secondary, developing in the course of the disease. Many German physicians, on the other hand, refer the disease to a toxin affecting hæmogenesis, as shown by the abundance of myeloblasts in the bone-marrow and in the blood, indicating a reversion to the embryonal type. It is probable that both views are in part correct; that not only blood destruction but blood formation has been affected by a common toxæmia resulting in the genesis of abnormal corpuscles and the rapid destruction of the less resistant ones. The blood formation is atypical, and therefore to be attributed to pathological irritation rather than to excessive physiological stimulation. The other changes met with, especially those in the spinal cord and peripheral nerves, are probably produced by the action of the same irritant, rather than as the result of the protracted anæmia. The irregular course of the disease, with its remissions and exacerbations, its irregular fever, the frequent disturbance of the mental condition, and the occurrence from time to time of vomiting and diarrhœa, all indicate a common toxic cause.

The fact that the general condition does not bear a definite relationship to the blood state goes to show that there is something else than the poverty in corpuscles on which it depends. This is well illustrated by the contrast between the condition of a miller who was able to do without difficulty all but the heaviest work of his mill and yet his blood had only 1,000,000 red corpuscles per cubic millimetre, and that of a physician with over 4,000,000 corpuscles whose case is given in detail under the head of treatment. In the case of a member of the Canadian House of Commons during the past year there have never been more than 3,500,000 red corpuscles per cubic millimetre, and yet he has not only regularly and with marked ability attended to his duties in the House but has also conducted a most vigorous election campaign without either exhaustion or detriment. It is to be noted that in these as in all cases during well-marked remissions the colour index is always near the normal, and that the corpuscles show less deformity and there are fewer nucleated ones among them.

That the condition is a toxæmia is further indicated by the early occurrence of marked weakness. This, in most cases, is the first symptom and it may be complained of a considerable time before the pallor is observed. It must therefore be independent of the anæmia to which, as already stated, it is not proportional. In 22 cases observed during the last three years with scarcely an exception the first deviation from health noticed was the weakness; pallor followed soon afterwards. It is to be observed, also, that the early occurrence of weakness, before, as a rule, any disturbance of the digestive tract is noted, does not support the theory that the toxin is of gastro-enteric origin or that the digestion tract is the site of infection, but rather indicates that the changes in it are secondary to the toxæmia. The disturbances of the stomach and bowels doubtless, however, increase the toxæmia and therefore aggravate the condition.

The ground for the opinion that the toxin is of gastro-enteric origin is the constancy with which disease or disturbance of the function of the digestive tract occurs. Few, if any, cases are met with in which there is not at some time a history of diarrhœa and vomiting. In my 22 cases diarrhœa and vomiting occurred practically in all of them at some period of the disease, usually early, but sometimes later. The post-mortem conditions, however, found in the relatively few cases examined do not afford much support to the theory, as in most of them all that has been found is atrophy of the gastric mucosa. Atrophy, however, occurs in gastric carcinoma and many other conditions which have shown no signs of pernicious anæmia, and then there is wanting evidence that the atrophy is not a late change in the disease. The only evidence of its early occurrence is the absence of free hydrochloric acid from the gastric secretion, but free hydrochloric acid is temporarily, and occasionally permanently, absent in many other conditions. During the remissions in pernicious anæmia the appetite and digestion are often quite vigorous and a full diet may be as well disposed of as in health. At such times there is every evidence of a secretion of hydrochloric acid. Even in malignant pyloric obstruction hydrochloric acid may be restored to the secretion after the condition has been relieved by gastro-enterostomy.

Of late much importance has been attached to the probability of infection of the stomach by secretion from diseased gums around decayed teeth.[2] There is no doubt that such unhealthy conditions of the mouth may cause gastric catarrh, but that is far from proving it, even indirectly, to be a cause of pernicious anæmia. It is a question whether decayed teeth and diseased gums are found to exist in pernicious anæmia in a greater proportion of cases than in other chronic exhausting diseases. There is such a vast army of people whose teeth are decayed and whose gums are unhealthy that it would require a marked connexion between the condition of the mouth and any constitutional disease to establish a relationship of cause and effect even in a remote degree. In my 22 cases I have notes of the condition of the mouth in 17: one or more teeth were told to stay in bed, except once a fortnight when they came to the hospital. When the afternoon temperature had remained below 100° for a week they were allowed to get up for the first part of the day, and if the temperature remained down subsequently, for the whole day. There was no difficulty in getting the patients to take their own temperatures and even to keep charts, so, fairly accurate information upon this subject was available. Three of these patients at the end of three months were practically unaffected by the administration of izal oil. Their temperature range was one degree lower than at the beginning. Two of them had gained weight. The remaining one had in this respect remained constant. The cough in all three was somewhat better, but the expectoration remained abundant, thick, and purulent, and the numbers of tubercle bacilli and pyogenic cocci remained, as far as one could tell, approximately constant. The physical signs in the lungs gave but little evidence that the areas of softening or crepitation were appreciably diminished. At the end of three months these patients were treated in a similar manner without izal, and seemed to make rather slower progress. One of them asked to be again put on izal, and this was done with somewhat the same result as before.

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[6] Brit. Med. Jour., Jan. 16th, 1896.

[1] A paper read at the meeting of the Association of American Physicians, Washington, on May 1st, 1901.

[2] William Hunter: THE LANCET, Jan. 27th, 1900, p. 221.

The results of the treatment in the case of the 12 remaining patients of this class will now be considered. In six of these the mischief was confined to one lung. These patients were observed for periods varying from four to seven months. In three the evening temperature at the beginning of the treatment ranged from 102° to 101°, in two no higher temperature than 100·8° was observed. In the remaining one there was no complete record of the initial temperatures. When taken in the out-patient room (afternoon) the temperature was 101°. The pulse of these patients was about 110. They were all losing weight. Two had typical night sweats. One had diarrhœa. This last patient, as he presents an interesting feature, may be discussed first. At the end of four weeks his morning temperature was normal, and the evening temperature had been for a week under 100°. He had gained two pounds, his pulse in the out-patient room was 90, as against 110 on previous visits, and the diarrhœa had practically ceased. When he first came his diarrhœa, which had been bad for six weeks and had existed for five months, was a very prominent feature of the case. In some earlier experiments I made with izal I found this drug to be remarkably potent in controlling intestinal putrefaction. This was evidenced by the cessation under its influence of the diarrhœa in several cases of infantile diarrhœa in the summer. Directly after the administration of the drug a diminution of the ethereal sulphates in the urine took place.[5] In the phthisical patient mentioned above there was, when he first came under my care, a large excess in the quantity of ethereal sulphates in the urine. This lead to the conclusion that the diarrhœa was attended with, and probably was accentuated by, fœtid decomposition in the intestine. In addition to this, previous experience of the arrest of phthisical diarrhœa, probably dependent upon the presence of actual tuberculous lesions in the intestine, by guaiacol carbonate, led one to infer that izal would be beneficial in these cases. *A priori* izal should both inhibit putrefactive decomposition and exert its bactericidal action upon the tubercle bacillus *in situ*. The anticipations were fulfilled; after its administration the aromatic sulphates rapidly diminished and the diarrhœa and intestinal discomfort *pari passu* with them. It may here be remarked that unirritating antiseptics are often more efficacious in the treatment of phthisical diarrhœa than so-called astringents. This patient continued under observation for a further period of three months and steadily improved. At the end of this period his evening temperature had for a term of four weeks not exceeded 99°. His cough and expectoration were confined to the early morning. The signs in the lung showed that a small area corresponding to the original softening had become excavated, but that the lung in the immediate neighbourhood had become free from crepitation. There was thus every hope that the disease had become arrested. On two occasions towards the end of the period I failed to find tubercle bacilli in the sputum.

The remaining five cases were similar to the one described above except that the general symptoms were not so severe. The patients all gained weight, practically lost their fever, and regained their working capacity. The cough and expectoration greatly diminished and were practically confined to the early morning. The physical signs in the lung showed in each case amelioration; this consisted, as above, in the area of softening becoming limited and in the disappearance or diminution of the crepitations and the reappearance of a fuller inspiratory murmur over the area which was previously the seat of them.

Six cases still remain to be considered, essentially the same, except that both lungs were affected. In one of these cases the patient who was observed for five months remained practically *in statu quo*. The weight increased slightly (four pounds) and the temperature range diminished, as did also the night sweats from which he suffered, but the physical signs in the lung remained practically the same. The remaining five cases all underwent distinct improvement. With regard to general symptoms the remarks made above concerning the other cases apply to these. The softening in the lung became in each case limited and the physical signs in the area situated between the breaking-down lung tissue and the healthy lung became very much less, or entirely disappeared. So far as concerns the less profoundly affected, lung improvement was observed in several different degrees. In one case the catarrhal signs entirely disappeared from the apex of the slightly attacked lung and full normal breath-sounds took their place. In the other cases the restoration to the normal of the affected area was not so complete. One of these last set of patients had albuminuria (one-tenth Esbach), and it is interesting to note that although he took relatively large doses (10 minims per diem) of izal oil no increase in the albumin took place.

*The third class* of phthisical patients, treated in the above manner, were in an advanced but chronic state. They numbered 10 in all. The disease was of old standing; in some cases of many years. There were, generally speaking, a large cavity with smaller ones and considerable cirrhotic change. Abundant crepitation and loud râles were present over extensive areas. The expectoration was very abundant, but varied in character from time to time, frothiness being occasionally more and occasionally less marked. In these patients fever was very rarely present and when it existed it was very slight. They may be roughly defined as being the subjects of old tuberculous lung disease whose symptoms were mostly of the bronchitic or broncho-asthmatic type. The best subdivision of them is the considering apart of those in whom the increased resistance to the circulation through the lungs gave rise to more or less marked derangement of the general circulation. This was distinctly present in four cases and was evidenced by cardiac dilatation, œdema of the ankles, and, in addition to these signs, in two, by the presence of albumin in the urine. Besides the two methods of administering izal mentioned above in these cases a third was used. This consisted in either suspending the izal medical oil by means of paroleine and using it for inhalation in a modified spray apparatus, or simply placing a few drops of izal in an ordinary metal inhaler and directing the patient to wear this as often as possible.

In one of these 10 cases the patient did not seem able to get used to the taste of izal and it was, after four weeks, discontinued. In three other cases, although the condition of the patients improved, at the end of four months the physical signs in the lungs did not give any marked evidence of amelioration. In the remaining six cases the increase in weight was marked, from 7 to 14 pounds in five months. The expectoration was very much diminished and very much less purulent, the cough was less frequent and less severe. The physical signs in the lungs showed that during the treatment the pulmonary cavities secreted less. Further, the loud râles for the most part disappeared and the areas of crepitations became distinctly less extensive. With regard to the severity of the coughing fits it is of interest that this became less severe, apart from the diminished quantity of expectoration. A hyper-sensibility of the bronchioles is probably answerable for some of the severity of the coughing fits in this class of patient, apart from the stickiness of the secretion. This is generally treated by substances the active principles of which exert a paralysing action upon unstriped muscular tissue, such, for instance, as belladonna. Izal exerts a slight paralysing action both upon sensory nerve-endings and also upon motor nerve-endings supplying involuntary muscle. This property of it probably explains its beneficial action in the above regard. So far as concerns the treatment by izal the patients with circulatory trouble were not to be distinguished from the others. The article referred to above upon the pharmacology of izal established were both old men and one of them died in the following year from acute diarrhœa, the other two years later from senility. In the physician's case the serum had no apparent effect, nor had it in three other cases in which it was subsequently used. During June anti-streptococcic serum was used, five cubic centimetres being given every two or three days at first and later 10 cubic centimetres; in all 125 cubic centimetres were used. During this time the temperature varied from 99·2° to 100·6° F. Some time after beginning the use of serum, after each injection a free secretion of saliva occurred which was sometimes blood-stained. No apparent benefit followed the use of the serum. The patient spent the summer of 1900 under most favourable conditions, living out of doors all day and sleeping in a tent at night. During the remissions the appetite was good and his diet was highly nutritious. By September he was considerably better but still his blood only contained about 3,500,000 red corpuscles per cubic millimetre. In October, on my advice, he tried spermin (Poehl), 10 cubic centimetres being given in divided doses extending over 10 days. He soon began to improve and during November his blood contained 4,500,000 corpuscles per cubic millimetre and the hæmoglobin rose to 85 (Fleishl). He looked quite well and said he felt as well as ever; the corpuscles, however, showed considerable inequality in size and a few nucleated ones could be found. He resumed his practice in a quiet way, but soon found himself unequal to the work. He became depressed; his mental condition which had been affected early in his illness and was not completely restored even at his periods of greatest improvement, now became so much disturbed that he became difficult to nurse. He was confined to bed although the blood showed only moderate deterioration, and in January, 1901, he grew suddenly worse and died comatose.

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[5] Neubauer und Vogel: Analyse des Harns, Wiesbaden, 1893, p. 13.

In more recent cases I have advised moderate purgation, with the object of removing infective material from the bowel. At the same time intestinal antiseptics have been given, and such general remedies as strychnine, arsenic, iron, bone-marrow, and the like. The results, however, have been no less disappointing than former experiences. Notwithstanding all the good work that has been done the cause and pathology of the disease are as yet quite unknown, and as to its effective treatment we are equally in the dark. No plan of management or treatment so far devised avails to cure the disease or even, in most cases at least, to alter its erratic course. Before the recovery can be considered complete the blood on histological examination must be found quite normal. A restoration of even the full complement of 5,000,000 red corpuscles per cubic millimetre is not sufficient, as that may occur in a prolonged and marked remission. Not a few of the cures reported have doubtless been remissions of this kind.

Toronto.

# FRIEDREICH'S ATAXIA.[1]

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FRIEDREICH'S ataxia is a sufficiently rare disease to make a group of cases such as the following worthy of detailed record. The patients are three sisters, aged respectively 20 years, 18 years, and 11 years, who belong to a family of four, the remaining member being a boy, aged 16 years, whose general health is reported to be excellent, but who is afflicted with stammering of a pronounced degree. The only point of importance in connexion with the family history is that the parents are first cousins. So far as can be ascertained there is no reason to suspect alcoholism or syphilis in either father or mother.

CASE 1.—The eldest of these three girls (Fig. 1) came to the out-patient room at the Royal Hospital for Children and Women some time ago complaining of gradually increasing loss of power in her legs, on account of which she had latterly found it a matter of considerable difficulty to get upstairs. She had always been perfectly well in her general health, but at the age of 12 years she first observed that her legs were becoming feeble. There was no wasting of the limbs, no history of previous acute illness, and no sensory disturbance. She had several chronic sores on her feet to which she attributed her difficulty in locomotion and the feeling of weariness in her legs. This history led to an examination of the patient's feet, and their appearance at once suggested the nature of her malady and prompted inquiries as to the health of other members of her family. Both feet presented the characteristic deformity of Friedreich's disease, being foreshortened with abnormally high instep arch and acute extension of the phalanges on the metatarsal bones (Fig. 2). The sores she complained of were numerous; a few superficial, others deep, and with some of the features of perforating ulcer. The soles were tender to the touch, and partly because of this tenderness—wholly, as the patient thought—and partly also, no doubt, from the deformity and muscular debility, she was unable to walk across the floor on bare feet. The girl then explained that she required to wear specially made boots to enable her to get about at all, but that with them she could manage pretty well so long as she was not required to do much in the way of going upstairs. This point, which to the girl is one of the striking features of her case, is noteworthy as prominently emphasising the fact that the flexor muscles of the leg are those which become specially impaired in the early stages of the disease. Her gait is more reeling than ataxic in character. This is brought out if she is asked to turn sharply round, when it will be observed that her efforts at movement are attended by a certain amount of shakiness. She walks with her toes turned inwards and with her legs widely apart. Romberg's symptom is well marked and she complains of attacks of vertigo which are always liable to be induced by closing her eyes when she is in the erect position. Her knee-jerks are absent and the plantar reflexes, though not abolished, are feeble. There is loss of motor power in both legs, but especially in the left, which she is quite unable to raise from the ground against the opposition of the most moderate pressure. Her arms are slightly ataxic, but not yet to such an extent as to interfere with her daily duties. There is no nystagmus and her eye-movements are normal. The optic discs are healthy and the pupils are equal and react freely both to light and to accommodation. Her speech is unimpaired and she is mentally bright and active. A fine tremor is to be noted throughout her muscles whenever they are put into use, and this is specially observable in the face, where sustained muscular tension, such as that required by the upper lip when called upon to uncover the teeth and gums, brings about, not only tremor, but after a few moments clonic contractions of the levator labii superioris, orbicularis oris, and other small circum-oral muscles. There is nothing abnormal about any internal organ, but her menstruation is somewhat irregular as to periodicity and is scanty. She suffers from pronounced ichthyosis, so that the congenital imperfection is not limited to the spinal cord, but implicates the skin as well.

The facts of the case leave little doubt as to the diagnosis, but full confirmation is afforded by the condition of the patient's two sisters.

CASE 2.—The elder of the two, aged 18 years, at once attracts attention on entering the room by her apathetic and almost vacant expression. Her gait is more shuffling but less ataxic than her sister's, and her speech is slurring, deliberate, and produced by a voice almost wholly wanting in both animation and inflection. She, too, enjoyed perfect health till the age of 12 years and her first abnormal sign was (precisely like her sister's) a difficulty in getting upstairs from feebleness of her leg-muscles. On examination she is found to possess the same foot-deformity (Fig. 4) but without any plantar sores, the same absence of knee-jerks, and, in fact, a replica of the sister's symptoms, but with the important addition of a marked curvature of the upper part of her spine (Fig. 3). The loss of power in her legs is not yet so far advanced as in her sister's case, but, on the other hand, on extreme conjugate deviation the eyes manifest oscillating movements which are not sufficiently sustained to be dignified with the name of nystagmus, but are still nystagmoid in character and in all probability represent the early stage of that condition. In her case tremor on movement is a well-marked feature and on watching her attentively for a little while one observes occasional choreiform twitchings which seem to be confined to the right arm and face. Her skin is normal and there is no impairment of her general health or evidence of disease in any thoracic or abdominal organ.

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[1] A clinical demonstration at the Medical Graduates' College and Polyclinic on July 2nd, 1901.

carious in 10 of these, but nearly all of them were too well cared for to be a possible source of infection of the stomach. In only four of these cases were the gums unhealthy, three of them being only slightly affected and the fourth only fairly severely. In none was there a purulent secretion. It is further to be observed that these cases were not more affected by stomatitis or gastro-intestinal disturbances than were those whose teeth and gums were perfectly healthy.

One case at present showing very grave symptoms of pernicious anæmia was under treatment two years for dilatation and prolapse of the stomach with marked disturbance of its function. The patient was then quite thin and anæmic, but the blood did not present the characters of pernicious anæmia and she made a very good recovery. Her present illness began during the past winter. There was a history of pernicious anæmia in the family of two of my cases One of them, a young man, whose death is just reported, had a brother who died from the same disease about four years ago. The history was typical, so that there can be no doubt as to the diagnosis. The other case is that of a lady about 70 years old. She had been ailing for nearly two years and presented the characteristic symptoms in a marked degree. Two of her brothers died a few years ago from a disease with similar symptoms and history.

Symptoms of the disease of the nervous system occurred in nine of the 22 cases. In most of them there were only slight feelings of numbness in the extremities, the hands chiefly. In the case of a physician to whom I shall presently refer, not only the numbness, but ataxia, was quite marked, and the mind was not quite vigorous and clear even during his remissions, in some of which he was almost well. In the case of a lady, aged 68 years, there was a sensation of extreme coldness in the hands that was distressingly painful at times. In her case numbness was also marked Severe neuralgia of the head in all parts, but usually affecting one side more than the other, was the form which the nerve symptoms took in a young woman. The pain could scarcely be relieved, until a remission of all the symptoms occurred when she recovered fair health for a time; a relapse followed and terminated fatally six months later. Of the 22 cases 16 were males, an unusually large proportion. They were from all walks in life, but none were subject to undue privation or burdened with excessive work or "carking" care. In no case was any apparent cause evident.

In estimating the value of the treatment in any disease it is necessary to take due account of its natural course. This is especially true of pernicious anæmia, the course of which is subject to such sudden and extreme changes. There are few diseases in which more marked remissions occur. It is not unusual for patients almost moribund to be about in a few days and to resume work in a few weeks This was the history in the case of a man who had been ailing for some months, and in April, 1900, was so prostrate that he could not be roused; blood-stained fluid flowed from his mouth saturating his pillow. Yet in a few days he was sitting up, and returned to his home within a week, a distance of 100 miles. *During the summer he considered himself* well and worked at his trade as a stonemason. He relapsed in the autumn and spent the winter in-doors with hopes of improving with the advent of the warm weather, but he grew worse rather suddenly and died in April, 1901. Another man, under my care at the same time, in his first attack two years before was so prostrate that his physician told him that he would not be able to return to his office for a year; but he was there in two weeks, and continued well, as he thought, for a year when he relapsed, failing steadily with the usual exacerbations and remissions, until he died six months later. Such cases as these show the inappropriateness of the name "progressive" pernicious anæmia The disease is *remittent* not *progressive* Many cases run a milder and more persistent course, but in these also remissions occur and from time to time give promise of recovery. As in the case of the Member of the House of Commons already referred to, the recovery may be almost complete and remain unchanged for a year or more, but examination of the blood always shows some characteristic deviations, and a relapse may be confidently expected sooner or later. This has been my experience with the 22 cases observed during the last three years *Of these 14 patients have died, four* are running the usual variable course, and the remaining four have not been heard from for some time.

Arsenic, since its introduction by Bramwell, has until recently been regarded as a specific in pernicious anæmia. As the natural history of the disease has become better understood confidence in it has gradually lessened until now many regard it as of little value. The only case of complete recovery which I have had was apparently due to its action.[3] The case was that of a patient who in 1889 presented all the characters of pernicious anæmia with acute symptoms. The red corpuscles were reduced to 750,000 per cubic millimetre and there was marked poikilocytosis with much variety in size. Histological examination of the blood was not then further made. He took arsenic very freely for three months causing considerable peripheral neuritis His recovery was complete and he has since remained well. In the light of my more recent experience I am inclined to doubt the diagnosis, although it is not apparent wherein the error lies. In none of my late cases has arsenic proved of any service. In many of them it soon caused gastric irritation and had to be discontinued

The general acceptance of the theory of gastro-intestinal toxæmia has led naturally to the use of various antiseptics Of these bi-chloride of mercury has been most generally used, both locally as a mouth-wash as well as internally. My experience with it unfortunately has not been satisfactory; no tangible good has resulted from its use. The use of other antiseptics as salol, resorcin, creasote, bismuth salicylate, and bismuth naphtholate has been equally ineffective. Should this plan of treatment after due trial prove unavailing it will go far to show that the theory of the origin of the disease from a gastro-intestinal toxin is incorrect.

With a view of supplying the blood with an artificial serum and stimulating lymphagogue action and excretion of toxin by the kidney I have given normal saline subcutaneously in a few cases. I first gave it to an old man in the Toronto General Hospital who was so prostrate as to be almost unconscious. After the first injection of a pint he roused up and remained much better. A pint was given every second day and on the alternate days the same amount was given by the rectum. The subcutaneous injection was so painful that on recovering his normal mental state he declined to continue its use and the saline enemata soon caused diarrhœa and had therefore to be stopped. He improved very much and left the hospital in very fair condition with over 3,500,000 corpuscles per cubic millimetre. He returned four months later in a relapse and died in a few days. In a few other cases improvement followed the subcutaneous saline and in one there was apparently a recovery, but he may have relapsed as he has not been heard of for some time It is, unfortunately, too painful for most people to endure. The rectal administration should be as effective, but it cannot be continued on account of the diarrhœa.

If, as Rumpf[4] has lately pointed out, there is, in addition to the hydræmic state of the blood, an excessive quantity of sodium chloride present, it would seem injudicious to add more water and chloride of sodium to blood already surcharged with these constituents. If, however, the solution stimulates the renal secretion its use may so increase elimination from the blood as more than to counter-balance the *evil effects* of the introduction of more chloride of sodium and water into the blood.

The use of various other sera is illustrated by the history of the case of the physician to whom I have already referred He was 60 years of age and practised in a neighbouring city Symptoms of weakness were noticed early in 1899 and pallor shortly afterwards. His teeth and gums were healthy but he suffered much from stomatitis, especially when his stomach was disturbed, as it was frequently. He could take arsenic only for a few days, as it caused nausea and vomiting, and normal saline by the bowel set up diarrhœa Bi-chloride of mercury was used for some time, both locally for the mouth and internally for the general toxic condition, without doing appreciable good. Bismuth salicylate and similar antiseptics were given from time to time for the diarrhœa which always recurred when the stomach was disturbed. His history was the usual one of mild exacerbations and remissions Plain horse serum was then given subcutaneously in the hope of stimulating lymphatic action, but the only effect was to produce a severe urticaria This was also the result of its use in three other cases Then anti-diphtheritic serum was used, two cubic centimetres being given every second day. Its use in two previous cases had been followed by gratifying results, doubtless *post hoc* rather than *propter hoc*. The patients of perfect health. It is of special importance to note that she has not yet reached the age at which both her elder sisters first began to droop, because it has become one of the recognised tendencies of the disease to manifest itself at the same age in members of the same family—so much so that one of the most favourable of all prognostic facts is the absence of symptoms after the age of incidence has been passed.

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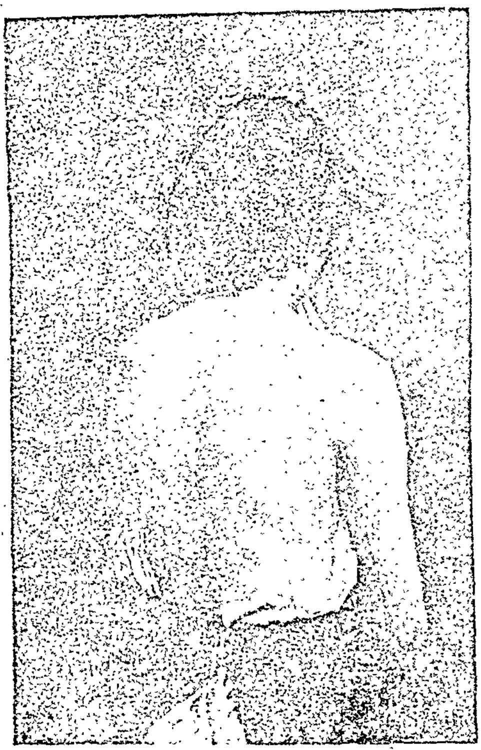
[3] Philadelphia Medical News, 1890, p 357.

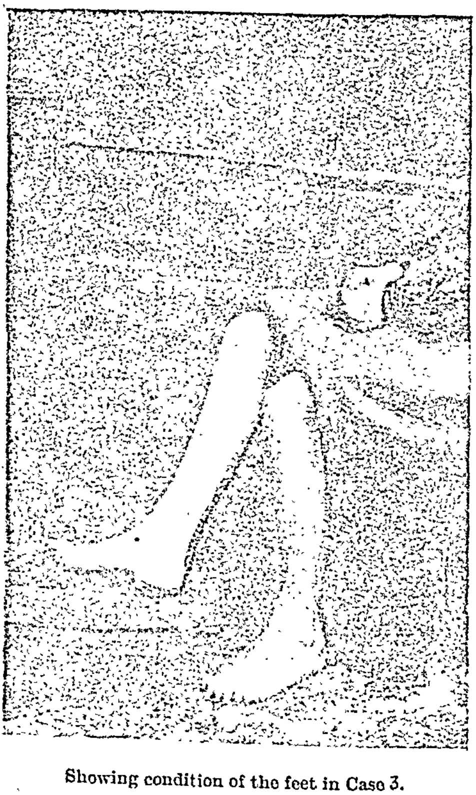
[4] Berliner Klinische Wochenschrift, No 17, 1901 Abstracted in American Medicine, vol. i., No. 9.

FIG. 5.



Showing condition of the back in Case 3.

FIG. 6.



Showing condition of the feet in Case 3.

Though the disease has not reached its full development in either of these girls the three cases taken together portray in unmistakeable colours the picture first painted by Friedreich. The absence of certain phenomena, such as well-marked nystagmus, pronounced ataxia of the upper arms, emotional instability, &c., is to be explained by the comparatively short time during which the disease has been in progress. It is, of all nerve disorders, one of the slowest. Many important symptoms, therefore, remain to declare themselves in process of time, and already in these present cases a certain amount of evidence is forthcoming that the advent of some of them will not be long delayed.

The photographs in the accompanying illustrations have not succeeded in bringing out as well as they might have done the deformities of the feet and back, but they illustrate clearly enough some abnormal features and have been taken with a view to future comparison. The attitude and shape of the feet are, in all three cases, already striking. There is no marked curvature of the spine to be seen when the back of the patient in Case 1 is examined, but the photograph fails altogether to portray the bend which is strikingly in evidence in Case 2, and only imperfectly reproduces the slighter, but still undoubted, curvature which the youngest girl (Case 3) presents.

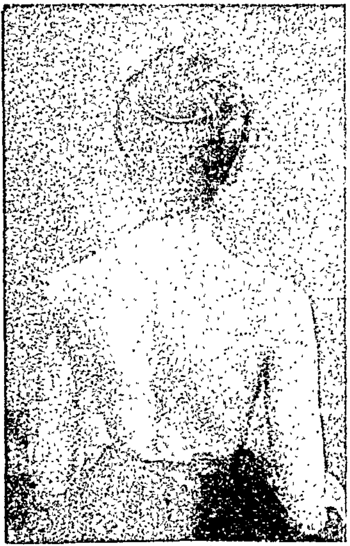
Friedreich's ataxia is essentially a family, as distinguished from a hereditary, disease; it attacks several members of the same family or generation, isolated cases being comparatively rare. Obviously it can seldom be a directly hereditary disease, because in the vast majority of cases it is so far advanced before the marriageable age is reached that a matrimonial alliance is out of the question, not necessarily from actual sexual incapacity, but on account of the helplessness and crippling which have been already by that time produced. There is nothing definitely known as to the etiology of the disease beyond its dependence upon congenital conditions of the spinal cord. It has been variously ascribed to alcoholic excess in one or both parents, to syphilis, to parental consanguinity, and to preceding acute febrile disorders—such as measles or scarlet fever. It has also been said to occur with greatest frequency in families of unusual numerical strength. None of these causes are adequately sufficient to explain its occurrence. As regards syphilis, for instance, it is now accepted that it may be definitely excluded as a direct cause, though it may coincidentally exist. The speech defect by which the only son of this family is afflicted goes to confirm the supposition of an unstable inheritance so far as nerve tissues are concerned, and the ichthyotic skin of the eldest daughter (Case 1) further proves a congenital tendency to imperfect development. But no more can be said in favour of consanguinity as a cause than that weaknesses of tissue inheritance are more likely to be intensified in the children of parents who come of the same stock than in those whose ancestry is derived from parents born of entirely different strains.

Pathologically Friedreich's ataxia depends upon a sclerosis of the spinal cord which invades the posterior, lateral, and often, also, the anterior columns. In many cases the cord is smaller than normal, and this deficiency in size may involve the medulla and pons as well as the cord. Cases are recorded in which the cerebellum also has been found atrophied. The sclerosis of the posterior columns is usually complete throughout the whole length of the cord, and that of the lateral columns extends outwards and forwards so as to involve the direct cerebellar and the anterior pyramidal tracts. The cord lesion is thus much more extensive than in ordinary tabes which in many respects the disease so closely resembles. According to some authorities the sclerosis of Friedreich differs intrinsically from all other forms of sclerotic lesion in being purely neuroglial in character.

The two diseases with which Friedreich's ataxia is most liable to be confounded are locomotor ataxia and disseminated sclerosis. It may be distinguished from locomotor ataxia by the age of the patient, the existence of the disease in other members of the family, the altered speech, characteristic foot deformity, tendency to spinal curvature, muscular tremors, and choreiform twitchings, and by the absence of visceral crises, Argyll-Robertson pupils, lightning pains, and other sensory phenomena. If carefully observed the gait also will be found to differ in the two diseases; in tabes it is purely ataxic, whereas in Friedreich's ataxia it partakes of the cerebellar character as well, and thus

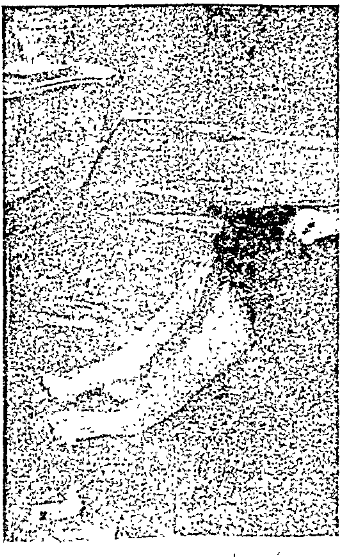
CASE 3.—The patient in this case—the youngest of the three girls—is 11 years of age and is supposed to be perfectly well, but on examination she presents three very suggestive symptoms. The great toe on each foot is hyper-extended and the extensor proprius pollicis stands out with undue prominence (Fig. 6); the knee-jerks, though not wholly absent, are so feeble that they can only be mildly elicited on reinforcement; and the small muscles of the face are distinctly tremulous when they are called upon to exert their full vigour. The girl is robust and energetic, she has experienced no muscular weakness, vertigo, or ataxia, and is, so far as she knows and to all superficial appearance, in the enjoyment

FIG. 1.



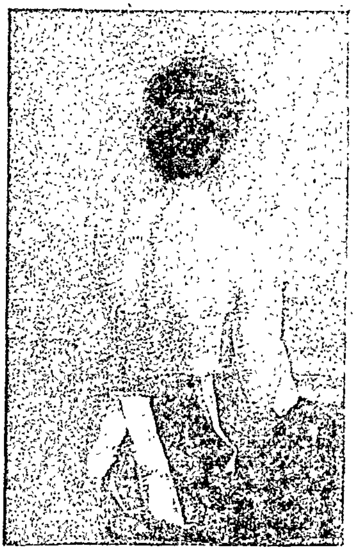
Showing condition of the back (no curvature) in Case 1.

FIG. 2.



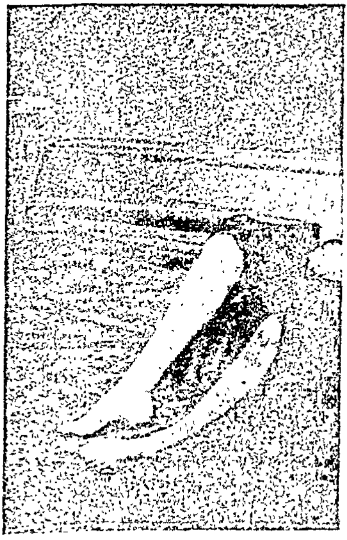
Showing condition of the feet in Case 1.

FIG. 3.



Showing condition of the back (spinal curvature) in Case 2.

FIG. 4.



Showing condition of the feet in Case 2.

## REPORT ON LEGISLATION AND PRACTICE OF SANITATION AND HYGIENE IN ELEMENTARY EDUCATIONAL INSTITUTIONS OF SOME EUROPEAN COUNTRIES.

| Playground and drill-hall. | Building. | Schoolrooms— | | | | Seats and desks. | Latrines. | Physical training. | Hours of work. | Hygienic precautions. | Vaccination. | Number of elementary schools and special institutions. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Area in metres per child. | Height in metres. | Ventilation. | Heating. | | | | | | | |
| | | | | | *France.—Paris (population 2,700,000).* | | | | | | | |
| Playgrounds: small, 700 sq. m. for 450 pupils, gravel or wood pavement; tree-planted. Drill-hall (*Préau*): 25 m. × 8 m. for 450 pupils; used as cloak-room, refectory, and playground, as well as for gymnastics and military drill. | From one-half to two-thirds of the primary municipal school buildings are modern. Some are in fairly open surroundings, others much enclosed. Neither basement nor roof-space is utilised. Corridors and staircases 1½ m. wide. Water on landings and in drill-halls. No bathrooms. | 8 m. × 7 m. for from 47 to 55 pupils. All rooms fully occupied and more space wanted. | 4 m. | Windows with moveable pane. Extraction opening in ceiling near chimney. One two-and-a-half inch opening between class-room and corridor. Outside ventilation: openings to spaces between ceiling and floor above. Air in rooms vitiated. Children pale, weak eyes, pimples, &c. No adequate provision for aeration during class. | Temperature 15° C. Iron or terra-cotta stoves which heat air taken from the room. Water-troughs found empty. | Either single, in pairs, or old-fashioned rows of desks. No support to the loins. All the same size in the same room. Part of the seat moveable. | Separate buildings. Open into portable receptacles or town drains; in the latter case self-flushing. Closets arranged for standing position. Arranged so as to be seen into—i.e., walls about 1½ m. high. One closet for 65 pupils; urinals in same proportion. | Daily physical exercises, besides gymnastics, boxing, fencing, and singing. | 30 per week including time for manual work, gymnastics, and singing. Intervals between classes. Hours: from 8 to 11 A.M. and from 1 to 4 P.M.—i.e., six hours daily except on Thursday, which is half-holiday. | Cleanliness of person and surroundings. Food either gratuitous or for small payment. Meat, 45 grammes; vegetables, 20 centilitres; soup, 30 centilitres. Summer colonies, some of which are permanent institutions, maintained by arrondissement. Pupils weighed and measured before and after summer outing. Good results. Medical visit every 15 days. | Vaccination and revaccination at 10 years obligatory. | 200 boys' schools; 200 girls' schools. Maternal schools for children from two to six years of age attached to several primary schools. Écoles enfantines intermediate between maternal and primary schools for children of both sexes from four to seven years of age. |
| | | | | | *Italy.—Milan (population 500,000).* | | | | | | | |
| Planted with trees, inclosed by a wall. Fine open spaces but rather crowded when in use—i.e., 36 × 26 m. for 700 pupils. Boys and girls have separate playgrounds. Drill-rooms 9 m. × 17 m. Central steam heat. | Old buildings rapidly giving place to new. The latter of modern construction, well placed and constructed in rectangular blocks or round three sides of a square. Spacious entrance halls, corridors, cloak rooms, &c. Corridors 3 m. wide, with taps and basins if the latter are not in the school-rooms. | 7 m. × 8 m. for from 50 to 60 pupils—i.e., 1 sq. m. per pupil. Generally not fully occupied. | 4 + | Windows 3 in number in each long side of the walls. Hopper lights. The air from the outside warmed by passing over encased radiator. Extraction opening near floor to roof 4 sq. dm. to 100 cubic m. | Temperature 13° C. Central steam or air. The former is more dependable. Condensed steam used again for boiler. The radiation apparatus in the rooms and corridors is arranged to heat the incoming air. | Isolated pairs of combined pattern on a ground frame. The seats lift on hinges and fold back; the top of the desk is immovable. Passage between rows of pairs. Four sizes of desks. | The latrines are self-flushing and they open into the town canalisation. They are syphoned and trapped. Sometimes with seat, sometimes without. One closet and one urinal to about 30 pupils. Special models for blind school and for school for defectives. | Special provisions for walking, running, jumping, and singing. Boys of the upper classes have gymnastics once or twice a week. | 22 hours per week. Upper classes: from 9.15 to 11.30 A.M., and from 12.30 to 2.45 P.M. Lower classes: from 9.30 to 11.30 A.M., and from 12.30 to 2.45 P.M. The pupils remain all day at school—i.e., do not go home at mid-day. | At the commencement of each scholastic year a medical examination of all pupils is made, and a report on a special form is presented to the authority. A monthly record is kept (1) of cases absented and re-admitted during the month; (2) of cases absented and not re-admitted; and (3) of those re-admitted from the previous month. In all cases the medical officer orders abstention and re-admission (for infectious diseases). Special provision and instructions for treatment of pediculosis. Cases of declared tuberculosis ex- | Vaccination and revaccination at from 10 to 12 years of age universal. Small-pox unknown in the schools. In the event of one case of small-pox all the class to be revaccinated except such as have been successfully revaccinated within five years. | 72 elementary schools (40,000 pupils). One school for deaf-mutes. One school for the blind. Two foundling schools. One school for defectives (*deficienti*). One school for stammerers. Special classes for backward children. Two *educatorii* or family schools for children (from four to 10 or 12 years of age) whose parents are at work. |

becomes a mixture of stamping and reeling. The resemblance to disseminated sclerosis is at first sight considerable In both affections there are nystagmus, a difficulty in speech, muscular tremor, and an abnormal gait, but on closer investigation it will be found that the nystagmus is more marked and developed at an earlier period of the disease in disseminated sclerosis than in Friedreich's ataxia; that the speech, though slurred and deliberate, is not so syllabic; that the muscular tremor is not rhythmical nor of the unmistakeable intentional type; and that the gait possesses none of the spastic element which characterises the disseminated case. Further and more distinctive points of differentiation are to be found in the facts that disseminated sclerosis is not a family disease; that it very rarely develops in persons under 20 years of age; that it is subject to periods of remission and exacerbation unknown in Friedreich's ataxia; and that the spinal reflexes are exaggerated and the optic discs frequently atrophied. The foot deformity and spinal curvature of Friedreich's disease are not present in disseminated sclerosis

The prognosis of the disease is, so far as now understood, hopeless. Its progress is usually slow, often lasting over a long period of years, but it is gradually a downhill one, and there is such eventual crippling that the patient is unable to do anything for himself—a helpless condition which sometimes is accentuated by the fact that the speech has become so slurred as to be wholly unintelligible No remedies have any apparent effect in arresting its course; it goes on steadily, however slowly, from bad to worse in spite of treatment. The most that can be done is to maintain the general health as thoroughly as possible, and this should be accomplished by means of good and abundant food, fresh air, suitable exercise, cod-liver oil, and general tonics. The constant current applied down the length of the spine may be of temporary value, and the use of a well-fitting rigid jacket will help to prevent the excessive development of spinal curvature.

hesham street, S.W.

# REPORT AND COMMENTARY ON SCHOOL SANITATION AND HYGIENE.

AS PROVIDED FOR IN THE FOLLOWING FIVE EUROPEAN COUNTRIES—VIZ., FRANCE REPRESENTED BY PARIS, ITALY BY MILAN AND FLORENCE, BELGIUM BY BRUSSELS, GERMANY BY STUTTGART, AND SWITZERLAND BY ZÜRICH.

BY STUART ALEXANDER TIDEY, M.D. LOND.

THE following report, drawn up during a rapid tour of inspection, represents the crystallisation in specific form of one element—viz., school hygiene, from a solution of general knowledge of continental methods of elementary education, acquired during 16 years' residence on the continent at intervals extending over a period of 30 years. To facilitate ready reference and comparison the reports are drawn up in tabular form and this was done in each case immediately after the visit of inspection was made. Thus confusion was avoided and the relative merits and defects were brought into strong relief.

The object of the reports is to afford an accurate appreciation of the work being done at various continental centres towards providing for the physical well-being of school-children educated at free elementary national or municipal schools. No consideration other than that of accuracy has been allowed to influence the compilation of results recorded. Reports on the same subject as treated in various countries must lead to comparisons, and should the comparisons drawn as a necessary part of this review come by any chance to the ken of those in charge of the institutions reviewed it is hoped that they will accept the conclusions as the result of sincere conviction based on a definite scheme of inspection. The selection of towns visited was made with a view to seeing a good, if possible the best, representative centre in each country. Whether this result has been accomplished or not it is impossible to say; possibly Berlin would have been a better representative centre than Stuttgart, and Le Havre than Paris; but accepting the centres visited as representative, the order of relative merit in which they stand in point of provision for elementary free education admits of no uncertain verdict except as to the claims of Belgium and Switzerland for the honour of first place. Together or separately, they excel all rivals in superlative excellence—Switzerland, represented by the town of Zurich, with its palatial school buildings arranged to meet every hygienic requirement, and Belgium, represented by Brussels, with its established structural excellence and highly-organised administrative programme; both marshalled by an energetic and progressive *personnel*, neither content with excellence but seeking perfection; Switzerland, more lavish in structural outlay; Belgium, if possible, more perfect in administrative organisation. Is there in either a determining element of superlative excellence or of essential defect to turn the scale? Yes; and reference to the respective reports will furnish the answer.

Under the head "Ventilation" will be found mentioned in the Swiss report opposite windows facing the lighting windows and opening into the corridor and extraction openings *near the floor* functioning in and out of class hours. In the Belgian report is no mention of opposite windows, and the extraction opening is *near the ceiling.* In relation to this structural difference there is no perceptible vitiation of the air at the end of the Swiss class, but at the end of the Belgian class there is perceptible vitiation of air. The Swiss engineer has provided a double extraction, and that for special function in winter near the floor. He argues thus. In winter the outside air passing over the radiator is heated and rises at once; descending as it cools, it reaches its destination at the level of the heads of the pupils, is not sufficiently heated by respiration to rise again, but finds its way to the extraction shaft by the low opening. In summer the entering air diffuses equally throughout the room, is warmed by respiration, and passes into the corridor or into the open air by the high opposite windows. The Belgian architect says: "The intake air is warmed by passage over the radiator, is breathed by the pupils, and then rises and finds its way by the high aperture to the extraction shaft." One of his premisses is false, by omission, and the conclusion falls to the ground. On this ground, involving as it does the most important hygienic principal—viz., that of proper aeration of the class-rooms—the palm of superiority must be awarded to the Swiss elementary school.

Next, and following close on the heels of the leaders, comes Italy, represented by Milan and glowing with the enthusiasm of the Risorgimento. Here, again, are fine elementary school buildings, well-designed to fulfil the demands of modern science and generously installed. Here also the *personnel* is proud of its schools and still striving to excel. Florence, too, far behind Milan in point of school buildings, has all the potential energy and will to convert her antiquated schools into educational palaces. To quote words recently used by Professor Del Greco: "Questi stabilimenti infelici sono destinati a sparire—a morto." ("These infelicitous buildings are destined to disappear—to death.") But while the Florentine bemoans the destitute circumstances of his seats of learning, he, nevertheless, makes the best use of them. One of the most infelicitous of the schools—viz., that of Salvino del Armato degli Armati—is a pattern of order and cleanliness Every attempt is made to do good work with bad material. What better warrant of future success? Then the institution for backward children, near Florence, is a model of excellence in point of administration and instruction, though housed in an ancient building

But to proceed, Germany, as represented by Stuttgart, comes next in order of merit. Here we see established scholastic success enjoying the dignity of recognised merit as the educational school of Europe, the buildings being of substantial structure and simple decorative design and fulfilling the established hygienic rubric. No indication is there of a keen progressive movement, but all is in order and everything established on a solid basis.

Next on the list under review comes France, represented by Paris. Many of the school buildings are of recent construction, but the best are not built to meet modern requirements of school hygiene. There is deficient width of corridors and staircases, the drill-halls have to subserve a variety of purposes, the basement and roof-space are not utilised, the ventilation is defective, and the system of heating is bad, the pupils are adapted to the desks instead

### REPORT ON LEGISLATION AND PRACTICE OF SANITATION AND HYGIENE IN ELEMENTARY EDUCATIONAL INSTITUTIONS OF SOME EUROPEAN COUNTRIES—(*Continued*).

### *Germany.—Stuttgart (population 170,000).*

| Playground and drill-hall. | Building. | Schoolrooms— | | | | Seats and desks. | Latrines. | Physical training. | Hours of work. | Hygienic precautions. | Vaccination. | Number of elementary schools and special institutions. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Area in metres per child. | Height in metres. | Ventilation. | Heating. | | | | | | | |
| There is no playground in town schools. In the outskirts about 35 sq m. for 350 pupils. There are 10 large drill-halls in the town, with complete gymnastic apparatus, 26 m. × 14 m. generally used for 60 pupils at a time. Temperature 10° R. | There are some special and some adapted. Buildings either in town or outskirts, the latter being well placed. The corridors are 3 m. in breadth. There are no lobbies or cloak rooms, the hats, &c., being kept in the corridors or the class-rooms. In the basement are baths and heating furnaces. Roof-space for openings of hot air shafts and drying linen. | 1 sq. m. Rooms generally 9 m. × 7 m. The drawing and technical work-rooms are larger. | 4 m. | Windows with moveable pane. The air from outside is heated by stoves or by a central furnace. Extractors opening on the roof. | Temperature 15° R. in the class-rooms Central air or stoves with air-chambers and warm air-shafts. The latter open in the roof-space. Air moistened in the central chamber or in the room. | Generally rows of pairs. Some old-fashioned in rows of four each. Six sizes with the height of the pupil for which desk is adapted painted on each desk. Complete regulations for proportions of parts of combined desk-seats, for distance of desks from walls and width of space between them. The desk-seat measures about 1·25 m. long, 0·7 m. antero-posteriorly, and 1·2 m. in height at the back—i.e., the highest point. All angles of furniture are rounded. The "Rettich" pattern in general use. | In separate buildings. Each closet separated completely. All with seats. Opening leads direct into cess-pool which is ventilated by special furnace and high chimney shaft. Oil urinals for boys and girls. One latrine for 37 boys or 34 girls. | Gymnastics for older boys and girls form regular part of programme. Smaller children only walks, drills, and general attention to carriage. All have singing. | Range from 20 hours per week for the youngest to 32 for the oldest, including gymnastics. Hours from 8 A.M. to 11 A.M., and from 2 P.M. to 4 P.M. Wednesdays and Saturdays half-holidays. Intervals between all classes. | General regard to cleanliness. Baths in school not obligatory, but general. Table of infectious diseases in class-rooms. Table of first-aid in drill-halls. No regular medical visits. | Obligatory, "impfzwang." Re-vaccination obligatory between ages of 10 and 12. No case of small-pox had occurred in the kingdom of Wurtemberg for many years till 1899 when one case in an Italian student occurred, but did not spread. | 28 elementary free schools, 10 drill-halls, 10,429 pupils. One blind institute (private), and one deaf and dumb institute (private). Provision for backward children under consideration. Many kindergarten (private). Foundling teaching institute. |

### *Switzerland.—Zurich (population 158,000).*

| Playground and drill-hall. | Building. | Area in metres per child. | Height in metres. | Ventilation. | Heating. | Seats and desks. | Latrines. | Physical training. | Hours of work. | Hygienic precautions. | Vaccination. | Number of elementary schools and special institutions. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ample tree-planted and gravelled spaces surrounded with iron railings. Boys and girls in the playground together Drill-halls 1000 square metres for 200 pupils, fitted with apparatus and weighing and measuring scales. | All are special; several quite modern. The entrance-halls, cloak-rooms, and corridors are spacious. There are large entertainment rooms, gymnasiums, and baths and douches (obligatory). The walls are washable to 1½ m. The floor-angle is rounded. The floors are of wood, asphalte, iron cement, linoleum, or cinolite. Four to five | 1 sq. m. + Class-rooms 10 m. × 6 m. to contain from 28 to 60 pupils. | 4 + | Hopper lights to the windows nearly the whole length of the outer wall. Hopper lights to the opposite corridor windows. Extractor near the floor with pipe opening into the roof-space. 4 sq. dm. per 100 cubic m. Cleaning flue to the chimney-stack also in the roof-space. | Temperature 14° C. Central—(1) water (expensive); (2) steam (best); (3) air (irregular). The radiators in the rooms, corridors, and latrines are arranged to heat the incoming air. | Combined seat and desk in pairs of varying patterns. The pairs are either isolated or in batches of five pairs on framework. Passages between longitudinal pairs of desks. | Automatic periodical flushing syphoned pedestals with seats opening into canalisation or clearing tank. One per class of 50 girls; one per two classes, or 100 boys, with urinals. This is found sufficient as the classes break up every hour. The lobbies contain washing apparatus. | Gymnastic instruction from 10 years of age onwards. Universal walks, drill, &c. Swimming, cross-bow, shooting, singing. Manual work carpentry, fitting, washing, cooking, modeling, and sewing. | Age from six to 14 years. Morning: 7 to 8 (summer), 8 to 9, 9 to 10, and 10 to 11. Afternoon: 2 to 3, 3 to 4, 4 to 5 (occasionally). A quarter of an hour interval between all classes. | Height and weight are taken and recorded twice a year. Holiday colonies. A medical visit every week in some schools. Vision tests for use by teachers in all rooms. A recommendation that hygiene and first aid be included as obligatory in normal schools. There is a table of first aid directions in the teachers' rooms. There are a hygrometer and a thermometer in the school-rooms. Daily soup-kitchens. | General, not obligatory. There was one case of small-pox two years ago. | 38 elementary schools (13,977 pupils). One blind and deaf-mute institute. Special classes for stammerers. Special classes for backward children. 30 kindergarten (1165 children), ages from four to six years, attached to the elementary schools. |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Italy —Florence (population 200,000)* | | | | | | | | | | | | |
| In town very limited In the suburbs 5 sq m or more per pupil Should be playground 4 5 m Drill hall 1 25-1 50 m | Chiefly adapted some new New projects accepted The law of 1900 is very specific | Generally less than 1 sq m Should be kindergarten 0 80 sq m elementary schools 1 sq m secondary schools 1 25 sq m | 4 50 often more Rule: 4 50 at sea level 4 00 at an altitude of from 500 to 800 m 3 50 at higher altitudes | Window frame divided Upper part one median pane on horizontal axis lower part opens vertically in the middle High windows in opposite wall Openings to the outside near the floor with radiators The law is more exacting | None except in kindergarten | For kindergarten a combined seat and desk with canvas hammock and pillow for sleeping which hangs over the back of the seat when not in use. For elementary schools G Bini's combined chair and desk on ground frame Six sizes The desks slope Backs to support the loins The seat tips back on a hinge when the pupil stands The foot-rests are moveable for cleaning the floor The desks are in pairs | Pedestals without wooden seats or merely two slightly raised foot-pieces at the side of the aperture The latter leads direct into the cesspool some cesspools are ventilated One latrine per 50 pupils The new law requires syphons traps flushing cisterns and ventilation shafts but only one latrine for 50 pupils male or female | Boys half an hour daily and bigger boys gymnastics twice a week Girls; half an hour twice a week Project for swimming bath | 22 hours per week—arrive from 8 30 to 9 A M lessons from 9 to 10 30 A M rest from 10.30 to 11 A M lessons from 11 to 12 A M lunch from 12 A M to 1 P M work from 1 to 2 P M Girls do sewing &c in the afternoon and leave off at 2 30 The pupils do not go home at mid-day | Notices against spitting A table of contagious and infectious diseases in each director's room Suspected cases kept away Periodical cleanings and ventilation by open windows | Certificate in all cases After the lapse of 10 years re-vaccination In the event of one case of small pox all in the class who have not been vaccinated within five years to be revaccinated In the event of two cases in the class all are to be revaccinated | 38 elementary schools, two kindergarten, one school for the blind two schools for deaf mutes one institution for backward children imbeciles and epileptics and one institution for illegitimate children and foundlings |
| *Belgium —Brussels (population 200 000—town only)* | | | | | | | | | | | | |
| The play grounds about 1000 square metres paved with bricks sloping to the centre or gravelled and tree-planted They contain paved and glazed receptacles for excreta which are flushed periodically from an automatic tank Tout à l'Égout" | Mostly modern and made on the same model—viz. central covered hall (préau) 45 m × 15 m | 1 4 sq m | 4 5 m | Guillotine windows opening at top and bottom External openings behind radiator Extraction openings 40 cm × 45 cm near the ceiling for a room 7 × 8 × 4 5 m Shafts of these open into the roof space | Temperature 16° C Central steam or stoves The former with radiators placed in front of the air intake. The stoves in a similar position and in the corner diagonally opposite extraction aperture | Combined seat and desk designed by Mr Ramaekers after study of essentials and of recognised patterns The seats and desk lids are immoveable the former are small so as to facilitate entrance and exit Seven sizes Each isolated pair on platform raised about 10 cm from the ground | Periodical self flushing pedestals for sitting position head and feet visible One for 50 boys or 25 girls separate buildings | Physical exercises by teachers half an hour daily Bar bells dumb bells Indian clubs gymnastics walks swimming singing and manual work | 30 hours per week, including those for all physical exercises gymnastics and baths From 8 30 to 11 30 A M with a quarter of an hour interval and from 1 45 to 4 P M with a quarter of an hour interval From the age of six years onwards | Instruction to masters and pupils by medical officer Nourishment at midday when required Cod liver oil or poudre zootrophique A pamphlet is given to each member of the *personnel* on infectious diseases Dental department Bath and douche once a week Summer colonies Pamphlet of advice to mothers Medical visit every 10 days | Obligatory for admission to school | Eight boys schools eight girls schools and three boys and girls schools About 800 children in each school 13 000 in all Not more than 40 per class One school for backward and unruly children One school for the blind subsidised by the town One school for the deaf and dumb also subsidised Thirteen kindergarten of 200 each for children from three to six years of age Five new elementary schools projected School attendance not obligatory |

of the desks to the pupils, and the whole is less scrupulously clean than it might be. These defects cannot be all due to lack of means, for poor Florence can do much better in antiquated palaces. Some of the disadvantages of overcrowding might be mitigated easily by simple measures for regular aeration during class. The impression received is that defects exist because they are not realised. To the credit side, however, may be placed the excellent supply of midday food, the summer colonies, and the large provision for taking charge of young children from the early age of two years (nowhere else attempted) till they enter the primary school.

Such are the impressions received during a visit to representative elementary schools of five European countries. In conclusion, a word of grateful recognition should be said of the uniform courtesy extended in every case, alike by authorities and school *personnel*, to an unexpected and unknown visitor.

# Clinical Notes:

## MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

### THREE CASES OF IMPERFORATE ANUS AND RECTUM.

By JAMES LAURIE, M.B., C.M. GLASG.,

*VISITING SURGEON TO THE GREENOCK INFIRMARY; ASSISTANT SURGEON TO THE THROAT, NOSE, AND EAR DEPARTMENT OF THE GREENOCK EYE INFIRMARY; AND SURGEON TO HIS MAJESTY'S PRISON, GREENOCK.*

THE relative infrequency of congenital defects of the rectum and anus prompts me to report the following cases which came under my observation and treatment in 1895. Keating, quoting Ball, says: "In a joint collection of 66,654 deliveries in Vienna and Dublin lying-in hospitals there were only three cases of imperforate rectum."

CASE 1.—I was called at 11 o'clock one night to see an infant (a female), aged 24 hours, and on my arrival at the house I found a midwife busy giving the child injections of soap-and-water, but "still she could get no passage." There was a well-formed anus, and on passing my finger three-quarters of an inch into it I found a very dense membrane occluding the passage. I opened it by a crucial incision, much to the relief of the child, and instructed the mother and the nurse how to keep it dilated by passing the finger, well-oiled, into the part. I saw the child some time afterwards and she was doing well.

CASE 2.—In the second case there was a very fine and delicate membrane closing the external aperture of the anus. The child had been born the evening before and no fæces had passed. The membrane was easily torn by a pair of dressing forceps and the mother was instructed to keep it dilated.

CASE 3.—I was sent for to see this child one forenoon and was informed by the nurse that the infant had been born 16 hours previously and had no anus. On examining the perineum there were a well-marked raphé and considerable bulging when the child strained or cried, but no indication of an anus. Under chloroform, which was administered by Dr. A. G. Newell, I made an incision from the centre of the raphé to the coccyx and felt the rectum bulging downwards. By a blunt dissection for an inch through cellular tissue I found the rectum ending in a blind pouch. Gently pulling it down I incised it by transfixion antero-posteriorly and sutured the ends of the skin. The sutures held. The child made a good recovery and had full control over his bowels.

The infants were all well nourished and were doing well when I heard of them last.

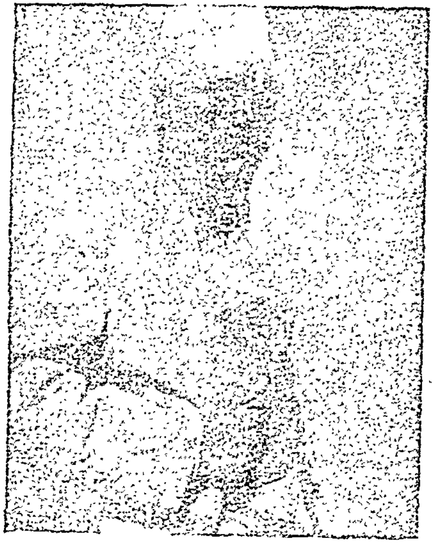
Greenock.

### NOTE ON A CASE OF FIBROMA IN THE MALE BREAST.

By A. WEBB JONES, F.R.C.S. ENG.

CONSIDERING how rarely one meets with new growths of the male breast I have thought the following case of pure fibroma perhaps worth recording.

The patient, an Egyptian soldier, aged 35 years, came to hospital complaining of a gradually increasing swelling of the left breast which he first noticed four months previously. Latterly he had also been troubled with slight pain. On examination the left breast was uniformly enlarged to about twice the size of the right. The outline stood out in marked contrast to the opposite side, but retained its general shape. On palpation the mass felt soft and elastic, but no indication of lobulation—as in a lipoma—could be obtained. It was freely moveable on the chest wall.



Showing patient before operation.

The breast was removed without difficulty by Thomas's incision. Microscopically the growth proved to be a pure fibroma.

Wadi Halfa.

# A Mirror

# OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

> Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

## PADDINGTON GREEN CHILDREN'S HOSPITAL.

### A CASE OF TUBERCULOUS PERITONITIS WITH OBSTRUCTION; LAPAROTOMY AND SHORT-CIRCUITING OF THE SMALL INTESTINE; RECOVERY.

(Under the care of Dr. G. A. SUTHERLAND and Mr. W. WATSON CHEYNE.)

A FEMALE child, aged three years, was admitted into the Paddington Green Children's Hospital in September, 1899. For three months the abdomen had been increasing in size and she had suffered from attacks of vomiting and constipation. There had never been diarrhœa or abdominal pain. In the family history there was nothing to be noted save that one brother had died from pulmonary phthisis. The child's previous health had been good. On admission she was found to be well nourished but markedly rachitic. The abdomen was much enlarged and tense, with dilated superficial veins. Fluctuation could be made out over the greater part, the fluid apparently being free in the peritoneal cavity. The liver was not enlarged and the spleen could not be felt. Deep palpation of the abdominal contents was impossible owing to the amount of distension present. Rectal examination showed the presence of ballooning. The heart and lungs presented no evidences of disease and the urine was small in amount, but otherwise normal. Mercurial inunction over the abdomen was ordered and a mixture of cod-liver

## REMARKS.

### FRANCE (Paris).

About one elementary school per 7000 inhabitants. The drill hall, small, and used for many purposes, is provided with water. The playgrounds are small and if on clay soil are paved with wooden blocks. The standard of construction of buildings is far inferior to that seen in Switzerland, Italy, and Germany, the general style of maintenance suffers equally by comparison. The rooms, constructed in the proportion of about 1 sq. m. per pupil, are often overcrowded. The height, which allows of a cubic capacity of 4 cubic m. per pupil, is sufficient, but owing to absence of adequate provision for ventilation the air in the rooms is sensibly vitiated. The stove heating maintains a temperature of 15° C., but the air, heated by circulation through an air chamber in the stove, is taken from the room itself, and the water troughs are sometimes found to be empty. Lighting is by gas, about nine over head (one and a half metres) burners with reflectors to each class room, besides one for blackboard. The seats and desks are of an inferior model and do not vary in size. The latrines are in separate buildings and are on the whole good but not sufficiently numerous. Considerable attention is given to physical training, object-lessons, and manual work. The three hours duration of classes is broken by an interval of a quarter of an hour both morning and afternoon. Hygienic precautions are not obvious, and the general physical condition of the children corresponds to defective ventilation. Judging from the full classes the maternal and "young children" schools are highly appreciated. Doubtless the conditions of a large city and pecuniary reasons account in a great measure for the relative inferiority of the Paris primary municipal schools, but such reasons cannot explain the defective aeration of the class rooms, a proper provision for which should rank *first* of all hygienic measures.

### ITALY (Milan).

One elementary school to about 7000 population. Some of the schools are attended by over 2000 pupils, boys and girls. Elementary school provision for about one-eleventh of the population. In modern schools the play grounds and drill halls are good, but the space is limited. The entrance halls, corridors, and lobbies are spacious. Lunch is taken in class rooms. In some buildings provision is made for keeping children up to 10 or 12 years of age till 6 P.M. (*Educatorii* or *Scuole famiglia*). The new buildings have basements about two metres high, well ventilated and serving to contain boilers of central heating apparatus, drains, and water pipes, also a lofty "solaio" or roof space. Here chimney stacks are fitted, in some cases with Albiati's fire-extinguishing and cleaning flue. The school rooms are adequately large and lofty and are well lighted, warmed (temperature 13° C.), and ventilated. The capacity is excessive both on account of the great height and generally because the rooms are not fully occupied. The steam heating is either at high pressure (one and a half atmospheres) or low pressure (one tenth atmosphere). The model of seats is not so good as elsewhere, but it is economical and it fulfils hygienic requirements. The latrines are generally good, clean, and in adequate numbers. Dr. di Cristoferis, the head of the Education Department, is very strong in his advocacy of simple exercises, such as walking, running, and singing, as compared with gymnastics proper. The lessons occupy from three and a half to four hours per day, with intervals between the classes. At the Scuola Poerio a tablespoonful of cod liver oil is given in addition to municipal rations to necessitous children. The special schools are exceptionally fine and well appointed buildings, with every modern sanitary installation including baths and douches. That for defective children is still unfinished, but is palatial in proportion and design. One wing only is occupied.

### ITALY (Florence).

One school to about 5000 population. The sites and buildings are generally ill adapted to their purposes, but every effort is being made to adapt present structures, often ancient and cramped in position, to modern requirements. The areas of playgrounds and drill halls are generally too small. The areas of schoolrooms vary considerably in different schools, in some there are passages between each pair of desks, in others not. Capacity is generally sufficient on account of the great height which provides against great heat in summer. Floors, pavement set in cement or varnished cement. The angles between the surfaces of the floors, walls, and ceilings are not rounded. Ventilation is not automatic but depends upon the teacher and therefore is uncertain. The latrines are not numerous enough and they are primitive but are kept clean. The chairs and desks are good with moveable seats; they are noisy when pupils sit down. Physical training is general in a limited degree. The hours of school work are from three and a half to four and there is little home-work. The teachers are well trained to watch the health of the pupils. Vaccination is universal and revaccination after 10 years. There is practically no small pox in Florence. Special institutions are all more modern and better found than ordinary elementary schools. Recent legislation is far in advance of practice in matters of school hygiene and sanitation.

### BELGIUM (Brussels).

11 boys' and 11 girls' elementary schools with a total attendance of 13 000—i.e., about a fifteenth of the population. Modern models accommodate 800. As school attendance is not obligatory children are removed at 11 or 12 years of age to work in factories. The playgrounds are large for the centre of a large city. The *préaux* and gymnasiums are spacious, clean, well ventilated and heated, and are admirably installed. The type of building, solid and permanent in structure, has stood the test of time as to suitability and is adopted as the established model. No unnecessary outlay or useless sacrifice of space betrays itself while no expense has been spared to attain hygienic and didactic excellence, and ample space is given to fulfil the most exacting hygienic requirements. The class rooms, lavatory, and gymnasium lead out of the *préau*. The entrance corridors two and a half metres wide are adorned with illustrations representing the results of alcoholism. The balconies around the *préau* are at the height of four and a half metres, into which the upper class rooms open. There are hat pegs in the *préau*. The latter is paved with ceramic tiles and the walls to two metres are lined with glazed tiles. There is a fine gymnasium with apparatus for Swedish and German exercises. The walls of the building are of brick, fully ventilated. The kindergarten are on the same model, but only one floor, three class rooms and one play room. The playroom is occupied constantly by each class in turn. The one sanitary defect which suggests itself is the insufficient provision for the extraction of vitiated air from the class room. The absence of corridors, except for the main entrance, is one of the characteristic features of the building. The boilers for central heating, baths, and douches are in the basement. The time allowed to each bath and douche is 10 minutes, and 150 baths are given per day in batches of 14 at a time, each pupil in a separate compartment. The roof space into which the extraction shafts open is clean and well ventilated. The schoolrooms afford ample area and capacity per pupil and are kept thoroughly clean. The seats and desks are of good pattern and are moveable for cleaning. The latrines are excellent, and the pedestals and lavatories are of English make. Physical exercises receive great attention. Hygienic measures of all kinds are firmly established, and I believe the dental department is a feature peculiar to Belgium. The kind of work is varied as far as possible from hour to hour. The special elementary institutions are good, and decidedly Brussels takes a foremost place among nations in its provision and administration of elementary educational institutions.

### GERMANY (Stuttgart).

One free school (elementary) to 6000 population. There is provision for one sixteenth of the population. The playgrounds are good, but not universal, they are surrounded by iron railings, gravelled, and tree planted. The drill halls are very fine; they are 10 in number and are used for higher as well as elementary schools. The buildings are fine but are not well provided with lobbies. The basements are provided with tile baths three metres by one metre for many pupils at a time or single tub baths, all are provided with shower baths. The central heating furnaces are in the basements. The outside air is filtered through canvas and is moistened in heating chambers and then conveyed to the class rooms in shafts which open into the roof space and which are cleaned by heavy brooms attached to ropes. The area and capacity of the school rooms are adequate but are somewhat less than at Zurich and Milan. There is artificial lighting only in the class rooms for drawing, carving, book binding, &c., and in the drill halls. The arc light with large reflector gives the best light, the arc light with reflection from the ceiling the second best, and the incandescent burners come third. Arc lights, however, require more attention and are not so dependable. The temperature in the class rooms is kept at 15° R. = 18.5° C. = 66° F., in the drill rooms at 10° R. = 12.4° C. = 54° F. The seats and desks are of varying patterns and are not all modern; they tilt on edge for sweeping the room and are not made in blocks of pairs but only in isolated pairs. The old and new of good patterns for sitting. The latrines are not of pedestal pattern; there are no water, no traps, and no syphons. Ventilation is by furnace and shafts. The school system here is established and does not betray the active progressive movement so noticeable in Switzerland and Italy.

### SWITZERLAND (Zürich).

One elementary school to about 4000 population. Some of the modern schools contain 1000 and 2000 pupils. Elementary school provision of all kinds for about one tenth of population. Special attention has been given to size and completeness of playgrounds and drill halls, which fulfil specified requirement in each case of three metres square per pupil. Drill halls warmed, ventilated, and fitted with gymnastic apparatus. The modern elementary school buildings fulfil requirements as to site, position, soil, surroundings, &c., and are palatial in design and proportion. They are generally from four-to-five storied buildings in addition to basement and roof space. The basement is used for boilers of central heating apparatus, sewage clearing tanks, sewage and water pipes, refectories for necessitous children, manual workshops, baths, douches, &c. The buildings contain special provision for kindergarten and class rooms for backward children and stammerers. The school rooms fulfil requirements as to area, height, cubic space, ventilation, heating, &c. Temperature always found about 14° C. Extraction flues work effectively both during and out of school hours and are of required area to change air about two and a half times per hour. The desks and seats of varying pattern all fulfil hygienic requirements, in some cases the pairs are in blocks five deep which are fixed on rollers and can be moved to either side for sweeping the room. They are made in four sizes. The lighting is by incandescent electric shade lamps, 1.5 metres above desk in the proportion of one lamp to nine pupils, and placed for light to fall on the pupils' left. It is suggested that arc lights (indirect lighting) would give more light and less shadow. The latrines are exceptionally good and no odour detectable. They are heated and the lobbies contain washing apparatus. Great attention is paid to physical training in class, drill room, playground, and on walks. The school hours are long but with intervals between all classes. Hygienic precautions include those against infectious disease as well as weighing, measuring, nutrition, bathing, holiday colonies, and general supervision. Vaccination is general but not obligatory, in which connexion it is interesting to note the occurrence of one case of small pox in spite of great hygienic precautions. In Zürich the maximum attention has been given to ordinary elementary schools as distinguished from special schools, which order is reversed in Italy.

The patient's condition did not, however, admit of the stomach being explored and he died within an hour.

*Necropsy.*—At the post-mortem examination an ulcer of the size of a threepenny-bit was found at the apex of the lesser curvature, near the cardiac end, and rather on the posterior surface. It was very high up and awkwardly placed, so that to introduce a tube would have proved a work of considerable difficulty. Except for the one ulcer the stomach was healthy.

CASE 2.—A man, aged 49 years, called Mr. Rendle up at idnight on account of severe abdominal pain. About n hour after a dinner of pork and stewed rhubarb he had egun to feel abdominal pain which had gradually increased ll now it was extreme, chiefly at the epigastrium. Morphia nd turpentine stupes relieved him and on the next day e seemed to be better, though still tender to the touch; is bowels, which had not acted on the morning of his ttack, were confined, not even flatus passing. On the following day this condition continued in spite of purgatives; he pain had practically vanished and Mr. Rendle concluded hat he had an internal obstruction to deal with. A surgical olleague saw the patient with him, agreed in the diagnosis, nd both advised removal to the hospital and an exploratory operation The patient and more particularly his iends all had a great horror of operation, and would only gree to his entering the hospital on condition that nothing hould be done until frequent enemata (which had been dministered at home, but not very effectively) had been ied; and most unfortunately these brought away a good deal of fæcal matter and he was able to pass flatus, his general condition being at first much improved. The improvement, however, was not maintained, and on the fifth day, as he was obviously losing ground, permission was obtained to operate. A ruptured appendix was found, ligatured, and removed, but the patient never rallied and died on the following day.

CASE 3.—A married woman, aged 41 years, was admitted into the South Devon and East Cornwall Hospital one evening on account of severe abdominal pain. She had suffered for years from indigestion off and on, but had been pretty well (for her) until two days previously. She then was seized shortly after breakfast with griping pains which lasted all day more or less; on the next day they still continued, but she was able to do her usual work and took her ordinary food. The bowels not having acted for two days she took half an ounce of castor oil at night, after which the pain just below the sternum became exceedingly acute, and continued so all night in spite of a copious relief of the bowels. She tried to get up on the following morning but had to return to bed. She was seen by a medical man, who put her on a diet of milk only, and sent her to the hospital in the evening. On admission she was obviously very ill; the temperature was 100 6° F. and kept rising, the pulse was 112, and the respirations were 24 and purely thoracic. The abdomen was distended and very tender, especially over the epigastrium; liver dulness was nearly absent. It seemed to all who saw her, looking at her symptoms and previous history, that a gastric ulcer was probably the cause of her trouble, and accordingly Mr. Rendle opened the abdomen in the middle line over that organ, but found it, as also the small bowel, save for flakes of recent lymph and free fluid in the peritoneal cavity, quite healthy. He then made a second opening through the right rectus and came down on a mass of omentum which was adherent somewhere near the appendix. This was transfixed and ligatured, when about an ounce of very fœtid pus was evacuated from deep down in the pelvis. The appendix could not be found for some time as it was bound tightly down by adhesions. The right ovary and tube, very swollen and œdematous, were removed, thus freeing the appendix and bringing it into full view. The patient's condition was now exceedingly grave and she seemed to be practically moribund. Dr. W. L. Pethybridge kindly transfused her with three pints of saline solution, and Dr. H W. Webber sutured the incision over the stomach while Mr. Rendle rapidly transfixed the appendix and meso-appendix with silk, tied it, and cut the appendix away close to the cæcum. He did not think it safe to spend even the little time necessary to fold in the edges of peritoneum, but put a Keith's glass tube deep down into the pelvis and closed the wound as rapidly as possible The patient made an uninterrupted recovery.

*Remarks by* MR. RENDLE.—The difficulties that attend the correct diagnosis of grave abdominal injuries are already sufficiently well known, but the above cases that have recently come under my care (during the illness of my senior) may be of interest as showing how even the most carefully formed opinion may prove to be in error. In each of these cases a wrong diagnosis was made as to the nature of the illness both by myself and by the colleagues who saw them with me, but I do not think that we were therefore to blame. Peritonitis was obviously present in each case and only the cause had to be determined. In Case 1 the onset seemed to be characteristic of a ruptured appendix, especially as there was an absolute denial of any previous indigestion or symptoms pointing to the stomach, which also seemed to be contra-indicated by the age and sex of the patient. In Case 3 the converse appeared to be probable, and, accordingly, I turned my attention to the stomach first of all. Case 2 is the one upon which I look back with much regret. The question of the appendix being at fault was considered very carefully, and we both of us came to the conclusion that it was not; but even here, had we been able to get leave to operate earlier, as we wanted to do, the result would probably have been very different. It was a case where an exploratory operation seemed to be absolutely necessary, but, as so often happens, the friends of the patient were dead against it and influenced him to refuse consent until it was too late. I thought this group of cases, which followed close on one another, worthy of being recorded.

# Medical Societies.

## ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

*Adjourned Discussion on Modern Methods of Vaccination and their Scientific Basis.*

A MEETING of this society was held on Jan. 14th, Dr. F. W. PAVY, the President, being in the chair.

Dr. S. MONCKTON COPEMAN, in the first place, repeated that portion of his demonstration which was given at the last meeting of the society and which was fully reported in THE LANCET of Dec. 14th, 1901 (p. 1670), dealing with the transference of variola through monkeys and calves, and the subsequent successful vaccination of the child with the lymph thereby obtained.

Professor SIMS WOODHEAD said that he had performed many experiments in order to test the effect of adding glycerine to calf lymph and he could fully confirm the observations of Dr. Copeman. He said that the addition of 50 per cent. glycerine to lymph had a greater effect in eliminating the non-spore-bearing organisms than the spore-bearing organisms, but that the staphylococcus pyogenes aureus was more resistant to the action of glycerine than other organisms, but that even on this organism it had a considerable effect, since it diminished all but a few—probably about 5 in 1000 being left. The spore-bearing organisms were almost entirely unaffected by glycerine and this seemed to give some indication of the nature of the organism of vaccine, which might be so small as to be invisible to the present power of the microscope. It had been pointed out by THE LANCET Special Commission on Glycerinated Calf Vaccine Lymphs[1] that when the spore-bearing organisms were in excess in the lymph, the collection of the vaccine lymph had not been carried out with all the care that could be desired, and he considered that if a lymph showed many spore-bearing organisms it was a proof that the vaccine had not been properly collected. He then dealt with the effects of glycerine on the activity of the lymph and said that he did not believe that for three or four weeks it diminished the potency, but that after that time the lymph lost some of its activity. He believed that glycerination had most effect on those organisms which grew at the body temperature. It had been stated that "worse" arms and more local inflammation were caused by glycerinated lymph. This he did not believe to be the case, but he asked that the Local Government Board should, if possible, prepare statistics from their returns in order to decide this point.

Dr. T D. ACLAND said that he hoped that the time would oil and iodide of iron for internal use. During the first fortnight after admission the following conditions were noted. The temperature for the first week usually reached 99°F. in the evening, but afterwards became subnormal, with a daily range of less than one degree. No pain was complained of, the bowels acted regularly, and the fluid present in the abdominal cavity seemed to vary considerably from time to time. At intervals of a few days attacks of vomiting occurred, one or more in the day, not preceded by nausea, and unaccompanied by any loss of appetite. The abdomen continued much distended, and at times on manipulation coils of intestine stood out prominently. These coils would remain rigid and hard for a few seconds, then gurgling was heard, followed by visible peristalsis and gradual subsidence of the prominent coils. From the appearance of these coils, the so-called "ladder-like" formation, it was concluded that they formed part of the small intestine and that there must be obstruction at or above the ileo-cæcal valve. The conditions above described increased in intensity during the following five weeks. The vomiting became more frequent, the bowels failed to act save after enemata, the evidence of obstruction became more marked, and the child was rapidly losing ground.

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[1] THE LANCET, April 28th, 1900, p. 1227.

On Nov. 5th, seven weeks after admission, the abdomen was opened by a median incision about four inches long, extending an inch above the umbilicus. A small quantity of straw-coloured fluid escaped. An extensive condition of tuberculous peritonitis was found, the small intestines being congested, distended, and everywhere studded with numerous tubercles, ranging in size from pins' heads to peas, the larger being white and evidently caseous. There was not a great deal of matting of the intestines, but some bands were found and divided. The omentum did not come into view, but the mesenteric glands were enlarged and caseous. On examining the state of the intestines towards the lower end of the ileum a hard nodular portion was found which was evidently the seat of the obstruction. The bowel at this point was much thickened all round, evidently in connexion with an extensive tuberculous ulceration of the interior, and the lumen was practically obliterated. An anastomosis was made between the portions of the intestine above and below this mass, but it was impossible to find any healthy intestine and tubercles were present in the opposed portions of the intestine. The anastomosis was performed in the ordinary manner by a double row of sutures and the abdomen was closed in the usual manner.

The patient was in a collapsed condition for some time after the operation, which lasted about an hour, but rallied well next day. The wound healed well with the exception of a small part at the lower end where a stitch had given way, but this also was well in a fortnight. There was not much alteration in the abdominal condition for some time after the operation. One month later it was noted that the abdomen continued distended and tense and that occasionally visible peristaltic movements were produced on manipulation. The acute obstructive symptoms subsided after the operation and the child took her food well. Two months after the operation the abdominal condition had greatly improved. The abdomen was now soft although still rather distended, an ill-defined thickening could be made out on the right side, as seen at the operation, but no visible peristalsis could be elicited. There was still apparently some free fluid present. The child had gained four pounds in weight. Four months after the operation she was in good health, running about all day and eating well. On examination of the abdomen nothing abnormal could be detected in the form of thickening, distension, or fluid. At the end of 18 months she was in excellent health and had passed successfully through attacks of pneumonia, measles, and diphtheria.

*Remarks.*—The symptoms in this case were clearly due to tuberculous peritonitis with obstruction of the bowel. Operative treatment was adopted, first as in itself a valuable therapeutic agent, and secondly for the relief, if possible, of the intestinal obstruction which was threatening the patient's life. The recovery of the patient was remarkable and unexpected. The child was in such a serious condition that it was very doubtful if she could rally from the shock of the operation, while the portions of intestine applied to each other were so diseased that failure of union and subsequent fæcal extravasation seemed very probable. At the time the question arose as to resection of the tuberculous mass and end-to-end suture, but this was considered inadvisable from the weak condition of the child and the diseased state of the intestine. The result of the operation is a striking example of the mysterious influence of laparotomy on the course of this affection, even although none of the disease is removed. No doubt in early cases of tuberculous peritonitis it is well if possible to remove the primary focus, but the great majority of cases in which surgical interference would be considered are so advanced and extensive that any attempt of this kind would be very likely to end fatally. Cases like the above show that such radical measures are not always necessary.

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## SOUTH DEVON AND EAST CORNWALL HOSPITAL.

### THREE CASES OF GRAVE ABDOMINAL INJURY SHOWING THE DIFFICULTY OF FORMING A CORRECT DIAGNOSIS.

(Under the care of Mr. C. E. RUSSEL RENDLE, assistant surgeon to the hospital.)

IN the following three cases the difficulty which is often experienced of diagnosing acute abdominal disease is well exemplified. In the first case a ruptured gastric ulcer was mistaken for an appendicitis. The sex and age of the patient were certainly in favour of the diagnosis of rupture of an appendix, but the very sudden onset might incline the diagnosis towards a rupture of a gastric or duodenal ulcer. A history of dyspepsia is encountered in more than nine-tenths of the cases, and the absence of such a history was certainly against the gastric lesion. This was typically a case for early exploratory laparotomy. In the second case an appendicitis was thought to be an acute intestinal obstruction, but it does not appear from the notes that at any time vomiting was marked or even that it occurred at all. On the whole, the evidence was in favour of peritonitis from extravasation. In the third case the diagnosis of a ruptured gastric ulcer, though at the operation found to be erroneous, was fully justified when the long history of dyspepsia is considered, though the onset was not very rapid. In all such cases the danger of an early exploratory laparotomy is slight—very much less, indeed, than the risk the patient will run if the case be left. As to the part of the abdomen to be first opened, this must depend on the provisional diagnosis, and even should it be wrong, the increase of the risk to the patient is but slight.

CASE 1.—A man, aged 56 years, was admitted into the South Devon and East Cornwall Hospital about noon. On the previous afternoon about four o'clock while carrying a heavy beam in H.M. Dockyard, Devonport, he felt a sudden agonising pain in the abdomen. He was taken to the surgery and was sent home in a cab. A medical man relieved the pain by morphia, but the patient refused to go at once to the hospital. When admitted he was under the influence of morphia, and as no one went with him it was impossible to be certain of his statements, but he persisted that he had been perfectly well up to the time of his accident. He had a normal temperature and a good pulse of 84. He did not complain much of pain and suffered fairly deep palpation, the abdomen being only a little distended; liver dulness was present and some respiratory motion also. As the theatre was in use at the time and as his condition appeared to be so good, Mr. C. E. Russel Rendle decided, in consultation with one of his senior colleagues, to defer operation till four o'clock, making a provisional diagnosis of ruptured appendix. When Mr. Rendle returned to the hospital at 3 45 P.M. he saw the patient's wife, who confirmed his statement as to his general good health, saying that he had not been ill for years, save that on the evening prior to his attack he had a stomach-ache and went to bed early, having a hot poultice. On the next morning, however, he appeared to be quite well, went to work, and ate his dinner as usual. On being questioned as to dyspeptic symptoms she said that he did not know the meaning of indigestion. When Mr. Rendle saw the patient, however, his condition had very seriously changed for the worse and it was with grave misgivings that he prepared to operate. The abdomen was opened through the right rectus and the peritoneal cavity was found to be full of semi-purulent turbid fluid. The appendix was found to be healthy, no ruptured bowel could be seen, and it was concluded that a ruptured gastric ulcer must be the cause of the symptoms.

any doubtful case, and especially those cases in which the patients were still comparatively young He did not think that all cases of chronic enlargement of the head of the pancreas did well, and he referred to one case of a man who at the time of operation was thought to be the subject of malignant disease, but at the necropsy the head of the pancreas was found to be the seat of chronic inflammation. He did not think that it was possible in many cases to push a gall-stone back along the common duct into the gall-bladder.

Mr. A. E. Barker said that from time to time cases were met with which were believed to be cancer and in which the patients made good recoveries. He referred to the case of a woman in whom he had explored the abdomen and had found what he considered to be cancer and accordingly had given a grave prognosis. The patient made a good recovery and was well a year after the operation. He thought that celerity in operating and protection to the patient from cold did most to eliminate shock.

Mr. W. G. Spencer suggested that the duration of the disease was an important factor in the diagnosis, for in those cases which ran a rapid course the disease was commonly situated in the head of the pancreas, whereas in those of more chronic course the growth might be secondary to the irritation caused by gall-stones. He suggested that some cases might be due to the occurrence of gumma of the liver and deprecated operation in such cases.

Mr. J. Hutchinson, jun., did not consider that rapidity of operation was so important as Mr. Mayo Robson considered, for in operations on the lower abdomen the most successful results were obtained by the slower operators. In comparing cases of intestinal obstruction in which a Murphy's button had been used with those which had been sutured, the mortality was less in those sutured (although a longer operation) than it was in those in which a Murphy's button was used. He asked if in the treatment of cases of ascites stitching the omentum to the abdominal wall had been shown to be of any service. With regard to those cases in which cancer was seen at the time of the operation and yet the patient recovered he said that he did not believe that it was the effect of the operation, and he mentioned the case of a man with ascites, jaundice, and lumps in the liver who recovered without any operation.

Dr. A. F. Voelcker asked what dose of calcium chloride had been used in these cases.

Mr. Mayo Robson, in reply, said that he gave 30 grains of calcium chloride three times a day for from two to three days before operating and one-drachm doses with saline solution per rectum subsequently to the operation. He mentioned a case in which chloride of calcium had proved of good service in arresting hæmorrhage. He was convinced that it was inadvisable to operate in cases of cancer of the head of the pancreas.

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# CLINICAL SOCIETY OF LONDON.

*The Radical Treatment of Chronic Tuberculosis of the Intestine.—A Case of Hair Ball removed from the Stomach of a Child, aged Nine Years.*

A meeting of this society was held on Jan. 10th, Mr. Howard Marsh, the President, being in the chair.

Mr. A. W. Mayo Robson (Leeds) read a paper on the Radical Treatment of Chronic Intestinal Tuberculosis, in which he observed that whatever might be their views regarding the treatment of acute intestinal ulceration surgical treatment was generally advisable in chronic intestinal tuberculosis. He related seven cases (one male and six females) in which he had operated with only one death, and remarked that while in the first and seventh of his cases the adhesions to adjoining parts were very intimate in the other cases the affected part of the bowel was quite free, thus rendering operative measures easy and simple. In the first, second, third, and fifth of his cases he had employed a decalcified bone bobbin as a temporary splint over which to apply sutures, a method which he had described on numerous occasions and which he still employed and advocated as being simple and efficient. The physiological rest to the diseased parts secured by short-circuiting, as in his third case, and by colotomy, as in his sixth case, seemed to answer so well that where the radical operation of excision involved serious difficulties or the patient was not in a condition to bear it he would not hesitate in future to be content with similar procedures and then to trust to general treatment and hygienic surroundings to assist in the cure. If in the future operative treatment should be thought advisable in acute cases he anticipated that short-circuiting the diseased area would be found to be the more useful procedure, as it was the easier and safer method to pursue, but experience alone would show whether the suggestions would prove of as much service in acute as they were in chronic cases. It was interesting to note that in his first and seventh cases, in which a condition of tuberculous peritonitis coexisted with tuberculous ulceration of the intestine, the mere exploratory operation had not cured or even arrested the tuberculous process, but that the radical operation of removing the principal focus of disease or, as in his third case, the short-circuiting and so setting at rest the diseased bowel, was in all three cases effectual in putting a stop to the tuberculous peritonitis and, so far as could be seen without the parts being exposed, in curing the more diffuse disease. All surgeons must have had the experience of curing tuberculous peritonitis by simple abdominal section, with or without drainage, and probably many of them had also experienced disappointment in other cases where the effusion had returned after a longer or shorter interval. He suggested that the explanation of these recurrent cases lay in the fact that the original focus of disease in the ovaries, Fallopian tubes, or bowel, had not been removed and had again been the starting-point for a further effusion of the tubercle throughout the peritoneal cavity. If that were the correct explanation the remedy was quite clear—viz, that wherever the original disease might be it should be removed, if that were possible without adding seriously to the risk of operation.—Dr. W. Ewart asked what were the early symptoms which led to the diagnosis of tuberculous ulceration of the intestine and what were the indications for operation He also asked if tuberculin had been used as a means of diagnosis.—Mr. Charters J. Symonds pointed out that the symptom which in the cases recorded had led to operation was obstruction and that operation had been performed rather for the relief of obstruction than for the treatment of ulceration of the intestine. He quoted the case of a female, aged 25 years, who had recurring attacks of mild appendicitis. The appendix had been removed and a fæcal fistula had formed when she first came under observation. The cæcum was excised and an end-to-end union of the intestine was made. At the time of the operation tuberculous ulceration of the intestine was seen to be present He mentioned two other cases of possibly tuberculous stricture of the small intestine in men. One of these patients had been subject to symptoms of obstruction for 20 years. In this case two feet of enormously distended intestine were excised. In the other case a man, aged 40 years, was too ill to stand the excision of the intestine but the gut was short-circuited. He thought that Mr. Mayo Robson's suggestion of removing the localised focus of tubercles was a good one.—Mr. W. Watson Cheyne said that there were two important points for discussion: the first was the treatment of tuberculous ulceration by excision or short-circuiting, and the second was whether the focus of the tuberculous disease should be searched for and removed. He quoted the case of an infant with extensive tuberculous disease of the peritoneum with symptoms of obstruction. In this case he short-circuited the intestine and at the time of the operation tubercles were seen all over the peritoneum. The child made an excellent recovery. He was convinced that the treatment of tuberculous ulceration of the intestine by *short-circuiting* was sound practice, but he considered it debateable whether the searching for and removal of the original *focus* were *advisable*, though, of course, where the disease was strictly limited—as, for instance, to the Fallopian *tubes—these should be* removed. In diffuse tuberculous peritonitis it was inadvisable to search for the focus as the patient could seldom stand the prolonged operation.—Dr. G. Newton Pitt thought that the operation in the cases recorded was performed rather for obstruction than for ulceration of the intestine. He considered it inadvisable to interfere with cases in which there was "matting" of the intestines. Although tuberculous affections of the appendix were not uncommon at post-mortem examinations he thought that tuberculous appendicitis was decidedly rare.—Mr. A. E. Barker said that he had removed a tuberculous mass from the abdomen of a little girl in the region of the not be far distant when the Government would take steps to supply a standard lymph throughout the country. He divided the subject into three main headings: (1) the origin of vaccine lymph; (2) the preparation of vaccine lymph, especially in relation to its purification, standardisation, and storage; and (3) the use of the prepared lymph, especially in relation to methods of vaccination, dosage, efficiency of vaccination, and the question as to the extent and duration of after-effects or complications of vaccination. He pointed out that although vaccination was in vogue more than 100 years ago it had been outstripped in the scientific details of technique by many of its successors in the department of protective inoculation. He said that glycerine had long been used to dilute lymph, but that until the research of Dr. Copeman it had not been used as a scientific means of freeing the lymph from extraneous organisms. He then referred to the standardisation of lymph by inoculating rabbits and said that in this way the potency of any particular lymph might readily be tested before being sent out without having resort to the necessity of vaccinating infants. He said that this method had been carried out at Lille with great success for over two years. He considered that vaccination as practised was open to two main objections, firstly, the necessity for creating a local sore which proved a possible starting point for various inflammatory complications; and secondly, that in the homes of the poor the vaccinated child imposed an extra burden on the already overworked mother. He next dealt with the extent and number of vesicles produced and thought that there ought to be a fixed irreducible minimum below which no certificate of successful vaccination should be given. Lastly, he referred to the treatment of variola by the antitoxin of vaccinia and stated that cases had been thus treated with serum taken from a calf which had been vaccinated four weeks previously. The observations were, however, inconclusive. He gave notice of the following motion:—

> That in the opinion of this meeting of Fellows of the Royal Medical and Chirurgical Society it is desirable that the Government should without delay make such additions to the national vaccine establishment as shall enable it to supply glycerinated calf-lymph to all medical practitioners who may desire to use it; and that, in view of the national importance of the subject, steps should be taken to test and regulate the sale of all imported lymph and to inspect the manufacture of all that is made in this country.

Professor HACCIUS (Geneva) said that in 1892 he experienced considerable difficulty in obtaining good lymph in calves and cow-pox could not be found. He therefore attempted to transmit variola to the calf; in this he was successful, and after passing the virus through seven calves he then inoculated a child with the result that typical vaccine vesicles were formed. These results he published, but Professor Chauveau of Paris held that the disease in the calves was vaccinia and not modified variola, and further Professor Chauveau inoculated a cow with variola and from the vesicle produced inoculated a child who developed typical variola. He (Professor Haccius), however, explained the last result as being in reality due to the direct transference of the variola virus, the cow being merely a stage in its transference. He said that Dr. Stumph of Munich had carried out experiments similar to those of his and had confirmed his results. It was well known that all cases of variola could not be thus transmitted to the calf, but he believed that the identity of vaccinia and variola would be proved.

*The discussion was adjourned.*

A demonstration with the "Epidiascope" was given after the meeting.

## MEDICAL SOCIETY OF LONDON.

### *Observations on the Surgical Treatment of Obstructive Jaundice, resulting from an Experience of over 200 Operations.*

A MEETING of this society was held on Jan. 13th, Dr. W. H. ALLCHIN, the President, being in the chair.

Mr. A. W. MAYO ROBSON (Leeds) read a paper upon the above subject. He said that his recent operative experience in cases of chronic obstructive jaundice, especially in those associated with gall-stones and with chronic pancreatitis, had led him to take a more hopeful attitude in considering the treatment of deeply jaundiced patients from a surgical standpoint. The first and often the most difficult question was that of diagnosis, and the following causes of jaundice must be taken into consideration: (1) common duct cholelithiasis; (2) chronic pancreatitis; (3) simple stricture of the common bile-duct; (4) inflammatory adhesions causing pressure on, or stenosis of, the hepatic duct or of the common bile duct; (5) hydatid disease of the liver pressing on or discharging into the bile ducts; (6) gummata implicating the ducts; (7) chronic catarrh of the bile ducts; (8) cancer of the common bile-duct; (9) cancer of the head of the pancreas; (10) cancer of the liver associated with jaundice either due to catarrh or pressure; (11) cirrhosis of the liver; and (12) other rare causes, such as aneurysm of the hepatic artery or of the aorta and other tumours of the liver, the gall-bladder, the pylorus, the kidney, or the intestine pressing on or occluding the common bile duct. Surgery held out good prospect of cure in the first five causes enumerated. Medical treatment alone was advisable for the sixth and seventh causes and in the remainder with certain exceptions relief could only be hoped for. Mr. Mayo Robson then dealt with one or two points which he had found of use in guiding him to a conclusion as to whether the case was suitable for an exploratory operation or not. He said that a painless onset of chronic jaundice must always give rise to the suspicion either of chronic catarrh dependent on cancer of the liver, or of occlusion of the hepatic or common bile duct by growth, and if this were associated with distension of the gall-bladder and rapid loss of weight and strength, cancer of the head of the pancreas would probably be found. On the other hand, the history of an attack of pain followed within from 24 to 36 hours by jaundice was strongly suggestive of cholelithiasis. Enlargement of the liver was much more common in obstruction due to cancer than it was in that from gall-stones. The presence of ascites was suggestive of malignant disease. The jaundice of gall-stones was rarely continuous but it increased and diminished from time to time, whereas the jaundice of obstruction due to growth steadily increased. Fat in the motions and glycosuria with very rapid wasting were suggestive symptoms of pancreatic trouble. A rigid right rectus abdominis and tenderness, one inch above and to the right of the umbilicus were suggestive of gall-stone trouble, as was McBurney's tender spot of appendicitis. The question as to treatment depended on the diagnosis. 1. If the diagnosis was doubtful an exploratory operation was advisable, providing that the general condition of the patient rendered it probable that such a procedure *per se* would not hasten death. 2. If malignant disease was positively diagnosed operation could, with some few exceptions where it had been possible to completely remove it, do but little good. 3. If gall-stones, or in fact any of the first five enumerated causes, were diagnosed, operation was decidedly advisable. Mr. Mayo Robson then proceeded to consider these three conditions, and he quoted five cases regarded as hopeless which had been operated on with good success; these cases, he said, supported his first proposition. With regard to the second proposition he considered that there were two classes of cases in which operation could do no good—(*a*) primary cancer of the liver and (*b*) cancer of the head of the pancreas—but in young patients the question of operation should always be considered, as malignant disease of the pancreas was not common until middle age. Three cases were quoted which showed that in forms of cancer other than those mentioned relief or apparent cure had resulted from operation. With regard to the third proposition operation was urgently demanded. 212 patients suffering from obstructive jaundice dependent upon one or other of the causes above mentioned had been operated on. Of these 183 recovered, showing a mortality of 13·6 per cent. A careful study of the causes of mortality showed that the two greatest dangers were hæmorrhage and shock and the two next serious causes were exhaustion and sepsis. The employment of chloride of calcium in large doses had been an efficient means in controlling the hæmorrhage, and the administration of strychnine and large saline enemata, with or without brandy, half an hour before operation had diminished shock. But of even greater importance was the cultivation of the habit of operating expeditiously, and even the most complicated cases should not occupy more than an hour.

Mr. J. H. MORGAN said that the success of the operation evidently depended on the accuracy of the diagnosis which had preceded operation and that that accuracy had been derived from experience. He considered that rapidity of operation was most important and that shock could be largely avoided thereby.

Mr. F. S. EVE said that he thought it advisable to explore ference; (2) a Calculus removed from the pelvis of a kidney; (3) a large Gall-stone; (4) a Tubal Gestation; and (5) Some Fibroid Tumours.

Dr. D. BERRY HART showed a Microscopical Section of Actinomycosis of the Ovary.

Dr. A. C. SANDSTEIN sent a paper on the Movements of the Pelvic Bones during the Operation of Symphysiotomy and the true function of the Section of the Pubic Symphysis. The paper was communicated by the Secretary. The conclusions arrived at were based on a study of symphysiotomy on 28 recent female cadavera taken at random in the post-mortem theatre. All the pelves except two had true conjugates of over four inches. The movements that occurred during and increased with the separation of the pubes after symphysiotomy were as follows. The first was the movement of the pubes outwards by rotation of the innominate bones on vertical axes passing through their respective sacro-iliac joints. The outward rotation could only increase the sacro-pubic diameter to a very limited amount. For although each pubis was carried further from the sacral promontory than it was before, yet it was not so with the line joining the two pubes, which, indeed, in some shapes of pelves might even be carried nearer the sacral promontory. The second movement consisted in rotation of the innominate bones on a horizontal transverse axis passing through the sacrum, and carried the pubes downwards. This was estimated by measuring the exact vertical height of the centre of the sacral promontory above the upper end of the symphysis pubis before symphysiotomy, and after it above the line joining the upper ends of the separated pubes. Careful measurements were made with degrees of separation varying from one to eight centimetres; it was found that there was positive proof of the existence of that movement of the innominate bones, and one might at least calculate on a depression of the pubes of 1·4 millimetres for each centimetre of pubic separation. The third movement consisted in rotation of the innominate bone on its own long axis (an axis lying as it were in a direction from the posterior superior spine to the ilio-pectineal eminence), so as to cause the ilium to become more erect (or vertical). In every case with each increment of pubic separation there was increase of the distance between the anterior iliac interspinous diameter and the horizontal level of the symphysis pubis. Roughly speaking, six centimetres of pubic separation gave an increase of one centimetre. An examination of all the results showed that the diameters lying more or less transversely were increased greatly by each centimetre of pubic separation and a very small amount of pubic separation would enlarge these sufficiently to let the fœtal head pass. But unfortunately it was more usually the true conjugate that presented the difficulty, and six centimetres of pubic separation enlarged that only about one centimetre or two-fifths of an inch on an average. Here separation of the pubes increased greatly the transverse diameters and sometimes increased the true conjugate, but it might even diminish the true conjugate. The downward movement of the pubes increased the true conjugate and the rotation of the innominate bones increased the downward movement of the pubes. Walcher's position should therefore be used, though greater effects were obtained with symphysiotomy. With regard to the safety of symphysiotomy Dr. Sandstein especially watched the result of the separation of the pubes on the sacro-iliac joint; in 44 per cent. rupture of the ligaments began below six centimetres of separation, while in 56 per cent. it began at or above that point. In three pregnant women it began only at eight centimetres in two, and not even at that in one. The vulva was greatly affected by the separation of the pubes, the parts between the bones becoming stretched like a drum; up to five or six centimetres the strain was well borne, in only one did a tear occur at six centimetres. After seven centimetres it was evident that there would be a great risk of necrosis and sloughing of the stretched tissues. The bladder and urethra would only be involved secondarily by a tear or through sloughing. Dr. Sandstein collected the results of 300 recorded cases between 1892 and 1898 and found that the danger lay in and around the symphysis pubis. The sacro-iliac joints did not suffer from suppuration or "non-union," though some pain in them was recorded. Lacerations about the vestibule and vulva occurred in 30 cases, hæmorrhage in 38 cases, fistula occurred seven times, local sepsis in 24 cases, and phlebitis in eight cases. 35 deaths occurred and were due to septicæmia or pyæmia in 24 cases and to hæmorrhage in three cases. As a result of his investigations Dr. Sandstein stated that pubic separation should be limited to six centimetres, and as each centimetre increased the true conjugate by 1·67 millimetres, the utmost amount of increase of the true conjugate which could be aimed at was one centimetre, or two-fifths of an inch. Therefore, the cases must be strictly limited to those in which, by an addition of two-fifths of an inch to the true conjugate, they could with safety to the mother deliver a living child by nature alone or aided by forceps or version. The range of forceps was in a true conjugate of from four to three and a quarter inches; symphysiotomy with a maximum of six centimetres separation increased the true conjugate two-fifths of an inch, which when subtracted from three and a quarter inches gave two and seven-eighths inches, or 7·3 centimetres, as the minimum conjugate on which this operation should be performed. Walcher's position should always be used. Sometimes the sides of the pelves moved unequally, with consequent risk of tearing. This could be met by flexing the thigh on the abdomen on the non-moving side, using the bent-up knee of that leg as a lever and abducting it forcibly outwards and downwards; this in his experiments could always make the side share in the movements. The knife should be a broad-bladed one. The symphysis must be completely divided, but division of the sub-pubic ligament should not be aimed at as it prevented extension by tearing of the wound down into the vulva. Rigid asepsis was necessary, and since many fatalities occurred from sepsis in patients with a previous foul vaginal discharge the existence of such a discharge should be considered as a contra-indication to the operation.—Professor A. R. SIMPSON, Dr. HART, Dr. J. W. BALLANTYNE, and the PRESIDENT discussed the paper.

Dr. HART read a paper on a case of Full-term Intact Extra-peritoneal Gestation successfully removed after Five Years' Retention. There was a very clear history of extra-uterine gestation five years before. The physical signs were those of an extra-peritoneal cyst reaching up to the navel. Its presence had given rise to symptoms only produced by the size of the cyst. On operation the cyst contained a thick, grumous fluid, and the bones were either loose or easily detached. There was some flesh and skin on one of the legs and on the scalp. The bones were in a good state of preservation. No trace of the placenta or cord could be found. The sac opening was stitched to the abdominal wound and the sac itself was stuffed with iodoform gauze. The posterior peritoneum had been lifted up as Taylor had described.—Dr. F. W. N. HAULTAIN, Dr. BALLANTYNE, and Professor SIMPSON commented on the case.

Dr. HAULTAIN read a paper on Expulsion of a Dermoid Ovarian Cyst per Vaginam during Labour. The patient was in labour with her third child, and before being seen by Dr. Haultain the pains had continued for 24 hours. A large soft swelling had been detected behind the posterior vaginal wall and an attempt to deliver the child by forceps had been made but ineffectually, the traction resulting in the protrusion of a soft bulging mass from the vulva. On examination afterwards the mass seemed to be free in the canal, and an endeavour to pull it down for inspection resulted in its detachment and removal. No special hæmorrhage occurred and a living child was speedily extracted with the aid of forceps. After expulsion of the placenta a rent was found in the posterior vaginal wall and was treated by packing with iodoform gauze for four days. The patient made a good recovery. Four similar cases were recorded by Luschka, Lomer, Berry, and Trent; in all these cases forceps had been used and all the children were born dead; one mother died. Six cases were recorded of the expulsion of ovarian tumours per anum, and in four of these the result was fatal to the mother. This complication of labour was rare and might be said to occur only once in 4000 cases. If labour were left to the spontaneous efforts of nature a maternal mortality of 50 per cent. was shown; this result indicated the necessity of prompt and energetic treatment. Four methods of management were recognised: reposition of the tumour into the abdomen; assisted delivery of the child, either without diminishing the size of the tumour or after doing so; Cæsarean section and ovariotomy; and vaginal ovariotomy.—Dr. R. G. MCKERRON (Aberdeen), Professor SIMPSON, and Dr. BALLANTYNE discussed the paper and Dr. HAULTAIN replied.

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SOCIETY OF MEDICAL OFFICERS OF HEALTH.—A meeting of this society was held on Jan. 10th, Mr. A. Wynter Blyth, the President, being in the chair.—Dr. D. S.

appendix and the child had made a good recovery. He considered that it was inadvisable to interfere with those cases in which there was "matting" of the intestines and in such of these cases on which he had operated he had always regretted it, as the wound had opened up and fæcal fistulæ had formed, the final condition of the patient thereby being rendered very distressing. The cases most suitable for operation were those with a considerable amount of fluid. He did not think that tuberculous disease of the appendix was of common occurrence. He then entered on the question of how much of the intestine might be safely removed and mentioned a case in which the cæcum, the ascending, the transverse, and the descending colon had all been successively removed for tuberculous ulceration and the patient after the final operation remained in excellent health.—Mr. C. R. B. KEETLEY thought that it was important in all cases of tuberculous peritonitis to find the point from which the disease had arisen. He classified the cases under three headings—the first, cases in which a tumour could be felt (this, he said, was always glandular); the second, cases in which there was a tuberculous appendicitis; and the third, cases in which there was diffuse tuberculous peritonitis. He quoted a case in which he had removed some suppurating glands in the mesentery and the patient had made a good recovery and he considered that the presence of enlarged glands in the mesentery was a valuable indication of the seat of the disease and should always be looked for at the time of the operation. He considered that patients with abdominal tuberculosis usually stood the severe abdominal operation very well.—Dr. NORMAN DALTON mentioned the case of a girl, aged 12 years, who was taken acutely ill with symptoms of appendicitis. The abdomen was opened and the peritoneum was seen to be thickly studded with tubercles. The girl made a good recovery.—Dr. PERCY KIDD referred to the difficulties of diagnosing ulceration in early cases of the disease. He thought that in most cases there was also disease of the lungs. Multiple ulcers of the intestine were generally found and these were more common in the cæcum than in the ileum, and it was curious that tuberculous appendicitis was not more common considering how frequently this region was the seat of tuberculous ulceration.—Mr. MAYO ROBSON, in reply, said that out of some 300 cases of appendicitis in which he had operated five had been tuberculous. He considered that loss of flesh, diarrhœa, abdominal pains, and night sweats were the symptoms upon which he had relied for the diagnosis of ulceration of the intestine. He believed that the removal of the focus of the disease was most important.

Dr. E. PERCY PATON read a paper on a case of Hair Ball in the Stomach of a Child, aged Nine Years, which was successfully removed. The patient was an intelligent girl in whom a lump was accidentally found in the epigastric region. As she was known to have eaten hair and other similar substances since she was three years old and had only been broken of the habit recently a hair ball was diagnosed. There were no gastric symptoms. On opening the stomach a mass, consisting chiefly of the child's own hair, seven inches long, weighing seven and a quarter ounces, and having the general shape of the stomach, was extracted. The child recovered without a bad symptom,

## OBSTETRICAL SOCIETY OF LONDON.

*Chorio-epithelioma with Pulmonary Metastases.—Pneumococcic Meningitis.—Exhibition of Specimens.*

A MEETING of this society was held on Jan. 1st, Dr. PETER HORROCKS, the President, being in the chair.

Dr. CUTHBERT LOCKYER read a paper on a case of Chorio-epithelioma with Pulmonary Metastases, in which the evidence of an abortion lay in the fact that the patient lost blood freely four months before admission, the loss continuing until she was sent to hospital. The patient was 42 years of age. She had given birth to seven children. The last confinement took place three and a half years before admission into the Samaritan Hospital. Three abortions were recorded, the last being 13 years before the patient was sent to the above hospital. She was admitted with evident uterine enlargement and in a condition which prohibited operative interference. The uterus was perforated by a new growth in its walls and secondary deposits were found in the lungs. The pathological characters of the primary and secondary growths were described, pathological proof of the occurrence of chorio-epithelioma following immediately on the removal of hydatidiform mole was given, and the paper was followed by a lantern demonstration on the close association between vesicular mole and chorio-epithelioma.—The PRESIDENT remarked that it was quite impossible to prove definitely whether these malignant growths were of maternal or of fœtal origin. Even if it could be shown that they were developed from the outer epithelial layer of the villi of the chorion, that would not settle the question, because it was still disputed whether that layer was maternal or fœtal. It was for this reason that he had named his own specimen, shown at the society some months ago, "deciduoma malignum," the name given by Sänger who first described the condition. He could not help leaning to the view that it was fœtal in origin, and he did not see how those who believed in its maternal origin could get over the fact that it so often followed upon hydatidiform mole. The point raised by Dr. Lockyer that there were two sorts, one without syncytial elements, probably maternal in origin, to which the term "deciduoma malignum" would be appropriate, and one with syncytial elements of fœtal origin, to which the term "chorio-epithelioma" would be better applied, was no doubt very important. But it had to be proved. Could, for instance, Dr. Lockyer say that in all cases of this malignant growth which had followed vesicular mole there had been syncytial elements? In every instance of this malignant growth it was very desirable to investigate thoroughly the question of a recent pregnancy, miscarriage, or parturition. In his own case this had been very difficult to ascertain. The woman was 48 years of age and had had a child two or three years previously. The growth was typical and contained syncytial elements.—Mr. ALBAN DORAN stated that when the patient was admitted into his wards she was too ill for any operation. At first sight sloughing fibroid seemed probable, but on further examination extensive malignant disease was evident. It was remarkable that she lived so long. Dr. Lockyer was to be congratulated upon his excellent report of the pathology of this case. Many similar cases must have been overlooked or misinterpreted.—Dr. HERBERT SPENCER said that while he agreed with Dr. Lockyer's views in the main, he thought it would for the present be better to use the term "deciduoma malignum" until a little more was known about the pathogenesis of the disease. There was no doubt that two distinct classes of growth had been described under this name. But Klebs, who was, he thought, the first pathologist to investigate the disease, had hesitated whether to describe it as a cancer or a sarcoma, and the late Dr. Kanthack had stated his decided opinion that his (Dr. Spencer's) case, which showed large masses of typical syncytium, was a sarcoma. He thought therefore that it was a little premature to style it a "chorio-epithelioma," though personally he was inclined to regard the syncytial growth as of that nature.—Dr. LOCKYER, in reply, stated that the patient's history afforded no proof of a period of amenorrhœa prior to the onset of hæmorrhage which began suddenly in June and continued until November, 1900. He thought that the syncytial masses were of chorionic origin and if a chorionic villus was entirely fœtal it followed that any neoplasm arising therefrom must likewise be of fœtal origin. He adopted this nomenclature of "chorio-epithelioma" for his specimen, believing that the syncytial envelope of a chorionic villus was an epiblastic fœtal structure. The term "syncytial carcinoma" would be equally applicable in the case of these new growths.

Dr. THOMAS WILSON (Birmingham) read a short communication on a fatal case of Primary Pneumococcic Meningitis simulating Puerperal Eclampsia, in which there was 1·5 per cent. of sugar in the urine but only a cloud of albumin.

Dr. A. H. N. LEWERS showed two specimens of Cancer of the Body of the Uterus removed by abdominal panhysterectomy.

## EDINBURGH OBSTETRICAL SOCIETY.

*Exhibition of Specimens.—The Movements of the Pelvic during Symphysiotomy.—Full-term Intact E Gestation.—Expulsion of a Dermoid Ovarian Vaginam during Labour.*

A MEETING of this society was held on Jan. RITCHIE, the President, being in the chair.

Dr. N. T. BREWIS showed: (1) A Cyst weighing 48 pounds and measuring 48 in exhibited a young man, aged 18 years, who had been the subject of (unilateral) Acute Cellulitis of the Larynx, believed to be due to a foreign body.—Mr. Lennox Browne exhibited a female patient, aged 14 years, the daughter of a medical practitioner, who had been the subject of Adenoids, and in whom deafness, almost inarticulate speech, mental hebetude, and chorea were prominent symptoms. After removal of the adenoids the patient, with the consent of Dr. Ferrier, had undergone breathing and movement exercises which had led in two months to the doubling of her vital capacity, increase of her chest girth, cure of her chorea, and very marked improvement in her speech and intellect — Dr. W. Culver James showed a female patient, aged 18 years, suffering from Aphonia, with loss of Speech.—Mr. Mayo Collier exhibited a female child, aged nine years, the subject of Defective Speech, associated with Defective Hearing almost to the extent of deaf-mutism, in whom great improvement in both conditions had followed on the removal of a large mass of impacted cerumen which had probably accumulated and been undetected in consequence of a curious abnormality in the meatus.—Mr. Lennox Browne exhibited five patients the subjects of Lingual Varix, one of whom was a medical practitioner; the other four had been sent to him by hospital colleagues as examples in patients at present attending the out-patient department, a point emphasised by the President.—Mr. Mayo Collier referred to an extreme case of Paroxysmal Dyspnœa, the sole reason for which appeared to be lingual varix. Treatment by the galvano-cautery had resulted in a remission which had now lasted for three years.—Dr. Atwood Thorne exhibited a patient with Deafness associated with Nasal Stenosis and Hyperostosis at the Isthmus of the External Auditory Meatus.—Remarks were made on this case by the President, Mr. Mayo Collier, and Dr. Wyatt Wingrave.—Mr. W. J. Chichele Nourse showed a case for opinion which, having many signs of a Malignant Growth of the Left Vocal Cord, had so improved under biniodide of mercury as to suggest its being a gumma.—The President suggested that the case should be watched and further reported on at the next meeting —Mr Lennox Browne read the notes (1) of two cases of Acute Ulcerative Tonsillitis, which had been followed by orchitis, with an acute pustular inflammation of the skin of the penis and the scrotum; and (2) of a case of Posterior Tongue-Tie, with Hypertrophy of the Lingual Tonsil, occurring in a female board school teacher, aged 23 years. A drawing illustrated that the epiglottis stood up, showing all its glossal surface, as well as the lingual tonsil. Removal of the latter and snipping of the central glosso-epiglottic fold resulted in immediate restoration of the parts to the normal.—Dr. P. H. Abercrombie, who had seen the patient both before and after treatment, testified to the striking peculiarity of the appearances as witnessed before and after treatment.—Mr. Lennox Browne also read notes of a case of Pulmonary Tuberculosis in which, bacilli being numerously present, the patient showed continuous gain of body weight during four years of observation.—Dr. Wyatt Wingrave spoke of the histological characters of the bacilli in this case, remarking especially on their tendency to degeneration with development of fresh organisms, and from the presence of pus corpuscles he believed the case to be one of localised pulmonary abscess of a tuberculous nature.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Jan. 1st, Dr. E. C. Kingdon, the President, being in the chair.—Dr. G. M. Lowe of Lincoln read a paper on the Use of X Rays in Medicine and Surgery. He used the current from the city main at 230 volts pressure controlled by two of Con's electrolytic breaks coupled in series. With a current of from nine to 11 ampères and at a distance of from 14 to 24 inches of the anode from the plate he got excellent negatives in from five to 30 seconds. The prints exhibited were on Otto paper showing perfect proportion and exquisite detail. Dr. Lowe laid great stress on the importance of a uniform method of work, the anode always being plumb over the part to be radiographed and both sides symmetrically exhibited so that the surgeon could interpret the results correctly. In medicine he had found the rays useful in the diagnosis of hæmatoma, aneurysm, enlargements of the heart, the spleen, and the liver, as well as in renal and vesical calculi. He had frequently observed splenic enlargement amongst the so-called dyspeptic clerks and other employés working in the large foundries on the banks of the Witham, where the subsoil was a wet sand overlying a thick bed of peat. He described a case of Lupus Vulgaris (previously twice scraped) which was now quite healed after about 17 applications of the x rays at a distance of six inches from the part, the rest of the face being protected by a metal mask. After describing and comparing with each other the Finsen ultra violet rays, the Bergused rays, and the x rays, Dr. Lowe showed that all radio-active agencies had at least one property in common—viz., their power of ionising the air—i.e., of rendering the air a conductor of electricity, as shown by the gold leaf electroscope. Lord Kelvin had demonstrated that a bar of iron loaded with positive electricity and insulated by paraffin wax could be discharged or de-electrified by the x rays, and Dr. Lowe put forward the probable theory that this property acting on a limited area of skin and subjacent tissues, when the tube was brought within a few inches from the surface, was the cause of dermatitis and other therapeutic results by acting on the trophic nerves of the parts. X-ray workers were, he stated, daily meeting with remarkable effects which when collected and formulated would revolutionise certain branches of therapeutics.—At the conclusion of Dr. Lowe's address Dr. C. H. Cattle, Dr. J. S. Bolton, Dr. F. H. Jacob, Mr. A. R. Anderson, Dr. F. D. Blandy, Mr. Simpson, and the President spoke on the subject, and Dr. Lowe replied.

GLASGOW SOUTHERN MEDICAL SOCIETY. — A meeting of this society was held on Dec. 26th, 1901, Dr. John Stewart, the President, being in the chair. According to arrangement the meeting was an open one for professional conversation, and the subject suggested for discussion was, What are Scheduled Poisons? In view of recent proceedings of the General Medical Council great interest in the question was manifested, and attention was drawn to the dubiety existing in many minds as to the drugs regarded as poisonous within the meaning of the Pharmacy Acts. After a lengthy discussion it was resolved to appoint a committee to inquire as to what drugs were included under the term "scheduled poisons," and especially those described in the Acts as "poisonous vegetable alkaloids and their salts."—The President, Dr. J. Forrester, Dr. T. Russell, Dr. C. E. Robertson, Dr. D. Young, Dr. J. Fraser Orr, and Dr. A. Wauchope were elected to form the committee, with power to add to their number, and were instructed to report the result of their investigations to a future meeting of the society.—The meeting then proceeded to consider the recent edict of the General Medical Council with reference to the keeping of open shop or medical halls and unqualified drug assistants. After some discussion it was unanimously resolved to protest as a society against the terms of the edict. The council of the society was instructed to draw up a protest for presentation to the General Medical Council at its next meeting.—The ninth meeting of the society of the present session and the first of the new year was held on Jan. 9th, Dr. Stewart, the President, being in the chair. The meeting took the form of a smoking concert, supper, and conversazione. There was a good attendance of members and friends. Supper was served at 9 o'clock, after which an adjournment was made to another room where a pleasant evening was spent in song and story.

BRISTOL MEDICO-CHIRURGICAL SOCIETY. — The fourth meeting of the session of this society was held on Jan 8th, Dr. Barclay J. Baron, being in the chair.—Mr. C. K. Rudge was elected on the Library Committee in the place of Mr. L. M. Griffiths resigned. A cordial vote of thanks was passed to Mr. Griffiths for having acted as librarian for so many years —Dr. F. W. Crossman showed a patient with a loud Aortic Bruit.—Dr. T. Fisher, Dr. P. W. Williams, Dr. E. J. Cave, Dr. E H. E. Stack, Dr. J. Michell Clarke, Dr. A. J. Harrison, and Dr. Newman Neild spoke on the condition —Mr. G. Munro Smith showed the following specimens: (1) Concretion from a Horse's Intestine; (2) Renal Calculi; (3) a Tonsillar Calculus; and (4) Necrosis of the Clavicle (the patient was shown).—Mr. J. Handcocke Wathen showed a series of Concretions from Horses' Intestines —Mr. W. Roger Williams, Dr. Cave, Dr. T. Fisher, Dr. E. Markham Skerritt, Dr. W. K. Wills, Dr. Williams, and Dr. R Shingleton Smith discussed the specimens.—Dr. Stack showed a specimen of Aneurysm of the Internal Carotid Artery at the Base of the Brain from a girl, aged 22 years.—Dr. Fisher showed specimens of Acute Tuberculosis of the Lungs following Tuberculous Peritonitis.—Dr. F. H. Edgeworth read a paper on Transient Renal Hæmorrhage

Davies, medical officer of health of the city and port of Bristol, read a paper on Plague Exclusion and Control. The *simultaneous occurrence among rats of a disease resembling* the plague in man had of late years attracted the attention of epidemiologists who had seen in it an explanation of the spread of epidemics, and at the late International Congress on Tuberculosis this view had been forcibly restated by Dr. R. Koch who insisted on the grave error of attempting to treat all pestilences on the same lines and applying quarantine and disinfection to all indiscriminately instead of combating each as its etiology indicated. The notion that personal contact was the chief factor in the propagation of the plague had been accepted by the international conferences with, as the experience of recent epidemics showed, but little success, since they now knew that it was the pneumonic form only that was often directly communicable. But in every outbreak that had been properly investigated rats had been proved to be the active agents and with their extermination the disease had disappeared. Yet this view, though accepted by all epidemiologists, had been met by the authorities in every country with more or less of passive obstruction, and even the Indian Government had failed to distinguish clearly cause and effect. It was high time that this fact should be generally known and acted on, for otherwise sanitary measures and inoculations were of no avail. Referring to Dr. Ashburton Thompson's report, Dr. Davies said that at Sydney the agency of rats was obvious and indisputable, but nowhere had this precaution been adopted until it was too late. There the plague had been introduced and spread by rats, and the negligible influence of contagion was seen in the fact that the 289 cases were distributed through 276 *houses. A plague "contact" was not one who had been* exposed to infection by plague patients but to plague rats. The regulations of the Local Government Board of November, 1896, were well enough as regards the importation of the disease by infected persons, but they wholly ignored its introduction by means of rats, especially in ships with cargoes of grain or cotton-seed. The first official recognition of the danger arising from the introduction of the plague by rats was the Order of April, 1901, which advised port sanitary authorities to take precautions against the landing of rats from plague ships, and recommended their destruction and the cremation of their bodies without handling. The Order was, however, not compulsory and was applicable only when the existence of the disease on board was established, but it had the effect of strengthening the hands of the authorities. In Bristol they kept a register of infected ports, based on the lists published by the Marine Department of the United States of America, but retaining the names on the list three or four months longer, since such ports were officially declared free when the disease had disappeared among the human population. All such vessels were considered "suspects," though no cases had occurred among the crew, for the disease might be confined to the rats and communicated by them to the labourers who alone handled the cargo. Thousands of infected rats were at present carried from port to port and permitted to infect freely those on shore, a practice as irrational as would be the isolation of every case of hydrophobia in man while troops of rabid dogs were allowed to remain at large. All rats should be destroyed while the ship was empty and others prevented from going on board, the feasibility of this having been proved by Dr Ashburton Thompson in the Australian ports, where all vessels were fumigated while empty and none were allowed to enter a port without a certificate from that of departure. Turkey alone had taken any steps in this direction, but an international agreement only would be really efficacious. The Bristol Chamber of Commerce had carried at the meeting at Nottingham a resolution for the framing of regulations for ridding all ships of rats at infected ports, which, with similar recommendations from port sanitary authorities, from the British Medical Association, and from the Society of Medical Officers of Health, had been forwarded to the Board of Trade, the Local Government Board, and the Shipowners' Association, but by none of these had it been taken seriously. At present they could attack the rats only at the port of arrival, a course obviously less effective than their destruction at the infected port. If the plague were once introduced the measures to be adopted were: (1) provision for the isolation of the sick, though there was little danger except from pneumonic cases; (2) the quarantine of "contacts"—i.e., of persons who had been in contact with plague rats; (3) protective inoculation of those associating with the sick or employed in infected premises; (4) the exclusion of all rats from dwelling-houses by the putting into thorough repair of all old stone sewers, house drains, and yards and basement floors, the latter by the owners and the former by *the sanitary authorities; (5) the resolute extermination of* all rats in ports and warehouses, as was the duty of the authorities in Western Australia; and (6) the cleansing of "verminous" persons. The only "sanitary" measures, in the ordinary sense of the word, that were of any use were the repair of defective drains and the closure of rat-holes.—Dr. Ashburton Thompson (Sydney) insisted on the necessity for an international agreement as to the destruction of rats on board ships from infected ports, since they might be dying from the plague and might carry it from port to port while none of the crew were attacked. The Indian Governments attached the most importance to infected persons and things, the Australian Government to rats, and the result of the application of this view in the suppression of the outbreak at Sydney, the first treated on modern principles, afforded ample justification. Whatever difficulties might be met with in densely peopled insanitary eastern cities, what had been accomplished in the purely English towns of Australia might be so in those of Europe.—Dr. R. A. Farrar (special plague officer with the Government of India) defended the natives of India, maintaining that in their persons they were cleaner than the lower classes of this country. Neither European nor native attendants contracted the disease in the hospitals and the greater susceptibility of the native was in part due to their habit of going barefoot and wearing toe rings. Infection mostly took place through breaches of the skin or abrasions, and thus while inguinal buboes were most frequent, in the women who swept the floor with their hands they were more often axillary. *On board ship* the barefooted lascars should, he thought, be treated as "contacts," though the well-shod European was not. Rats on infected ships, or during epidemics those killed on shore, should be promptly plunged into strong solutions of corrosive sublimate or carbolic acid to destroy the fleas, and he would suggest funnel-shaped, rather than discoid, shields to prevent the passage of rats along the hawsers.—Dr. Herbert Williams (Port of London) entirely agreed with Dr. Davies that the ideal course was the destruction of the rats at the infected port of departure, but *masters of vessels would not take the* trouble and consular certificates were of little worth. In the port of London they had tried burning sulphur and cylinders of compressed sulphur dioxide, but the former was uncertain and the gas tended to imperfect diffusion, so much so that rats in cages six feet from the cylinders had been found alive. Much greater, but not complete, success had been attained with the Clayton Disinfecting Company's apparatus, which impelled the gas by a fan through pipes into the hold, while for disinfection the return air was *passed over burning sulphur. The total* extermination of rats on shore was impracticable, though he understood that at Odessa over a million had been killed recently. The isolation of vessels was beset with difficulties, as was the use of cranes and lighters, to say nothing of gangways, and with every precaution the rats might be landed in cargo. He had seen a hundred escape from a broken cask.—Dr. E W Hope (Liverpool) dwelt on the extreme difficulty of dealing with vessels of 4000 or 5000 tons, in which the rats passed from hold to hold during the fumigation. The Local Government Board might, he thought, inquire into the efficacy of different methods and empower port sanitary authorities to detain rat-infested ships. He had found the American company's apparatus very successful with empty vessels. He could not ignore sanitary measures altogether when he considered the class of persons who in Oporto and, in Glasgow were the first to be attacked, and he believed in the communication of infection from such persons by means of fleas.—Dr. E. Walford (Cardiff) had had but two cases under his observation; one of the patients contracted *the disease in Cardiff, and the other else*where, but each had been attacked while unloading grain-ships, and the former, whose buboes were axillary, had handled dead rats which were proved by bacteriological examination there and in London to have died from plague. He had been successful with the Clayton apparatus, but was well pleased with the work of professional rat-catchers.—Dr. J. Howard-Jones (Newport, Mon.) and some other members and visitors having continued the discussion Dr. Davies replied briefly.

**BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.**—A meeting of this association was held on Jan. 10th, Dr. John Macintyre, F.R.S. Edin., the President, being in the chair.—Dr. Wyatt Wingrave the work done by them in the seventeenth century when the Royal Society was founded, when we read of the contributions of Boyle, Lower, and Mayow to physiological knowledge. Space fails us to deal with other lectures in which the writer traces the further advances made in our knowledge of digestion by Boerhaave, Haller, and Spallanzani; the explanation of the true meaning of respiration which followed the chemical discoveries of Black, Priestley, and Lavoisier; and the older views concerning the processes of the nervous system. We must be content to commend Sir Michael Foster's book, not only to every physiologist and medical man, but to everyone interested in science, as a valuable lesson in the methods of scientific research and a delightful piece of literature.

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*Text-book of Medicine.* Begun by the late CHARLES HILTON FAGGE, M.D. Completed after his death and since Revised or Re-written by PHILIP HENRY PYE-SMITH, M.D. Lond. Fourth edition. Vol. I. London: J. & A. Churchill. 1901. Pp. 1123 Price 21s.

A REVISION of "Fagge" radical and far-reaching enough to entitle this classic work to compete successfully with the up-to-date and progressive works of present-day medicine naturally conveys to the mind of its admirers a conception of so great a sacrifice of method and tradition that "Fagge" thus resurrected would be "Fagge" no longer. It must, however, be remembered that in the present instance the revision has been undertaken and carried through in no spirit of impious vandalism, but by the same master-hand which created "Fagge" and invented its traditions. Dr. Pye-Smith's paternal conservatism has saved this treasured volume from the heroic treatment which a more modern author catering for the vulgar, hurried needs of the twentieth century student would doubtless have felt constrained to administer. The leisurely style of the original "Fagge," the historical allusions, the etymological notes and references, the quotations from century-old authors, from Celsus, from Hippocrates, from Galen, and a host of others—all of them find a place in the new as in the older editions. Those who learned their medicine when "Fagge" was the only text-book for the student with ambitions. can have no quarrel with Dr. Pye-Smith for perpetuating in his most recent edition the traditions which they love and reverence. But what of the modern student? Will he appreciate. or has he indeed time to appreciate, the refinements and niceties of style or the discursive experiences of what is now practically a past generation of clinical physicians?

At the time of his death in the year 1883 Dr. Fagge left behind him a vast collection of notes and manuscript, collected mainly from Guy's Hospital reports or as the fruit of his own experiences inside and outside the hospital. This work had occupied his best energies for more than 12 years, so that even when Dr. Pye-Smith undertook, at the request of Mrs. Fagge, the Herculean task of editing the proposed volumes, much of the material and its pathological bearings was already in scientific arrear. In spite of the invaluable assistance of the late Dr. J. Cavafy in the earlier editions, and of Dr. J. F. Payne in the one under review, this scientific arrear has never been made completely good. The discursive style which we have already mentioned as being perpetuated in the present volume does not lend itself to the scientific precision which modern pathology and modern nosology demand, and there is repeated evidence throughout the pages of this first volume that a half-hearted attempt to reconcile traditional speculations with newly ascertained facts has brought the continuity of argument to a condition which nearly approaches chaos For instance, the chapter on Inflammation, evidently written and revised up to the standard of current opinion of some six or seven years ago, represents a valuable and accurate account of this pathological process according to the views then held. Within recent years, however, our views on inflammation have undergone radical modification, and as a graceful concession to the modern pathology Dr. Pye-Smith adds a paragraph at the end of this chapter which not only casts doubt upon the soundness of the views expressed in the previous 20 pages, but practically nullifies everything which depends on the definition of the term "inflammation" as accepted by him and stated at the commencement of the chapter. Seeing how large is the part which inflammation plays in the pathology of diseases dealt with in this volume, it is unsatisfactory, to say the least, that the foundation should be beset with these ambiguities. The distinction between degenerative changes and inflammatory processes is admittedly a matter of great difficulty, and in no department of medicine is this more apparent than in that of diseases of the central and peripheral nervous systems. Here, again, we cannot admit that Dr. Pye-Smith has always made the position clear. And in this connexion we would quote two passages in different sections of the volume which, if not absolutely contradictory, at least present a confliction of views. Referring to the lightning pains of tabes on page 560 Dr. Pye-Smith says: "In all their characters they are true neuralgias and they are not due to demonstrable lesion of the nerves," while on page 700 in the same connexion he says: "The peripheral afferent nerve-trunks, as well as their roots, are affected; ...... the boring and flashing pains, no doubt, are caused by morbid changes in the posterior root-zones."

Although, as we are told in the preface, at the present time there is scarcely a page of the late Dr. Fagge's work as he left it at the time of his death, nevertheless the passages which deal with the anatomy of enteric fever, the clinical account of variola and scarlet fever, the course of malarial fever, the description of neuralgia and migraine and of epilepsy and bronchitis appear very much as they were presented in former editions. The introductory sections on general pathology and those on diabetes, rheumatism, osteoarthritis, diphtheria, tabes dorsalis, and several others have been completely re-written for the present volume.

The chapters on Gout, Beri-Beri, Rickets, and, we may add, Rheumatism, including as they do departments of medicine in which much new work has been published and many theories have been expressed, will strike the reader as pedantically old-fashioned for a modern text-book. For instance, as regards gout we may question whether "the primary fact" to be kept in mind in considering this disease is the excess of urates in the blood. On this pathological pivot, however, the symptoms, morbid anatomy, and etiology are almost entirely explained. The definition of gout as a disease characterised by the deposition of insoluble urates in the cartilages of joints and subcutaneous tissues is narrow enough in all conscience to exclude bronchitis, dyspepsia, gastralgia, iritis, cystitis, urethritis, phlebitis, and eczema from the list of symptoms and manifestations often included among the syndromata of the *gouty diathesis. At a period of medical history when* the deposition of insoluble urates is generally regarded as one of the manifestations, and not the essence, of gout this careful differentiation of what are usually held to be associated symptoms from the primary disorder is dogma of a most pronounced type.

In reference to rheumatism, which is defined as an acute febrile disorder running an undefined course with implication of the joints and often of the heart, Dr. Pye-Smith does not declare in favour of a specific origin. At the same time he hesitates to associate it with the arthritic diathesis or the disorders of metabolism. In adopting a somewhat *non-possumus* attitude towards every theory which has so far been suggested he leaves the reader in a condition of nebulous speculation. The short chapter on beri-beri leaves the reader in a similar condition of doubt, as may be inferred due to Chill.—Dr. Wills, Mr. Roger Williams, Dr. Williams, Mr. J. Taylor, Dr. Smith, Dr. Stack, Dr. Clarke, Dr. Skerritt, and Dr. Harrison discussed the paper.—Dr. J. Odery Symes read a paper on Some Urinary Infections, with special reference to their Treatment by Urotropin.—Mr. T. Carwardine, Dr. Fisher, Dr. Neild, Dr. Cave, Dr. Stack, Dr. Edgeworth, and Dr. Harrison spoke on the paper.—Dr D. S. Davies gave a short report on a recent case of Black Small-pox in Bristol.

**Liverpool Medical Institution.**—At the annual meeting of this institution held on Jan. 9th the following office-bearers, members of council, and committees were elected:—President: Mr. Rushton Parker. Vice-Presidents: Dr. Edward Adam, Dr. J. M. Hunt, Dr. John E. Gemmell, and Dr. W. Permewan. Honorary treasurer: Dr. H. Briggs. Honorary general secretary: Dr. J. R. Logan. Honorary secretary to ordinary meetings: Dr. J. Hill Abram. Honorary librarian: Dr. Leslie Roberts. Council: Dr. James Barr, Dr. R. J. M. Buchanan, Mr. G. A. Hawkins-Ambler, Dr. W. Macvie, Dr. E. Nicholson, Dr. J. Lloyd Roberts, Mr. Edgar A. Browne, Dr W. M. Cairns, Dr. D. Douglas-Crawford, Dr. J. Ernest Nevins, Professor C. S. Sherrington, and Dr. W. B. Warrington. Pathological and Microscopical Committee: Professor R. W. Boyce, Mr. R. A. Bickersteth, Dr. R J. M Buchanan, Dr. D. Douglas-Crawford, Dr. John Hay, Dr. O. J. Macalister, Mr. K. W. Monsarrat, Mr. G. P. Newbolt, Professor Sherrington, and Dr. Warrington. Journal Committee: the honorary secretary to ordinary meetings, the honorary secretary of the pathological section, Dr. F. H. Barendt, Mr. F. C Larkin, Mr. Newbolt, Professor A M. Paterson, Mr. W Thelwall Thomas, Dr. Arthur J. Wallace, and Dr. Permewan. Auditors: Dr. J. Lloyd Roberts and Dr. Dawson.

**British Electro-Therapeutic Society.**—A meeting of this society was held on Jan. 10th, Dr. W. S. Hedley being in the chair, at which a list of 58 medical men was read as constituting the members of the above society. The rules suggested by the provisional committee were discussed and the majority of them passed A few amendments and additions are to be brought forward for confirmation at the next meeting on Feb. 14th. The following officers were then elected:—President: Dr. W. S. Hedley. Vice-Presidents: Dr. Lewis Jones and Dr. H. G. Turney. Council: Dr. A. Barry Blacker, Dr. Wilfred J. Harris, Dr. George Herschell, Dr. Septimus P. Sunderland, Dr. Hugh Walsham, Mr. William Armstrong, Dr. J. Allan, Dr. James Barr, Mr. J. F. Hall-Edwards, Dr. Robert Jones, and Dr. Ernest Solly, with power to add to their number. Honorary treasurer: Dr. H. McClure. Honorary London secretary: Mr. Chisholm Williams. The annual subscription is one guinea and there will be eight meetings in the year. A journal will be published quarterly. Medical men desirous of joining should send their names to the honorary secretary, 20, Bedford-square, London, W.C.

**The Royal Institution.**—In the fifth of his Christmas lectures on Waves and Ripples, delivered on Jan. 7th, Professor J A. Fleming dealt with the subject of electric oscillations and electric waves. He described the production of Hertzian waves and said that the essential principle of the coherer had been discovered by several persons. Professor Hughes observed a phenomenon of this kind in 1879 or 1880. It was afterwards found that the apparatus was rendered more sensitive by substituting metallic filings for the discs previously used, and one form of the instrument used by Marconi in his wireless telegraphy was constructed on this system. In the sixth and concluding lecture, delivered on Jan. 9th, Professor Fleming said that electric waves could be refracted by metal plates and could be brought to a focus by lenses of paraffin wax, just as light was brought to a focus by glass lenses Water was opaque to electric waves, but they could be refracted by a prism of ice provided that its surface was perfectly dry. The various classes of waves in the ether might be considered as forming a sort of gamut or scale, having at one end (that with the shortest wave-lengths) invisible but chemically actinic ultra-violet rays, then the luminous spectrum, then the rays of dark heat beyond the red end of the spectrum, followed at a considerable interval by Hertzian or electric waves of different lengths.

# Reviews and Notices of Books.

*Lectures on the History of Physiology during the Sixteenth, Seventeenth, and Eighteenth Centuries.* By Sir MICHAEL FOSTER, K.C.B., M.P., M.D. Lond., D.C.L., &c. (Cambridge Natural Science Manuals.) Cambridge: The University Press 1901. Pp. 310. Price 9*s*.

IT is probable that there is no one man so well fitted as is Sir Michael Foster to write the history of the subject which has made his name familiar to physiologists all over the world. No epoch-making discovery, no special line of research, is associated with his name, but by general consent he knows physiology as few others know it. We are therefore not disappointed, on turning over these pages, to find a luminous criticism of the physiology of the past and an instructive lesson in the methods by which our present knowledge has been attained—a lesson not confined to physiology but applicable to every department of science. It is, indeed, the history of scientific progress in general with which Sir Michael Foster is compelled to deal in his lectures. The history of physiology is so closely interwoven with the histories of anatomy, chemistry, and physics that they cannot be considered apart. Pathology and medicine are so intimately based on physiology that these lectures give us their earlier history too The broad general lesson conveyed is that the one method which has ever yielded solid and lasting result is that of faithful observation and thoughtful experiment.

The lectures here printed were delivered in San Francisco in 1900 They represent an amount of research and learning which have extended over many years of the writer's life There is no attempt to cover the whole history of physiology even within the limits of the three centuries under consideration. The plan followed is that of selecting certain branches of the subject, such as circulation, digestion, and respiration amongst others, and dealing with them very fully. Each branch is naturally associated with the names of those great pioneers who laid the foundations of our knowledge concerning it, and biography is pleasantly mingled with history. The result is something far more engrossing and delightful than the dry bones of history alone, and if only for this reason something much more instructive. We gain a living picture of those far-off workers and are enabled to form an idea of their mental attitude towards the problems which confronted them. To say this is to give the highest praise which can be bestowed upon a scientific historian. It is easy to chronicle discoveries and their dates and to prove that someone stole the ideas of somebody else, but to enable the reader to stand, as it were, in the shoes of Vesalius, Harvey, or Van Helmont, and to limit his scientific conceptions within their narrower purview, and to grope with them into the darkness, is an achievement of no common order, and it is this which Sir Michael Foster has succeeded in doing.

Commencing with the life and times of Vesalius we read how this great observer laid the foundations of modern anatomy—the first effective revolt against a blind adherence to tradition We follow the influence of his teaching and learn how it led up, through Cæsalpinus, Fabricius, and others, to Harvey's great discovery. We read of the rise of modern physics and of how in the hands of Borelli many physiological problems received a physical explanation. We learn how Malpighi founded the science of histology and how our ideas of glandular secretion took origin. The rise of chemical physiology from the days of Paracelsus, through those of Van Helmont, Sylvius, and Stahl, is dealt with in two chapters in which the physiology of digestion takes an important place. We may well be proud of the share taken by Englishmen in the development of natural science and of cast up on the shore of his native county, "it was to rake for ambergriese in the paunch of this leviathan, as Greenland discoverers and attests of experience dictate that they sometimes swallow great lumps thereof in the sea—insufferable fetor denying that inquiry." Olaus Magnus, the Archbishop of Upsala, thought ambergris a good specific for syncope and epilepsy. M. Beauregard declines to recommend it for anything except as a doubtful aphrodisiac. A remarkable instance of a drug which has apparently persisted from primitive pharmacopœias to the present day is afforded by the common river crayfish. In the stomach of that creature are certain slimy concretions known as gastroliths. Such a structure, not always present in the animal and of rather mysterious import in its economy, is precisely the kind of thing that the mediæval physician would set great store by. These gastroliths or "crab's eyes," as the more vernacular term runs, are still pounded up and mingled with various powders which are referred to by M. Beauregard. It is not until we get quite near to the end of the book that the author grapples with an animal product which is really of use and which has been investigated chemically, physiologically, and therapeutically. This substance is cantharidine, formed from various species of beetles; these beetles are represented in two excellent coloured plates.

We have attempted to give some notion of the contents of this volume. It has most emphatically interested us in its perusal and will certainly interest others. Whether it is wanted, in the grosser utilitarian sense, is another matter altogether.

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*The Criminal.* By HAVELOCK ELLIS. Third Edition, Revised and Enlarged, with 40 Illustrations. London: Walter Scott. 1901. The Contemporary Science Series.

IN this volume the author has made an attempt to present to the English reader a critical summary of the results of the science now commonly called criminal anthropology. We have perused the book with considerable interest and can recommend it to those who wish for information on a difficult subject considered both from a scientific and a social point of view. That the work has reached a third edition is evidence that it has supplied a want.

Mr. Ellis points out that the great question which the criminal anthropologist has to answer is, "What is a criminal? Is he—according to the old legal assumption on which our criminal law is still mainly built up—a normal person who has wilfully committed an abnormal act? Is he the victim of acquired disease, such as some form of epilepsy? Is he an atavistic reappearance of the savage in modern society? Is he a 'degenerate'?" Mr. Ellis discusses these matters in an intelligible and attractive manner. He believes that the criminal, in some of his most characteristic manifestations, is a congenitally weak-minded person whose abnormality, while by no means leaving the mental aptitudes absolutely unimpaired, chiefly affects the feelings and volition, so influencing conduct and rendering him an anti-social element in society. The criminal, according to the author, is in a majority of cases certainly not insane, but neither is he normal, and while not wholly insensitive to the motives which influence the normal man he is not affected by them in the same way or in the same degree as the normal man.

The chapters on the physical and psychical sides of criminal anthropology are well written and contain much that is interesting. The question of the treatment of criminals is a difficult one. Mr. Ellis has much to say on the subject, although we must admit that we derived but little profit after reading his remarks, and many able observers are studying the matter critically and carefully. The various methods adopted in different countries seem to give much about the same results, and doubtless the time will come when the investigations now being carried out will bear fruit. The better housing of the working classes, for instance, must have a great influence on criminality. "The worker," says Professor Prins, "is always on the borders of vagabondage; the vagabond is always on the borders of crime." If the stress of misery could be generally decreased the number of criminals would likewise become less. Social organisation is the basis upon which any criminal reform must be formed.

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*Lehrbuch der Speciellen Pathologischen Anatomie.* Von Dr. JOHANNES ORTH, Ord. Professor der Allgemeinen Pathologie in Göttingen. Neunte Lieferung: Auge, bearbeitet von Professor GREEFF. 1. Hälfte, mit 2 lithographirten Tafeln und 76 Abbildungen im Text. (*Text-book of Special Pathological Anatomy.* By Professor JOHANNES ORTH. Ninth Part: The Eye. By Professor RICHARD GREEFF. First half, with two Lithographed Plates and 76 Figures in the text.) Berlin: Hirschwald. 1902. Pp. 270. Price 7 marks.

THE present instalment of Professor Greeff's useful work is divided into five chapters which deal in succession with the Conjunctiva, the Cornea, the Sclera, the Iris, and the Ciliary Body. The account of the conjunctiva naturally commences with a very careful description of the epithelium in the different regions of the conjunctival sac. These regions he distinguishes as the anterior or palpebral area and the bulbar or posterior area, a division that is of great importance from a pathological point of view, for lymphoma or follicles only affect the anterior region which presents columnar epithelium like mucous membranes, whilst cutaneous diseases, as, for example, eczema, which appear in the form of phlyctenulæ on the conjunctiva bulbi, only appear on that region which is covered with laminated pavement epithelium, and consequently resembles the skin in structure. The columnar cells of the anterior region are arranged in two rows, of which the deeper one is flatter than the superficial one, and intermediately lying cells may be occasionally observed. The pavement epithelium of the posterior region presents a deep columnar layer of small cells which are continuous with the much larger columnar cells of the cornea, a middle layer of numerous polygonal cells with central nucleus, and a superficial layer consisting of one or two flattened cells. Intervening here and there amongst the latter two sets of cells, at first deeply situated, but subsequently near the surface, are scattered goblet cells, which the editor has satisfied himself are, as L. Green contended, unicellular mucous glands, of great importance in the functions of the conjunctiva. Lastly, there are a few leucocytes. The mucous layer of the conjunctiva is divisible into two layers—a superficial or adenoid layer and a deep or fibrous layer. The adenoid layer contains many lymph cells which move about in it with ease and sometimes form small balls which, with von Recklinghausen, he names lymphatic follicles, but doubts whether they are to be regarded as normal elements of the conjunctiva. This layer presents some feebly developed papillæ and is highly vascular, but the fibrous layer contains the majority of the vessels and nerves. The conjunctiva palpebrarum contains the acino-tubular glands named after Krause, of which there are about 40 in the upper and about six or eight in the lower lid. These ducts open at the conjunctiva fornicis. Besides these, Stieda's grooves and ridges are to be noted, which, as Rählmann has shown, first appear two or three months after birth, and are to be found most developed at the line of reflection of the membrane; and, finally, the simple follicular glands of Henle. Proceeding from these anatomical data Professor Greeff describes very precisely the different forms of conjunctival inflammation, and names them according to their etiology, illustrating the statements in the from the following sentence: "The pathology of beri-beri is uncertain; it is certainly not a form of malaria nor of scurvy, nor it is caused by any poisonous food; it does not depend on the presence of animal parasites." The article on rickets, unlike that on gout, is founded on a much broader pathology and contains an unusually full account of the methods of treatment. The following quotation is not, however, suggestive of modern methods: "When a feeding-bottle is used the most extreme care is required to keep it and its tube clean" It is unfortunately too often true that "tubes" and rickets are found associated in the same nurseries, but that "tubes" should be seriously discussed in a modern text-book which is for the instruction of the coming generation of practitioners is, to say the least, disappointing.

Up to this point we have taken the obvious line of criticism which on general grounds would suggest itself to a reviewer who has to deal with a text-book which first saw light nearly 20 years ago and is now for the fourth time published under the same editorship and under an editorship which is single-handed and self-reliant. There is, however, an altogether different standpoint from which this new edition may be approached, and many serious students will no doubt regard it in this view—namely, that the art of drawing accurate and striking pictures of disease, an art of which each succeeding edition of "Fagge" has given more brilliant and speaking examples, is so rapidly disappearing that it is the positive duty of those older clinicians who still retain this facility of description to give the world the benefit of their skill. Fagge's Medicine is, so far as we know, the only text-book of its kind which at the present day presents the clinical aspect of disease in a style which Sydenham, that great master of descriptive medicine, would have approved. For this reason if for no other, we, as a nation and as a profession, owe Dr. Pye-Smith a debt of gratitude, for with untiring efforts he has remodelled for contemporary use perhaps the greatest text-book of clinical medicine which has ever been published in any language.

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*Matière Médicale Zoologique: Histoire des Drogues d'Origine Animale.* Par H. BEAUREGARD. Revisé par M. COUTIÈRE, avec Préface de M. D'ARSONVAL. Paris: G. Naud. 1901. 8vo. Pp. 396 With five Plates and 145 Figures in the text. Price 12 francs.

THIS work is a comprehensive treatise upon those animals whose products are, or were recently, used in pharmacy. But it is not limited to a disquisition upon the drugs themselves and upon the animals and organs whence they are extracted; the author, who unfortunately did not survive to see his work in print, gives also the generalities of the several groups, orders, and families of the animal kingdom the members of which have provided mankind with drugs. The treatise, in fact, is one upon general zoology so far as concerns the main sub-division of the animal kingdom. It is accompanied by abundant illustrations of outward form and internal structure, with naturally a special prominence given to the anatomy and histology of those glands whence the drugs are derived. It will astonish the non-expert to observe how many different kinds of animals contribute to the healing of man's infirmities The list is not perhaps so long as was that of a mediæval physician in Europe or a Chinese doctor of to-day; but it is by no means short. Altogether some 50 kinds of animals figure in M. Beauregard's list, and of these the majority are mammals. Next in numbers are insects, fishes come third, while reptiles, crustacea, worms, and sponges furnish but one or two representatives each of creatures whose flesh or skeletons provide drugs While viverreum (the product of civets and genets), castoreum (derived from the beaver), and hyraceum (really the excrement of the hyrax) are no longer used in medicine, the musk of the musk-deer is still, though rarely, given as a drug in cases of "intense general depression." But in this and the other secretions already referred to the physiological action has not been studied. It is, after all, much on the same level with the recently reputed cure for cancer in the shape of violets. M. Beauregard gives, in fact, an example of a drug which has this kind of reputation. It was asserted that the hoofs of the elk were "efficacious as a remedy for epilepsy." This example brings us to the consideration of M. Beauregard's selection of drugs. It is not quite clear why he includes such an instance as that which has just been given and why he excludes many of the mediæval and subsequent remedies. The ancients used anything and everything that they could lay their hands upon for the cure of sickness, and the late use of some of the substances referred to by M. Beauregard is possibly to be explained as a survival from antiquity. That unconsciously humorous divine and natural historian, the Rev. Edward Topsell, observed that "the beastes do offer many profitable medecines for the cure of men; which the skilful Physitian must borrow from them if he will be perfect in his art and conscionable in his profession." And he goes on to remark: "I have proved by the inspection of this knowledge that herein is layed the largest foundation of Medicine." If M. Beauregard includes the hoofs of an elk and bezoar stones, why should not he also tell us something about the oil in which a fox is baked alive or dead, "the dust of a living Weasell brent," "a fat cat sod" (whatever that may be), and, especially at the present moment, a shaving of a goat skin mixed with pumice stone and vinegar, which is good for the small-pox? The author seems to us, in fact, to have hesitated midway between alternative modes of dealing with his subject. He should either have given us a large amount of antiquarian drug lore, or resolutely cut out all such animal products as are not used at the present moment in civilised countries. We wonder if many of the readers of the present notice have ever heard of "Ægagropiles"; the term is new, though the objects to which it is given as a name are probably familiar to most persons. An ægagropile is an expression used for those felted balls of hair that are found in the stomachs of many animals, particularly ruminants. They are mentioned by the author in the type which he uses to embody the names of drugs, but no suggestion is made by him as to their present or past use in the Pharmacopœia When we get to the subject of pepsine we tread on firmer ground, though whether the use of artificial digestives of this kind can be fairly termed drugs is perhaps a matter for argument. Pepsine is, according to the author, especially made from the stomachs of sheep. One of the most interesting of M Beauregard's chapters is that dealing with spermaceti As a drug its use is mentioned for the first time in the pharmacopœia of the University of Salerno—the same university which addressed a versified series of remedies to Robert, "King of England." But the Salernites, as the author calls them, confused spermaceti with ambergris, and this confusion, initiated by those well-meaning but officious savants, lasted until the sixteenth century. We have now fully unravelled the complications, and spermaceti, it is perhaps unnecessary to explain, is the fat contained in the great head of the cachalot, while ambergris is a pathological product of its liver which is now used mainly as a vehicle for perfumes, though it possesses a sweet, earthy smell of its own. Sir Thomas Browne, who is not quoted by M. Beauregard, was one of those physicians who was not by any means in advance of his time His full belief in witchcraft is well known and the consequent cruelties which he condoned. His intelligence in the matter of ambergris was not much better, as the following observation—which, perhaps, we may be allowed to quote—shows: "In vain," he wrote of a sperm whale first deals with the diagnosis and treatment of the various forms of gall-stone disease. The author lays great stress on an accurate history, and he claims that the diagnosis may be made often merely on the history, and that even if this be not possible the physical examination is greatly simplified by a complete history. This part dealing with the diagnosis is especially good. The author agrees with most surgeons in condemning exploratory punctures; for, as he points out, even without fever pus may be present Professor Kehr has not much opinion of the value of examination under anæsthesia, for he thinks that much more may be learnt from the history. The second part consists of notes of 100 cases of cholelithiasis in which the author has operated. They have been chosen to illustrate the chief points in diagnosis. They will well repay perusal, even though the reader may not always coincide with the author's opinion or treatment. An appendix give notes of 18 additional laparotomies for cholelithiasis which the author had performed in a little more than six weeks. This statement will serve to show the large number of cases on which he operates The translation is very accurate—in fact, too accurate, for it follows the original so closely that we find German phrases in English words. The peculiarity of the style is in great part due to Professor Kehr, but the translator might reasonably have modified it. Some of the sentences are almost cryptic, though the meaning can be found by a little thought We may quote the following as a specimen: "Adhesive peritonitis in the gall-bladder is such an exquisite human disease that I am inclined more to traumatic influences than stones." In spite of these criticisms we may repeat that Dr. Seymour has conferred a benefit on those surgeons who do not know German by translating this book into English.

# New Inventions.

## FORMALDEHYDE LAMP.

THE experiment of wrapping round the wick of a spirit lamp a spiral of thin platinum wire by which after the flame has been blown out partial combustion is kept up, aldehyde being given off, is a familiar one By substituting pure methyl alcohol for ordinary spirit formaldehyde is obtained, and on this principle a steady current of the powerfully antiseptic gas may be produced At the same time water is a product of the change and a moist environment is essential to germicidal action. At any rate this principle is applied with some success in a lamp which we have recently received. It consists of a glass reservoir containing methyl alcohol in which a cotton wick serves to keep two discs of platinum black supplied with the spirit To start the lamp a light is applied and the spirit is allowed to burn for some minutes until the platinum gets quite hot. The flame is then blown out when it will be found that at certain points the platinum glows feebly and formaldehyde vapour is steadily given off. According to our laboratory experience the lamp works well and without any special trouble. The method seems to be extremely convenient and useful for the diffusion of formaldehyde, one of the most powerful germicides for the purpose, in the air of infected rooms The lamp is easily kept under control, the quantity of formaldehyde given off being determined by the amount of methyl alcohol consumed. The action of the lamp is stopped by replacing a screw stopper which covers the platinum cap. The lamp is the invention of a medical man in Paris and the agent for its sale in this country is Mr. H. M. Kelly of 10, St. Mary Axe, London, E C.

# Looking Back.

FROM

## THE LANCET, SUNDAY, JAN. 18, 1824.

## HOSPITAL REPORTS.

### GUY'S HOSPITAL.

JAN. 16.

*Amputation at the Hip Joint.*

This formidable operation was performed here this morning, for the first time, by Sir Astley Cooper in the presence of some of the surgeons and pupils belonging to these institutions. The number of those present however, was not so great as on many other occasions, no previous notice of the operation having been given, and this arose in consequence of it not having been determined on but a few minutes before its performance. The patient was a man about forty years of age, whose thigh had been amputated some years ago, just below the knee, since that time the thigh bone had become diseased from the extremity of the stumps, up to the trochanter major; and this disease has had such effects on him of late, that he has been rapidly sinking under it; the thigh was of the middle size; on being asked this morning to submit to an operation, he readily consented. At half-past-one the patient was brought into the operating theatre, and placed in the recumbent posture on the table; the femoral artery, being tightly compressed at the groin by an assistant, (Mr. Key), Sir Astley, standing to the outer side, with the limb in the one hand, and the catlin[1] in the other, commenced the operation, by making an incision just below Poupart's ligament, a little to the iliac side of the femoral artery; this was continued obliquely downwards and outwards to the back of the thigh, about one-third of the way down, from which point the knife was carried in the opposite direction, obliquely upwards and inwards to meet the first incision, by this means, forming an eliptical curve; at this step of the operation, the femoral artery was divided, to which a ligature was immediately applied; the cellular membrane was merely cut through at first, but the knife was again carried in the same direction as before, and thus the muscles were also separated; at this step also, it was necessary to apply another ligature on the inside of the limb; here the operator changed positions, and sat on a chair in front of the patient, and waited a short time to see whether there were any bleeding vessels; after the lapse of a few minutes the operation was continued and very shortly completed, the head of the thigh-bone being removed from the acetabulum without any difficulty; two ligatures in addition to those already used were applied, making in the whole four; the integuments were brought together, and a suture applied to the upper portion; strips of adhesive plaster, and lastly a bandage were put over the stump. There were about 12 ounces of blood lost, but it had the appearance of being venous The limb was removed in the space of twenty minutes, the securing the arteries and dressing occupied fifteen more; the whole was completed in thirty-five minutes. During the operation the man was extremely faint, but some wine being given him, and fresh air admitted, he recovered. The patient bore the operation with extraordinary fortitude, and after all was finished, he said to Sir Astley, "that it was the hardest day's work he had ever gone through," to which Sir Astley replied, "that it was almost the hardest he ever had."

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[1] It may not be unnecessary to explain to the younger generation of our readers that a catlin was a long, narrow, double edged knife used for amputations.—ED L.

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WELLS (SOMERSET) DISPENSARY.—The annual meeting of the subscribers to this institution was held on Jan. 7th, under the presidency of the Mayor. The financial statement showed a favourable balance. After some discussion it was decided to discontinue the dispensary on its present basis as a charity, and a committee was appointed to report upon the best means of forming a dispensary on provident lines.

text with good woodcuts. Thus he differentiates the pneumococcus of Fränkel-Weichselbaum as the cause of one form of conjunctivitis, the Morax-Axenfeld diplo-bacillus as that of another, the Koch-Weeks bacillus as that of a third, and the streptococcus as that of a fourth; the gonococcus of Neisser and the Klebs-Löffler bacillus of diphtheria complete the list. The characters of each of these infectious agents are described in full detail. A coloured plate with the explanatory text shows the characters of conjunctivitis trachomatosa or trachoma. The differing and to some extent incompatible views of J. Müller, Eble, Duvillard, Himly, Berlin and Iwanoff, Leber, Saemisch, Sattler, Rählmann, and several others who have occupied themselves with the pathological characters of trachoma are given. Professor Greeff describes the trachoma follicle as sharply-defined nests or knots of cells lying in the adenoid tissue of the conjunctiva. Blood-vessels penetrate into the mass, which is traversed by a connective tissue framework with fixed connective tissue cells, the whole invested by a feebly developed connective tissue capsule which he depicts. The cells inclosed by the capsule present great variations, lymphocytes, mononuclear and polynuclear leucocytes, phagocytes, and giant-cells being found.

The changes that occur up to the period of cicatrisation are very instructively given. Professor Greeff will in no wise admit the division so often met with in books of follicular and papillary and mixed trachoma. He considers that the infectious agent or bacillus has not been discovered, but he has no doubt of its existence. The author then describes the microscopical features of various forms of conjunctivitis, as of C. veralis; C. petrificans; C. nodosa, or pseudo-tuberculous conjunctivitis; xerosis conjunctivæ with its bacilli; pemphigus; amyloid degeneration of the conjunctiva; and various tumours of that membrane, as sarcoma, papilloma, adenoma, fibroma, angioma, and cysts, are carefully and fully described in succession.

We have only here given the mode in which the conjunctiva is treated by Professor Greeff and it will be seen how full and instructive his treatise is, but we hasten to add that the pathological conditions of the cornea, sclera, iris, and corpus ciliare are equally well given and that since the appearance of Pagenstecher's "Atlas" no work has equalled it. It will be studied by all ophthalmic surgeons and constitutes a very important addition to our knowledge of the pathology of the eye. We trust that the second part will soon make its appearance.

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*A Treatise on Surgery by American Authors for Students and Practitioners of Surgery and Medicine.* Edited by ROSWELL PARK, A.M., M.D., Professor of the Principles and Practice of Surgery and of Clinical Surgery in the Medical Department of the University of Buffalo, &c. Condensed edition, with revisions. With 625 Engravings and 37 full-page Plates in colours and monochrome. London: Henry Kimpton. 1901. Pp. 1262. Price 25*s.* net.

THE valuable treatise on Surgery edited by Dr. Roswell Park and published a few years ago achieved the success which it deserved. It was felt, however, that it was rather large and expensive for the average practitioner or student, and therefore it was decided to issue a smaller edition, while at the same time the opportunity has been taken of revising numerous points In its present form we may apply practically all the remarks that we made on the original edition in 1898,[1] when we reviewed the work very fully. The chief effect of the contraction of the size of the treatise has been to make it more readable and more handy in use. It is certainly now more fitted for the use of students.

It is natural that we should look to see if any of the points to which we drew attention in reviewing the original edition have been altered. Unfortunately, they have received no notice. We still find "Lister's long splint" when it should be "Liston's"; Celsus is still described as the "prince of Greek physicians," although he lived in Italy and wrote in Latin; and still no mention is made of the value of potassium iodide in the treatment of actinomycosis in the general account of that disease. Of course, these are small points, but it would be well to correct them before another edition appears.

We must also draw the attention of the editor of the work to the statement that "fibrin is produced by the union of two substances, known as fibrinogen and paraglobulin." For many years it has been recognised that paraglobulin has nothing to do with the formation of fibrin.

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## LIBRARY TABLE.

*Phototherapy: (1) The Chemical Rays of Light and Small-pox; (2) Light as a Stimulant; (3) The Treatment of Lupus Vulgaris by Concentrated Chemical Rays.* By Professor NIELS R. FINSEN of Copenhagen. Translated from the German edition and with an Appendix on the Light Treatment of Lupus by JAMES H. SEQUEIRA, M.D., M.R.C.P. Lond., Dermatological Assistant and Medical Officer in Charge of the Light Department at the London Hospital; Physician to the North-Eastern Hospital for Children. London: Edwin Arnold. 1901. Pp. 79. Price 4*s.* 6*d.*—The three articles on the Action of Light in Disease, which are here presented in an English dress, are recognised as very valuable contributions to the study of a subject which had been greatly neglected by physicians. That light affected the pustulation in small-pox, and that by limiting the light of the sick-room to the red rays the severity of the disease could be mitigated, was held more than two centuries ago, though comparatively recently the idea was ridiculed. Professor Finsen's investigations into the effect of light on small-pox placed the subject on a definite experimental basis. He showed that if only red light be allowed access to the patient the vesicles do not, as a rule, enter upon the stage of suppuration and that hardly any scarring results. This investigation also included a study of the effects, macroscopic and microscopic, of light on the skin, and valuable results were obtained. The second article originally appeared in 1895, and deals with Light as a Stimulant. Professor Finsen made many experiments on the effect of rays of different colours on some of the lower forms of life and found that the chemical rays seemed much more exciting than the red rays; the chemical rays stimulated these animals, tadpoles, beetles, worms, and salamanders, to movement, while they came to rest when only red rays acted on them. The last essay is on the Treatment of Lupus by Concentrated Chemical Rays. The material of this paper has been presented to English readers several times in abstracts and therefore we need say little about it. It will be convenient for many to have a full account of it in English. Dr Sequeira has written a useful appendix which consists of a *résumé* of a paper by Dr. Forchhammer who is in charge of the clinic at the Finsen Light Institute at Copenhagen. This paper brings the subject up-to-date.

*Introduction to the Differential Diagnosis of the Separate Forms of Gall-stone Disease, based upon his own Experience gained in 433 Laparotomies for Gall-stones.* By Professor HANS KEHR of Halberstadt. Authorised translation by WILLIAM WOTKYNS SEYMOUR, A.B. Yale, M.D. Harvard, formerly Professor of Gynæcology in the University of Vermont, &c. With an Introduction by Professor KEHR. London: H. Kimpton. 1901. Pp. 370. Price 9*s.* net.—An experience founded on more than 400 operations for gall-stones cannot fail to be of interest to all surgeons, and therefore Dr. Seymour has done well to introduce this work to the English-speaking peoples, among whom it was hardly known. The book consists of two parts. The

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[1] THE LANCET, Nov. 12th, 1898, p. 1270.

*Private and Confidential.*

# APPLICATION FORM.

## *To the Almoners of the Lancet Relief Fund.*

The applicant should here state shortly :—

1. The nature of the emergency that has arisen.

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2. The circumstances out of which it has arisen.

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3. The amount of the grant desired, and whether by way of loan (free of interest) or of gift.

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4. If by way of loan, state when the loan will be repaid; and from what source the funds to repay it are expected to be forthcoming.

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*Continued on page 172 C.*

# THE LANCET RELIEF FUND.

*For Members of the Medical Profession and their Widows and Orphans when in Distress.*

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## ALMONERS.

THE PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.
THE PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.
THE PRESIDENT OF THE GENERAL MEDICAL COUNCIL.
THOMAS WAKLEY, F.R.C.S. Eng.
THOMAS WAKLEY, Jun., L.R.C.P. Lond.

## HON. AUDITOR.

SIR HENRY PITMAN, M.D. Camb., F.R.C.P.

———:0:———

THIS FUND will be provided year by year in the month of January to the amount of at least £300 solely by the Proprietors of THE LANCET, and administered free of cost, for the purpose of affording immediate pecuniary assistance to Medical Men, or their Widows and Orphans, *in cases of Acute Distress and Emergency*, by the grant of money by way of loans free of interest, or gifts, as the circumstances of the various cases may require.

Applicants must satisfy the Almoners of the Fund that they are qualified under the following regulation:—

> *"The recipients shall be such persons as satisfy the Almoners that they possess one or other of the following qualifications—that is to say: (*a*) That the applicant holds a registered medical qualification, and that he has fallen into pressing need of immediate pecuniary relief; or (*b*) That they are persons who have been, previously to the date of application, legitimately dependent upon some person holding a registered medical qualification, and that they have pressing need of immediate pecuniary relief."
>
> *(In the case of Widows and Orphans, in order to come within the scope of the Fund, the death of the Husband or Father must have been of recent occurrence.)*

To ensure the utmost despatch, the "Application Form" upon the other side should be filled up and forwarded (in an envelope superscribed "THE LANCET Relief Fund") to the Secretary, Mr. CHARLES GOOD, THE LANCET Offices, Strand, London, W.C.

The application *must* be accompanied by two separate Testimonials (originals, not copies)—one from the Clergyman of the Parish or other resident Minister of religion, and one from a registered Medical Practitioner. Each Testimonial *must* state—(1) that the application addressed to the Almoners has been read; (2) how long the writer has known the applicant; (3) that the writer believes the statements made by the applicant to be perfectly truthful, and such as may be acted upon without further inquiry; and (4) *may* state any other particulars that the writer desires to place before the Almoners.

Testimonials written for the Almoners of the Fund will in no case be returned.

*No.* ____________

# THE LANCET RELIEF FUND.

*Name* ______________________________

*Address* ______________________________

______________________________

*Received* ______________________________

*Considered* ______________________________

*Result* ______________________________

*Date* ______________________________

5. Whether the applicant is entitled or able in the circumstances which have arisen to look to any other source of assistance, and if so, what is the expected nature and extent of such assistance

6 Whether the applicant is receiving, or has received during the past six months, pecuniary aid from any Medical Charity.

7 State how the applicant is qualified to receive assistance, vide regulation* on first page

8 Particulars of

*Applicant's age* ____

*Number in family* ____

*How many are self supporting* ____

*How many are partially dependent* ____

*How many wholly dependent* ____

*Applicant's Signature* ____

*Address* ____

*Date* ____

*Continued from page 172 B* ]

metropolis. For not only are the London theatres visited by thousands of persons yearly from every part of the United Kingdom and from abroad, but regulations which are enforced for the safety of playgoers in London are likely to be quickly imitated in our other great towns. This question is one in which THE LANCET must necessarily take a keen interest, since we have always felt that nothing which affects the health or the safety of the public can possibly be indifferent to us. Of course, a vast improvement in respect of safety has taken place in all English theatres, and, indeed, in theatres all over the world, during the last 20 years. Playhouses are more scientifically constructed. Party walls of great thickness between stage and auditorium and the presence of firemen behind the scenes are now insisted on. The importance of isolated sites wherever possible for such buildings is widely recognised. Fire-proof curtains are in general use, while the introduction of electric lighting, more particularly behind the scenes, has unquestionably diminished the danger of fire. What the London County Council has done, and what other local authorities would do well to do also, is to systematise the safeguarding of theatres by drawing up a precise code of rules and formulating their requirements for the information of theatrical architects and managers. It is true that complaints are heard, in London at least, from these gentlemen that the requirements of the Council are capricious, that there is no finality in their demands, and that costly alterations are occasionally insisted on which are not really necessary. But this only means that the last word has not yet been spoken in the art of theatre-building and that it is only by slow degrees that local authorities, whether in London or elsewhere, can arrive at a completely satisfactory definition of what is an ideally safe playhouse.

Meantime it is only right that every care should be taken to discover any additional safeguards that may be useful and it would be unreasonable to complain, as theatrical managers have been known to complain, of a progressive increase in the demands made upon them by the requirements of the local authority. Certainly no sympathy will be felt with such complaints among members of the medical profession, for with them the saving of life must ever be the first consideration. After a time no doubt experts will have arrived at a conclusion as to what points are essential to the safety of a theatre under modern conditions and how the dangers that arise from fire and panic may best be guarded against. It will then be possible for the local authorities in all our great towns to draw up a code of regulations which will secure the maximum of safety for playgoers while making no demands upon managers which reason and experience do not show to be essential. One of the points upon which the London County Council has lately insisted is the danger of overcrowding. And in this it seems to us that its action has been indisputably wise. The practice that prevails in theatres in all parts of the kingdom of allowing the gangways to be blocked with spectators is a most undesirable one, and in London, at least, the Council is determined to check it. Without speaking of the unhealthy ditions which must prevail in a playhouse thus overded—a point on which, among medical men, there can be no two opinions—the additional risk which would be caused in case of an outbreak of fire when the passages are filled with spectators would be very great. There were even certain theatres in London where seats used to be placed in the gangways when all other places were full; this dangerous practice, however, we are happy to say, is now forbidden.

But it is with the most recent regulations of the London County Council, in which it is understood that the Lord Chamberlain entirely concurs, that we are here specially concerned. Two of these deal with points which we have not yet touched upon. One rule provides that "the public may leave the theatre at the end of the performance by all the exit doors." This is of the first importance, and the rule deserves to be adopted by all the theatres in the kingdom, and, indeed, in the world. At the present day all theatres, it is to be hoped, have what are called "extra exits," but these are almost universally kept closed. In many playhouses the audience are not even allowed to use them except in case of emergency. The result of this state of things is obvious. Exits which the public are not accustomed to use escape notice in moments of panic. In some cases through long disuse it has ceased to be possible to open the doors. Instances have even been known where these "safety" exits have been actually barred up in such a way that escape by them from within would be impossible. The excuse urged for this extraordinary state of things is that a larger staff would be required if more than one exit in each part of the house were commonly used. This, however, is certainly not a sufficient reason for permitting so dangerous a practice. The rule that so-called "extra exits" should be always and at all times available to the public, that they should be fastened only in such a way that pressure from within would immediately open them, and that every evening at the close of the performance they should be thrown open for general use, is a wise one. The other new regulation is that the fireproof curtain is to be lowered at least once during every performance so as to ensure its being in proper working order. This again is a rule which will at once commend itself to the common sense of every thinking person. A mechanical contrivance such as a heavy fireproof curtain, unless it is constantly used, is very liable to get out of order. A cry of fire arises, and when the attempt to lower it is made the mechanism refuses to act, the curtain sticks, and an elaborate and costly safeguard proves valueless from lack of use. Certainly if fireproof curtains are to be fitted in theatres it is only reasonable that they should be lowered nightly. The amount of time taken by the operation would be infinitesimal and the additional security would be immense. Medical men, the aim of whose art is the relief of suffering, must welcome regulations such as these which aim at reducing, and perhaps ultimately abolishing, the terrible waste of life which has too often been associated with fire or panic in theatres.

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## The Horos Case.

On Dec. 20th, 1901, Frank Dutton Jackson, aged 35 years, and Laura Editha Jackson, aged 47 years, man and wife, were convicted at the Central Criminal Court and

# THE LANCET.

*LONDON: SATURDAY, JANUARY 18, 1902.*

## Small-pox in London.

SMALL-POX continues to increase in London, and already the number of cases notified has in a single week amounted to 250. Cases have occurred in each of the 29 districts, but the disease has been specially prevalent in St. Pancras, Holborn, Stepney, and Southwark, spreading in the main amongst persons occupying the poorer tenement houses and affecting the common lodging-house class and their associates. Judging by the experience of previous epidemics, it may be expected that the increase will be manifested for some weeks to come, and if we may draw conclusions from an interesting diagram in the last published annual report of the medical officer of health of the County of London which is based upon the death records of 60 years, there should be some falling off in March, with a further increase in April and May, and then, as the warmer weather sets in, a general decline. The small-pox in London is manifesting its effects in more distant parts of the country, and we hear of cases due to infection conveyed from the metropolis as far as Wales and Exeter. There does not, however, appear to be any evidence of pandemic small-pox. The returns of the Registrar-General show that up to the present time but few deaths from this disease are occurring in Paris, although it is probably to the small-pox in Paris last year that London now owes its infection. Germany seems exempt so far as its principal towns are concerned, as might be expected in a country where revaccination is general. But Austria and Italy appear from the records to be equally exempt—and these countries cannot claim that their immunity may be due to the same cause as Germany; and, again, the northern towns of Europe, with the exception of St. Petersburg, appear to be equally free. There is therefore ground for hoping that the small-pox of London, like the small-pox of Paris, may last for only a year, but it is probable that for the next few years it will continue to cause trouble to sanitary authorities. The fact pointed out in the report to which we have referred that the period which has elapsed between the epidemics of 1838 and 1871 was 33 years and that a like period since 1871 is now drawing to a close, suggests that we may have at the present time the beginnings of more widespread prevalence.

There has been much demand by anti-vaccinationists for the vaccination statistics of the patients recently admitted into the hospitals of the Metropolitan Asylums Board, as if there were some possibility that they would teach a lesson dissimilar to that which had been provided by every previous epidemic in every place The report which the Metropolitan Asylums Board received from its statistical committee on Saturday last tells the same story as that to which we are accustomed. 760 vaccinated persons had a fatality of 14 per cent., and 190 unvaccinated persons had a fatality of 50 per cent. It would have been well if the figures had included the deaths and recoveries of all those who were admitted during the year 1901 instead of the actual deaths and recoveries during that year, for the latter method has a tendency to include a disproportionate number of deaths owing to the short period during which the disease has prevailed in London. In a few weeks' time it will be possible to tell a more complete story, and we trust the tables, corrected in the sense which we have indicated, will be again published. The report gives interesting information of the incidence of the disease on public officials and other persons brought while in the performance of their duty into contact with cases of small-pox. It is in the highest degree discreditable to the London sanitary authorities that during the year no fewer than 21 persons were admitted into the hospitals who were employed on the work of disinfection, most of whom were the servants of borough councils. Not one of these persons, the report states, had been vaccinated since infancy. With a record such as this we are reminded that claims have been put forward for the borough councils to administer the vaccination law. We are bound to remark that their inability to take care of their own servants will not impress the public with a sense of their fitness for this duty. There is much need for the association of the work of vaccination with the disease-preventing authorities, and the neglect to secure the protection against small-pox of their own officials is distinctly discouraging.

The records of the Metropolitan Asylums Board provide useful material for the purposes of comparison. Between the years 1884 and 1900 inclusive 17,900 cases of small-pox were received into their hospitals and 2198 persons were employed therein. Of these 17 contracted small-pox, of whom 13 were not revaccinated until after they had joined the hospital ships, while four were workmen who escaped medical observation. During the past year not a single case of this disease has occurred among the staff of the hospitals. We sincerely trust that the publication of these figures will have the effect of influencing many to resort to revaccination. It should be understood that it is open practically to everyone to make himself absolutely insusceptible to small-pox, and it needs to be remembered that there is sufficient small-pox in London to render exposure to infection a possibility to all. A concluding paragraph in the report of the Statistical Committee is an extract from a report published in 1872; this report states that out of upwards of 14,800 cases of small-pox received into the hospitals only four well-authenticated cases were treated in which revaccination had been properly performed. The evidence of the value of revaccination afforded by the cases admitted in 1901 is not stated, and we do not doubt that it would have been if there had been any reason to re-state the case. Without the aid of the public, sanitary authorities and medical practitioners can do but little, but with ready coöperation the prevalence of small-pox could be largely reduced.

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## Theatres and the Safety of the Public.

THE efforts which the London County Council has recently been making to secure the safety of the playgoing public have an interest far wider than the limits of the

Sweeting, Dr. W. W. E. Fletcher, and Dr. H. T. Bulstrode, three of the Board's medical staff, are dealing with the metropolitan area properly so-called, while other medical inspectors are paying visits to the sanitary and vaccination authorities in the outer ring. But Members of Parliament with inquiring minds also will be asking what the London County Council is doing to promote harmonious action among the several borough councils over which, in connexion with bubonic plague, it exercised a benevolent and a useful influence. The enemies of the Council—all of us have enemies—will not be slow to infer that the Council, now that there is a little unpopular fighting to be done, is loath to move, and that in the matter of small-pox prevention, which involves considerations as to vaccination, the less said or done the better. But if these be its views it may be found that other efforts will be made to bring together a meeting of the local authorities and to evolve a scheme of joint action which will deprive the Council of much of the credit which in the administration of the sanitary affairs of the metropolis it has, up to now, most deservedly gained. The Council, it must be remembered, possesses no jurisdiction as to vaccination. Under these circumstances the active intervention and assistance of the President of the Local Government Board may be desirable. There are no thinking people who wish to see the fair name of London as regards health jeopardised by the small but rampant body of anti-vaccinationists, nor will the working-classes welcome the decline of trade which will inevitably attend a serious extension of the present outbreak. The metropolitan medical officers of health are largely independent officers, able, and withal anxious, to do their duty. But in their endeavours they must be supported by the head of the public health service of the country, and we trust that Mr. Long will make it clear at an early date in the session that he intends the Vaccination Act to be enforced and all other measures against the spread of the disease to be taken; that efforts shall be made to bring about the notification of chicken-pox, that sanitary authorities shall provide expert advisers to assist in the diagnosis of small-pox, that contacts shall be sought out and watched, that school-children shall be inspected as to their vaccination, that vaccination and revaccination shall be promoted by all available means, and, finally, that the medical officers of health and the vaccination officers shall be *encouraged* and supported in their efforts

## THE LANCET RELIEF FUND.

A perusal of the annual report of the Almoners of this Fund, which will be found on page 186, serves as a reminder, if any were needed, that the falling-off in more recent years of the number of those seeking admission into the medical profession does not of necessity point to an increase in the worldly prospects of those who are already within its portals. We do not say, judging from our experience in the administration of the Fund which it has been our privilege to provide for the past 13 years, that it can be claimed that there is any widespread necessity for relief among the profession. We believe that the exact truth is rather that there are many who are just able to earn a bare living out of the exercise of that profession which cost them (or their parents) so much to enter—that the receipts and (of necessity) the outgoings are so evenly balanced that there is absolutely no margin to provide against even the least adverse circumstance which may arise. Our experience in the administration of the Fund teaches us that this is a true statement of the position in which many of our brethren find themselves day by day, week by week, and year by year, with the ever-present anxiety to make both ends meet and yet to keep up appearances—a position in itself well-nigh intolerable. Add to this the inevitable suffering of the sensitive husband and father who, having failed to make even a small provision by insurance, or by joining such an excellent body, for instance, as the Society for the Relief of Widows and Orphans of Medical Men, sees absolutely no prospect of leaving anything behind him for the future support of those dependent upon him should his professional career be cut short, and the picture we draw is on all fours with many of the cases which come before the Almoners. During the year 1901 no less than 82 applications for assistance were received—a number far in excess of those received in any previous year, which rather points to the fact that members of the profession, in common with their lay brethren, are feeling the increased cost of living brought about by the state of affairs in South Africa. Of these 82 applications 35 were dealt with by gifts of money ranging from £5 to £20, and two cases were relieved by way of loan. In addition, one applicant required the guarantee of his funeral expenses to enable him to enter a convalescent home, which the Almoners granted. The total relief afforded involved the expenditure of £383 10*s.*—the largest amount distributed in any one year since the inauguration of the Fund in 1889. Many letters from those who have benefited have been received, expressing gratitude for prompt relief which has enabled them to mitigate, and oftentimes to overcome, their difficulties. To those who have so ungrudgingly helped us in our labour of love it is again our privilege to make public acknowledgment of our indebtedness—to Sir William Selby Church, Bart., the President of the Royal College of Physicians of London; to Mr. Henry Greenway Howse, the President of the Royal College of Surgeons of England; to Sir William Turner, K.C.B., the President of the General Medical Council; to Sir Henry Pitman, for many years the Registrar of the Royal College of Physicians of London; and also to the late Sir William MacCormac, Bart., K.C.B., K.C.V.O., who during his five years of office as President of the Royal College of Surgeons of England did so much for the Fund. The application form of The Lancet Relief Fund will be found in our present issue, and can be readily detached for use in case of need. We again take an opportunity of asking those of our readers who may have occasion to assist in furthering any application made for relief from this source to note carefully the conditions on which applicants become entitled to participate in the benefits of the Fund, as it is still found that many requests are put forward which are so far outside the objects of the benefaction that they cannot be entertained, and from such applications nothing but disappointment can result. All applications should be made on the prescribed form, and should be sent to the Secretary of The Lancet Relief Fund, The Lancet Offices, 423, Strand, London, W.C.

## THE MACCLESFIELD INFIRMARY.

Like the war in South Africa, the contention between the governors and the honorary staff of the Macclesfield Infirmary has once or twice been prematurely reported to be ended. At last, however, an agreement seems to be made, for at a meeting of the governors held on Jan. 13th a motion was carried with one dissentient to the effect that in future "when a vacancy occurs it shall be advertised at least twice in the recognised medical journals, the applications for the vacancy submitted to the honorary medical staff with a requisition that they carefully consider the same and, if possible, select at least three suitable candidates from which the governors shall appoint" No great fault can be found with this resolution, except, perhaps, that the word "requisition" instead of "request" is needlessly peremptory, and that the governors must consider house surgeons as inanimate objects, as the pronoun "which," according—among other authorities—to sentenced—the former to 15 years' penal servitude and the latter to seven years'. The prisoners, commonly known as Theodore and Laura Horos, were at the head of a *quasi*-religious institution, the "Theocratic Unity and Purity League." The chief tenets of the league were set forth as chastity, celibacy, self-abnegation, and secrecy, and the induction of novices was accompanied by the most grotesque ceremony and mystic observances, such, in fact, as were calculated to lead to mental bewilderment and especially in the case of emotional subjects. A fruit and nut diet was enjoined as a means to a higher spiritual development. That the order was established for the main purpose of robbing individuals who had the misfortune to be engaged within its meshes there can be no shadow of doubt. Had the *modus operandi* of the prisoners ended here the case against them would have resolved itself into a charge of vulgar fraud. Who were the persons sought for membership of the league and what were the means by which they were to be entrapped? The majority of the victims were impressionable young women attracted by matrimonial advertisements which the male prisoner caused to be inserted in a newspaper. Frank Jackson represented himself as being the son of the female prisoner and by specious promises of marriage he succeeded in persuading the girls to leave their homes and to join the Purity League. Then by subtle devices under the guise of religious instruction he obtained control of them bodily and mentally and with the concurrence and aid of his wife he encompassed their moral ruin. The details of the procedure adopted by the prisoners are too revolting to narrate.

Before the magistrate the following charges were preferred: (1) of having obtained by fraud the moneys and goods of certain young women whom they had lured into heir power; (2) under the Criminal Law Amendment Act, of having procured these women for immoral purposes; (3) of having been guilty of rape upon the person of Daisy Adams, aged 16 years; and (4) of an unnatural offence upon another young girl. Committed for trial and indicted upon all these charges, they were proceeded against on the third charge only at the Old Bailey—not that the others were of a venial character. Although Daisy Adams—whom they had obtained from her mother, a person in sympathy with their religious tenets, under the promise to adopt her and to teach her certain subjects—had arrived at the age at which consent might be urged in defence, it was contended by the prosecution that she had been coerced and forced by the prisoners and was not therefore a willing agent. The Solicitor-General in his opening speech remarked that "the formation of the Theocratic Unity and Purity League was part of the machinery employed to attract certain emotional members of the public and eventually produce their downfall."

In addition to the statute crime for which he was indicted Frank Jackson was proved to have been guilty of practices which, in the words of the late Sir James Paget, were "a filthiness forbidden by God, an unmanliness despised by men" Beyond a direct denial on oath by both prisoners of the offences charged against them the male prisoner pleaded "the chastity of impotence," a plea negatived by the highest medical evidence. That both the man and the woman were endowed with more than ordinary intellectual acuteness and power, and notably so in the case of the woman, only served to aggravate their heinous offences, for they prostituted their intellects in the service of their depravity. Primarily their aim was to obtain money from their dupes, but they must have been steeped in vice and debauchery to practise such means as they did, not only to commit robbery but by having control over their victims, whom they viciously regarded as silenced by the knowledge of their shame, to secure themselves from retribution for their guilt. The female prisoner, because of her age and sex, received a comparatively mild sentence. Probably Mr. Justice Bigham, who tried the case, had reason for making such disparity in the punishments, but to our minds Editha Jackson's claim to indulgence was visionary. Her past history was exceptional in the variety and malignity of her crimes. She was the wife of the male prisoner, and yet she aided and abetted in the committing of the most brutal and lustful assaults on several members of her sex. Possibly his Lordship regarded her mental condition as hovering over the confines of sanity and lunacy. The case will long be remembered as one of the most remarkable ever tried in our criminal courts.

# Annotations.

"Ne quid nimis."

## THE CONTROL OF SMALL-POX IN AND AROUND THE METROPOLIS.

The progress of small-pox in London raises the important question as to whether the new metropolitan borough councils and the boards of guardians are one and all using their best endeavours to control the march of the epidemic, and whether there is about their procedure that active coöperation which can alone ensure a measure of success. As regards the borough councils an opportunity is now afforded them of justifying before a somewhat cosmopolitan audience the new dignity and pomp which the legislature has recently conferred upon them. The administrative bodies of this and other countries are observing closely the manner in which London is combating the deadliest foe which now threatens its inhabitants, but against which science has afforded a sure and certain protection. Now that Parliament has reassembled the President of the Local Government Board will doubtless be inundated with questions as to the extent of the outbreak and the precautions which are being taken against its spread. We shall watch with some curiosity the answers which will be given by Mr. Long to these queries. Fortunately, a stronger or more determined Minister has never filled the departmental post in question, and we may rely upon it, generally, that he will deal firmly with any recalcitrant sanitary or vaccination authorities. There are already indications that the anti-vaccinationists are endeavouring to curtail the useful work both of the medical officer of health and of the vaccination officer, and it is a fortunate matter that neither of these officers can be removed without the sanction of the central authority. The educated portion of the community will look to Mr. Long to defend the public health of the metropolis with vigour and he may rest assured of the cordial support of the medical profession in his endeavours. He is, we believe, already making detailed inquiries, both inside London and in the ring of unions which immediately surrounds it, as to what steps are being taken. Dr. R. D.

in fermentation in the production of alcohol we added: "It is therefore not chimerical entirely to suggest that the day may come when we may not only owe our increased facilities of locomotion to the much-abused microbe but some of our effectual means of artificial illumination also." The following statistics and facts show how nearly this idea is being realised. France, according to *Engineering*, now produces a good deal over 55,000,000 gallons of spirit annually, much of which is denatured, rendering it liable to a relatively small duty, so that it is probable that soon its price will not be more than 1*s.* 4*d* per gallon. An association exists to promote the use of spirit for industrial purposes. At the Agricultural Exhibition in Paris last year 15 spirit motors were at work and they created considerable interest. It is stated that the results obtained with these motors has been satisfactory as a whole and that they tend to prove that success will be complete with motors built specially for consuming spirit. Amongst the advantages of spirit for motive power may be mentioned the fact that spirit motors have more elasticity than have petroleum motors and work more quietly, and, moreover, as we have previously pointed out, they are free from the objectionable smell occasioned by the petroleum motor. The efficiency of the spirit motor is also said to be greater Fermentation and its microscopic agency may after all prove a formidable rival to the naphtha wells of the world, for the ferment is ubiquitous and its food is abundant everywhere, while the sources of petroleum are far from us and widely scattered.

## A UNIFORM METHOD FOR THE ESTIMATION OF ARSENIC.

In our issue of August 24th, 1901, p. 541, we announced that a joint committee of the Society of Chemical Industry and of the Society of Public Analysts had been appointed with the view of deciding the question of a standard method for the estimation of arsenic and especially of small quantities as in beer. At that time this committee had already reported that it felt in a position to prescribe a method but that before taking that step it was advisable to submit this method to a continued practical trial. This has now been done with the result that the Marsh-Berzelius method, with certain precautions, is recommended. For generating the hydrogen from zinc diluted hydrochloric acid seems preferable, but first it must be ascertained to be arsenic-free; or it can be partially distilled after first oxidising with bromine and then reducing with sulphurous acid, the first portions coming over containing the arsenic as arsenious chloride. Sulphuric acid can be purified similarly by heating it with a little pure sodium chloride. The generating-flask should be of a capacity of 200 cubic centimetres and should be provided with a 50-cubic-centimetre tapped funnel and an exit-tube, the latter being connected with a drying-tube containing, first, a roll of lead paper or cotton-wool saturated with lead solution, then a wad of ordinary cotton-wool, next a layer of granulated anhydrous calcium chloride and again a wad of cotton-wool A hard glass tube drawn out to a point 0·092 inch in diameter is connected with this drying tube. A control experiment is first made which will show whether the starting of the actual experiment is justified by the non-appearance of a mirror after 20 minutes. Standard arsenical mirrors are prepared by adding a few cubic centimetres of a solution of arsenious oxide in hydrochloric acid (each cubic centimetre containing 0·001 milligramme of the oxide). The arsenic standard solution or the suspected fluid is added after the hydrogen has been coming off for 20 minutes. The standard mirror tubes are sealed while full of hydrogen and preserved and placed upon a white card for comparison. The test is described to be of such delicacy that, using quantities of 20 grammes of a solid substance or 20 cubic centimetres of a fluid, it will give a distinct indication of one part of arsenious oxide in 7,000,000. There is little doubt that this method will be very generally adopted and a universal method is certainly desirable in order that analytical discrepancies may be avoided. While, however, this report seems to provide a satisfactory method probably for the generality of cases we do not gather whether it would answer in specific cases, as, for example, in the case of organo-compounds of arsenic, notably the cacodyls. Nor would the report appear to throw any light upon the exact combination of arsenic present, say, in beer. We may hope that the Royal Commission on Arsenic which will meet again shortly will have some definite information on this subject brought before it.

## ROYAL MEDICAL BENEVOLENT COLLEGE.

We learn with pleasure that under the will of the late Mr. J. F. France, consulting ophthalmic surgeon to Guy's Hospital, a sum of money has been placed at the disposal of the Council of Epsom College to provide pensions for aged and necessitous members of the medical profession. The election is vested in the Council of the College for the time being, following the regulation which the donor formulated in the case of the 10 female scholarships at the Royal Asylum of St. Anne's Schools which he purchased and presented to the College. Mr. France was a warm supporter of the institution from its initiation and for many years was a most regular attendant at the meetings of the Council. This second benefaction leaving the election of the pensioners in the hands of the Council emphasises the confidence felt by the testator, derived from his personal experience, in the care with which the recipients of these great boons are selected by the governing body. The Council at its last sitting determined to found pensions of £30 a year to be called the "France Pensionerships." The first election to these pensions will take place at the meeting of the Council on April 2nd.

## DYSARTHRIA AND OTHER SPEECH-SYMPTOMS PRODUCED BY A SUBCORTICAL GLIOMA.

Cases of small encapsuled tumours affecting the functions of limited areas of the brain by acting upon the subcortical nerve-tracts concerned are not of common occurrence, especially as regards the functions of speech-utterance. Dr. James Stewart of Montreal, in *American Medicine* of Dec. 21st, 1901, records a case of special interest not only as illustrating the diagnosis and successful removal of the tumour but as showing that dysarthria and not aphasia is the characteristic form of speech-disturbance met with in the case of tumours subcortical in relation to Broca's centre. Following the lead of Lichtheim and Déjerine, it has been the custom with many neurologists to call speech-disturbances attending lesions in this situation "subcortical motor aphasia." Dr. Bastian in his recent work on aphasia has clearly shown that these subcortical lesions do not give rise to aphasia but to dysarthria or anarthria. The following case illustrates the above points. The patient was a man, aged 37 years, by occupation a painter. He was healthy and free from syphilis. He first came under Dr. Stewart's observation in December, 1900, with transient attacks of total loss of speech. He had been in perfect health, with the exception of a slight frontal headache, until the preceding August, when he was suddenly seized with an attack solely characterised by total loss of speech-utterance for about 30 minutes. Six weeks later he had a precisely similar attack, and up to the time of his admission (December, 1900) he had in all 10 such seizures, the last one occurring on the morning of admission. "During the attacks he understood perfectly what was said to him and knew what he desired to the Twentieth Century Dictionary, is "now used of things only." A long discussion took place over the motion, some contending that it was taking power out of the hands of the governors. One gentleman went so far as to say that he did not intend to take any further interest in the infirmary "now that it had closed its doors to women doctors." Possibly, when the present irritation has subsided, the interests of the patients may again appeal to him. After the motion was carried the mayor announced that he was authorised by the medical staff to place before the governors the withdrawal of their resignations. It is stated that Miss Clarke intends to practise in Macclesfield, where she will doubtless be treated with courtesy by her colleagues in the profession, and where she must now be well known.

## THE METROPOLITAN WATER-SUPPLY.

THE report on the condition of the metropolitan water-supply for the month of November, 1901, has recently been published. It is a matter for regret that the publication of the Water Examiner's report should always be so long deferred, and it is not easy to understand why there should be so much delay in the matter, especially when it is remembered that the report is always printed in the same form and that much of the information given month after month is identical in substance. During the month of November the water of the Thames was in good condition at Hampton, Molesey, and Sunbury. The height of the river varied from a point three inches above to one 10 inches below the average summer level. At West Molesey the rainfall during the month amounted to only 0·45 inch. The average amount of water abstracted from the Thames daily was 118,110,369 gallons, that from the Lee 39,372,315 gallons, and the "springs and wells" owned by the companies produced a daily average amount of 48,239,786 gallons. The total daily amount, including that supplied from Hampstead and Highgate for non-domestic purposes, was 205,887,957 gallons, which represents a daily consumption per head of 32·68 gallons for a population estimated at 6,300,724 gallons. The daily amount supplied per head varied considerably in the cases of the different companies. The greatest amount supplied was that given by the Chelsea Company which was 42·21 gallons per head; the smallest amount given was that supplied by the East London Company, which was at the rate of 27·27 gallons per head. For the accuracy of these figures the companies are responsible, and it does not appear that the Water Examiner has the power, even should he have the wish, to ensure their accuracy. In regard to the approximate amount of water delivered for other than domestic purposes the Chelsea Company estimates that 20 per cent of its supply, "exclusive of waste," is so used. The East London Waterworks Company estimate, that no less than 30 per cent. of its supplies are used for non-domestic purposes. A large proportion of this water is, we believe, accurately measured. It may be noticed that the East London Company in the return which it gives of the details of its supply does not make an allowance for "waste." Neither the Kent Company nor the Grand Junction Company makes any such allowance. All the other companies mention "waste." It is by no means clear what the reader is meant to infer from this word "waste" used in this connexion. During the month of November the number of supplies given by the companies was increased by 1508, and the total number now amounts to 936,641. A constant water-service is now professedly given by four of the eight companies, the Chelsea, the East London, the Grand Junction, and the West Middlesex. The Lambeth Company professes to give constant service to only 77·4 per cent. of its customers, so that nearly a quarter of them are still suffering from the inconveniences of an intermittent supply. Dr. T. E. Thorpe, the analyst to the Local Government Board, reports that all the samples of the Kent Company's water which were examined showed that it was, as usual, of "high organic purity and excellent quality." The specimens taken of the New River Company's water were clear, but "in the cases of the other companies, in some samples minute amounts of suspended matters were present." Of the samples which were collected on Nov. 11th and 12th full analyses were made. It is of interest to compare the relative amount of organic impurity which was present in these specimens. It was as follows: "Taking the average amount of organic impurity in a given volume of the Kent Company's water during the nine years ending December, 1876, as unity, the proportional amount contained in an equal volume of water supplied by each of the metropolitan water companies was: Kent 1·1, New River 1·3, Southwark 2·5, Chelsea 2·6, East London 2·7, West Middlesex 2·8, Grand Junction 2·9, and Lambeth 3·0." It is readily seen from these figures that the water supplied by the Kent Company and by the New River Company was of very much better quality than the water supplied by the other companies, and that the analysis of that supplied by the Lambeth Company gave the least satisfactory results.

## THE DISTRIBUTION OF PLAGUE.

DURING the week ending Jan. 5th, 1902, 9 cases and 6 deaths from plague have occurred throughout Egypt; all these cases and deaths have occurred among the native population at Tantah, 5 of the deaths taking place out of hospital. Notwithstanding the many difficulties which have been encountered at Tantah, the Director-General of the Sanitary Department considers that the work is going on there as satisfactorily as possible, thanks to the energetic measures carried out by Graham Bey and the European and native staff under his direction. As regards the Mauritius a telegram from the governor received at the Colonial Office on Jan. 10th states that for the week ending Jan 9th 37 cases of plague occurred, of which 22 were fatal. As regards the Cape of Good Hope, a telegram from the governor received by the Colonial Office on Jan. 8th states that for the week ending Jan. 4th the cases of plague at the Cape Peninsula numbered 1, a European; at Port Elizabeth and all other places the cases numbered 0. The deaths from plague were as follows:—Cape Peninsula, 0; Port Elizabeth, coloured persons 1, natives, 1; all other places, 0. The area of infection remains unchanged The cases of plague in persons under naval and military control numbered 1, a private in the 2nd Dragoons, at Greenpoint Camp, Cape Town.

## THE MOTOR AND THE MICROBE.

*Apropos* of an annotation on this subject in our issue of Jan. 4th, p. 44, we learn from an interesting article in *Engineering* of Jan 10th that alcohol for driving motors is coming into gradual use in several continental countries. In France this is owing to the duty paid on all imports of mineral oil and to the enormous development in the cultivation of the beet, the production exceeding by far that necessary to meet the home consumption of sugar. "There is no exaggeration," says our contemporary, "in stating that the experiments which are being carried out extensively in France for developing the use of spirit in the production of heat, light, and power have more for their object to come to the aid of the agriculture of the country than to mark a step forward in any branch of industry." We said in the annotation referred to that "the idea of microbes as a source of motive power appears at first sight preposterous, but a little reflection will show that indirectly even for this purpose micro-organisms may be very intimately concerned." And, again, after pointing out the rôle of micro-organisms the number of sick that poured in. That seems to us to have been, in the main, both the cause and the explanation of the temporary breakdown of the hospital service which took place and about which so much has been heard.

## SMALL-POX IN LONDON.

THE small-pox returns for the last week show no diminution in the number of cases. On Saturday, Jan. 11th, 48 fresh cases were notified and removed; on Sunday, Jan. 12th, there were 30 fresh cases; on Monday, Jan. 13th, there were 53 fresh cases; on Tuesday, Jan. 14th, there were 37 fresh cases; and on Wednesday, Jan. 15th, there were 24 fresh cases.

## THE CHEAP PISTOL.

SINCE we last referred to this subject in December there have occurred a "Brighton tragedy" and an "Eastbourne tragedy," presenting the usual features of murder and suicide by shooting with a pistol, and the New Year had not been two days old before the "Hunstanton tragedy" showed again the danger of allowing deadly weapons to be bought and carried without restriction. If any member of Parliament should care to ask for a return showing the number of deaths attributable to the revolver in Great Britain during 1901 he would, we believe, find that they were fully equal to those resulting from many of the minor actions that have been fought in South Africa Parliament in this session no doubt will have plenty to occupy it to the exclusion of such matters as legislation for the restriction of the sale of fire-arms. At the same time the subject may at any moment, when it is too late to legislate, become one of considerable importance The coronation of His Majesty is approaching, and by that date London is likely to contain a large number of foreign monarchs and their representatives, while our own Royal Family will be constantly before the public. We have no intention of being pessimistic or alarmist but to shut the door after the horse is stolen is proverbially a useless exercise of caution, and the murder of the late President of the United States should serve to remind us that any miscreant with a disordered brain and 3s. 6d. in his pocket may at any time take a valuable life if he is reckless or mad enough to sacrifice his own.

## SEWAGE DISPOSAL AT CHICHESTER.

THE cathedral city of Chichester has been most unfortunate in the matter of its disposal of sewage. It was only six years ago that a complete scheme of main drainage was carried out at a cost of upwards of £42,000. Now the citizens are face to face with an expenditure of a sum which will probably not fall short of five figures for the improvement of the outfall works. This new expense has been forced upon the corporation owing to a law-suit successfully brought against the city by Lord Gifford for allowing the discharge of foul effluent from the works into the harbour. The sanction of the Local Government Board is now being sought by the corporation to borrow the necessary sum for carrying out an improved scheme at the outfall works. The corporation have adopted the Native Guano Company's system, by which it is proposed to enlarge the tanks to three times their present size, and in lieu of treating the sewage with eight grains of chemicals per gallon, as in the past, to substitute 50 grains 60 gallons per head of the population per day are to be so treated, and all that there may be in excess of this is to be received in rough filters or placed upon the land. The company's scheme provides that it shall take the whole matter of the outfall works and the disposal of the sewage entirely out of the hands of the council. This requires the fullest investigation before the corporation's seal is affixed to the contract. Sewage-disposal is a very important matter; so, also, must be to Chichester the proposal of the company to convert the sludge into manure. The question of Chichester's outfall sewage works is no new one to the Local Government Board. In the summer of 1899 cases of typhoid fever were traced directly to the consumption of sewage-contaminated cockles from the harbour, and on that occasion the assistance of the Whitehall authorities was sought.

## DYSENTERY IN ASYLUMS.

THE discussion upon dysentery in asylums which was opened by Dr. F. W. Mott, F.R.S., at the meeting of the Epidemiological Society on Dec. 13th, 1901, will be resumed to-night (Friday, Jan. 17th) at 11, Chandos-street, Cavendish-square, W., at 8 30. Many physicians associated with the work of asylums are expected to take part in the debate, and Dr. J. W. Washbourn, C.M.G., will open a discussion on "The Relation of the Dysentery of Asylums to that of South Africa," his paper being illustrated by lantern slides and specimens.

## THE EARLY HISTORY OF THE ALCOHOL QUESTION IN RUSSIA.

AT any time a trustworthy account of the "liquor traffic" in Russia would have been of interest, and at the present moment so much attention is being bestowed on the alcohol question as it affects this country that a Russian report recently issued by State Councillor J. N. de Lodijensky is worthy of note. From this report, which is the joint work of M. A. G. Pedashenko and M. A. P. Vihliaief, it appears that the Russian people have been accustomed to the use of alcoholic beverages from the earliest times. Ancient manuscripts and legends bear witness to the fact that even in prehistoric times the people were given to feasting and that "med" and beer were enjoyed by the poor whilst wine derived from grapes was drunk by the rich. The "med," like our English mead, was made from honey and is described as having been "slightly intoxicating"; of the composition of the beer we are not told. The art of distillation was introduced into Russia from Western Europe at the end of the fourteenth or at the beginning of the fifteenth century, and from that time the consumption of spirits rapidly increased. The reigning princes granted power to some of the people to sell alcoholic drinks and they also established places for its sale under their own management At a later period under John III. the Crown assumed the sole right to make alcoholic beverages. This led to illicit brewing and distilling. John IV., who is best known in England as Ivan the Terrible, established a number of public houses about the year 1555. These houses were afterwards let on lease. Under this system the sole right to keep public-houses and to sell alcoholic drinks in any given district was vested in a single individual. The right to the monopoly was sold for a term of years to the highest bidder and the fee was paid to the Crown. In some places the monopoly was retained by the Crown and the trade was carried on by persons nominated by the Government and bound on oath to trade honestly. Of the spirits used some were prepared in the public-houses; some were manufactured by merchants or landed proprietors. In the districts in which the monopoly was sold the spirits were made by the holders of the licence. In those parts of the country which were retained by the Crown the arrangements for carrying out the work were rather peculiar. Civil officers called "inn-heads" were appointed to conduct the business, and they received no payment for their work, but on the contrary they had to make good a deficit should the returns fall short of the sum fixed by the Government as the minimum. On the other utter." During the last few attacks a slight "deadness" and numbness of the right index and middle fingers were momentarily felt. Optic neuritis and headache of a severe character now developed, and later there appeared facial spasm followed by paresis of the lower facial muscles on the right side. There was also a weakness of the right half of the tongue. Articulation now became difficult, at first as regards labials and later as regards all sounds (dysarthria), and finally a condition of complete inability to utter words (anarthria) prevailed. Cerebral tumour was diagnosed, and after trephining and opening the dura mater a subcortical tumour was found in the lower part of the ascending frontal convolution. The tumour measured one inch by three-quarters of an inch; it was encapsuled and presented a firm consistency. Microscopic examination proved it to be a glioma. "On removing the tumour about two ounces of turbid watery fluid escaped from beneath it, leaving a cavity just over the first part of the horizontal branch of the fissure of Sylvius." The power of articulation began to return gradually on the eighth day after operation, and when the patient left the hospital on the twenty-eighth day articulation was nearly normal. He, however, spoke slowly, labials especially requiring deliberate effort. Handwriting, which was at first incoördinate (graphic ataxia), also began to improve and in a short time it became quite normal. Muscular power in the right hand was always retained. Dr. Stewart points out that there is no clinical difference between the speech-disturbance of subcortical lesions and bulbar lesions, and that differential diagnosis is only possible by the help of collateral symptoms. The proximity of the tumour to the cortical hand centre accounted for the incoördination of writing which existed when the tumour had nearly attained its full size.

## THE PLASTIC SURGERY OF THE FACE.

THE art of repairing or replacing lost features has a great antiquity. In India especially, where removal of the nose has been long a favourite form of punishment, attempts to shape a new nose were made centuries ago and they met with a large amount of success. In Europe Tagliacozzi of Bologna devised several methods of replacing a lost nose, and his work describing his procedures was published in 1597. Yet for nearly 200 years these methods were disused, and it was not until near the commencement of the nineteenth century that a revival occurred in this important cosmetic art. Even at the present time many surgeons still recommend artificial noses as vastly superior to anything that surgery can effect, but the present results are very remarkable The various methods of skin-grafting have done much to facilitate these operations, but the surgeon is especially aided by the thinness, elasticity, and vascularity of the skin of the face. Dr. J. B. Roberts delivered the Mütter lectures at the College of Physicians, Philadelphia, and he chose the Plastic Surgery of the Face for his subject, and these lectures, a revised edition of which he has now published, provide probably the best extant description of the various procedures which may be adopted for repairing deformities of the face. There are two main methods by which lost tissue may be replaced. In one a pedunculated flap of skin is raised from a neighbouring part and is twisted on its pedicle until it occupies the new position, where the edges and surfaces of the tissues have been prepared for it. This is the "Indian" method and is in some ways the more satisfactory as the risk of sloughing of the flap is extremely slight. The chief objection against it is that it necessitates a scar at the spot from which the flap is removed. The other method is represented by the Tagliacotian operation. In this the flap is taken, not from the face, but from elsewhere—from the patient's arm or leg—or from some other person. In this method the risk of sloughing is undoubtedly increased except when pedunculated flaps are used, but in the latter case it is necessary to fix the arm so that the flap may be applied. This constrained position is, at first at least, very wearisome. Antisepsis and asepsis have enabled surgeons to undertake very extensive plastic operations, and it is not improbable that this group of procedures is capable of wide extension.

## THE KING'S SANATORIUM.

WE desire to draw the special attention of our readers to a notice which appears in our advertisement columns relative to the Prize Essay in connexion with the King's Sanatorium. The advertisement gives the replies of the Advisory Committee to sundry questions which have been addressed to the committee by intending competitors.

## SANNA'S POST AND THE BLOEMFONTEIN WATERWORKS.

EARL ROBERTS went to Woolwich on Jan. 13th to present medals to a number of officers and men who had returned from South Africa, and especially to honour the members of the Q Battery of the Royal Horse Artillery for their memorable and gallant fight at Sanna's Post. The Commander-in-Chief was accompanied by Lieutenant-Colonel E. J. Phipps Hornby, R A., V.C., who commanded the battery on the occasion in question. There is no need to detail all that took place at Sanna's Post and the manner in which Q Battery so greatly distinguishing itself, because these facts are already well known. As the subject is connected, however, with one of the most lamentable incidents in the medical history of the war we need not apologise for referring to it. A somewhat new and strong light has been thrown upon the occurrences which took place at Sanna's Post and which led to the capture of Colonel Broadwood's force and to the ambush into which the Q Battery accidentally fell by an article in the *Standard* of Jan. 14th. According to the account of the special war correspondent of the *Standard* the very hard fighting that occurred at this post was but part and parcel of a carefully prepared scheme to capture and destroy the waterworks. "After our entry into Kroonstad, whence President Steyn fled with wonted celerity, there came into my possession," writes the correspondent, "certain of his papers. Among them were many telegrams, marked 'confidential,' from commandants in several parts of the Orange River Colony. On March 27th Chief Commandant Christian De Wet sent the following telegram to Staats President Steyn at Winburg: 'Will it not be well to destroy the waterworks at Bloemfontein and Modder River, if that has not been done already? There are many troops requiring much water, and this may, perhaps, force them to camp elsewhere.' This advice was repeated with greater urgency on the 28th, and two days later Christian de Wet was on the ridge of hills overlooking the waterworks outside Bloemfontein and the doomed bivouac of Colonel Broadwood." The natural inference to be drawn from these and other confidential telegrams is that De Wet's object was not to ambush the British forces, but to destroy the waterworks near Bloemfontein, a step which he had repeatedly urged upon the council of war. Whether the capture of these waterworks by the Boers should have been foreseen and guarded against at all costs by the British troops it is not for us to say, but no one can doubt that their loss was followed by disastrous consequences as far as the health of Lord Roberts's army was concerned A deplorable epidemic of enteric fever suddenly occurred after the capture of these waterworks by the Boers, and the hospitals with the British forces were, for the time being, quite unequal to provide for has therefore kindly reduced these to "less difficult phraseology" from which we learn that "the nerves contain or consist of colloidal solution which resembles jelly before it jells. Nerve action is simply the passage to and from conditions of gelatification and solution through electrical discharges. . ... Negative ions, termed anions, may have several negative charges. Heat promotes gelatification while cold makes solution less stable, &c." In fact, we believe that we might have understood something of the matter, which seems very similar to Du Bois Reymond's electrical theory, had it not been for that well-meant but unfortunate determination to give it to us in "less difficult phraseology." But "jells" is a sort of word which is suggestive of the late Lewis Carroll's Humpty-Dumpty.

## THE HOSPITAL FOR EPILEPSY AND PARALYSIS, REGENT'S PARK.

IN aid of the above institution a performance took place at the St George's Hall, Langham-place, W., on Jan. 13th. A new and original four act play, entitled *The Scarred Hand*, was performed by a company of amateurs. The play is written by Messrs. Val de Garno and Leopold Montague, and the former name veils the identity of a medical man. No doubt, in consequence of this fact, the medical details which play a prominent part in at least one act of the play were free from the impossibilities and incongruities which are usually wont to accompany such matters behind the foot-lights. In the accident ward of "St. Paul's Hospital," for instance, when a "bad accident case" seems likely to die the nurse in charge did not, as we have seen before now on the London stage, fall upon her knees and pray for Divine aid, but with more practical, if less spiritual, instincts she promptly rang for the house surgeon This gentleman had not failed to impress upon her with regard to the case in question that "if he bleeds, he dies," and it was in consequence of this warning and the appearance of hæmorrhage, leniently screened, we may add, from a shuddering audience, that she took prompt steps towards the electric bell. The interest of the play is well developed from first to last and its incidents are not of the sensational or morbid character which the title had rather led us to anticipate. A hospital ward and dramatic conversations between a pallid "accident," who is also an ingenious burglar, and a buxom nurse cannot fail to give rather a curious and almost laughable effect when presented on the stage to an audience largely familiar with the quiet realities of hospital life. Nevertheless, the play interested, amused, and never bored. Even professed playwrights do not always achieve equally pleasing results. In the end virtue triumphs, villainy is exposed and handcuffed, and the unfortunate heroine is found, after all, not to have committed bigamy. With these pleasant factors and the matrimonial success of the senior surgeon of St. Paul's even the most exacting spectator must assuredly depart well pleased. That this was the case with the audience at St. George's Hall was evident from the hearty applause and from the calls for "author," to which the joint authors (one of whom also took a part in the play) responded. The hall was well filled and no doubt the Hospital for Epilepsy and Paralysis will gain a well-earned increment

## THE CLASSIFICATION OF NERVOUS DISEASES.

CLASSIFICATION of diseases is not only of importance to the student who is enabled thereby to perceive the natural relations and affinities prevailing, but is of practical use in helping towards a clearer insight into etiology and prognosis. In the *Revue Neurologique* of Dec. 15th, 1901, Dr. N. Chataloff of Moscow propounds a classification of nervous diseases which he regards as an improvement over the etiological classification which was published by Möbius in 1898. The main division is into diseases of nutrition in a limited sense, and anomalies of structure, hereditary or acquired. Diseases of nutrition, moreover, are subdivided into quantitative and qualitative. The whole scheme may be briefly expressed as follows. 1 Anomalies of structure of a hereditary character: these include spastic paraplegia, spinal spastic paralysis, cerebellar ataxia and Friedreich's disease, syringomyelia, Raynaud's disease, progressive muscular atrophy, amyotrophic lateral sclerosis, progressive bulbar paralysis, Huntington's chorea, paralysis agitans, Thomsen's disease, tic douloureux, nodding spasm, and some cases of epilepsy. 2 Anomalies of structure which are acquired: these include cerebral, bulbar, and spinal traumatism; neoplasms of the central nervous system; hæmorrhages, thromboses, or embolisms; intermittent claudication; traumatic neuroses and psychoses; and some forms of vertigo and neuralgia. 3 Maladies of nutrition: these are characterised by disturbances of nutrition in a limited sense and either quantitative or secondary to some form of toxæmia. The quantitative group includes neurasthenia, vertigo, cephalalgia, neuralgia, and exhaustion from overwork. The neuroses of this group have long been known as "functional," but according to Dr. Chataloff they may be regarded as due to lowered conditions of nutrition (quantitative) in the nerve-centres concerned. 4. The qualitative disturbances of nutrition, arising as a rule from some form of toxæmia, include the following: encephalitis in its various forms, hemiplegia, abscess, focal myelitis in its various forms, disseminated sclerosis, hydrocephalus, meningitis in its various forms, polyneuritis, facial hemiatrophy, the post-febrile paralyses (including Landry's paralysis), the neuropathies from alcoholic, saturnine, and arsenical poisoning, tabes dorsalis, Raynaud's disease, pellagra, hydrophobia, tetanus, eclampsia, epilepsy, myxœdema, and acromegaly, the neuroses of diabetes and of Addison's disease, and some forms of hysteria, neurasthenia, chorea, and catalepsy. The classification of nervous diseases is a matter of considerable difficulty, because the etiology of many of them is but little known, while the pathological changes during the prodromal and early stages are still less known. The classification of Dr. Chataloff into four groups may serve as the starting-point for further subdivision into smaller groups showing closer affinities than the scheme is capable of showing at present.

## DELEGATE MEETING OF THE INTERNATIONAL ASSOCIATION OF THE MEDICAL PRESS.

SOME time ago we announced that the International Congress of the Medical Press, which was to have met in Brussels last year, had been postponed.[1] It will be remembered that the staffs of the medical periodical publications of the various countries were invited to constitute national associations of the medical press. These national associations were to elect and to instruct two or three delegates who were to proceed to Brussels two or three days before the meeting of the next international congress. They were then to prepare the proposals that would be submitted to the congress. We have now received information concerning an important modification of this plan. The provisional international bureau, or committee, which has its headquarters in Paris, has come to the conclusion that it is preferable not to wait for the convocation of the international congress, but to bring the delegates together at an earlier date. As the success of the congress—indeed, the holding of the congress—depends in a great measure on the delegates being able to formulate practical proposals, these hand, in the case of a surplus the money was the property of the Crown But in such cases the collectors of the returns either received presents or "were rewarded by the Czar's gracious thanks" It was thus obviously in the interest of those who conducted the business that the trade should be a good one, and it is therefore not a matter for surprise that the number of inns increased and that drunkenness became more prevalent At length the Czar Alexis Mikhailovitch, after consultation with the heads of the Church, the nobles, and his councillors, established stringent rules for the conduct of the business The lease system was abolished in the year 1681 and only one place for the sale of liquor was permitted in each town This state of things, which would probably be considered a good one by some modern temperance reformers did not long continue to be in force, and many changes have since taken place in Russia in regard to regulations for the sale of alcoholic drinks

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[1] See THE LANCET, Nov. 2nd, 1901, p. 1210.

## ST THOMAS S HOSPITAL

THE great services rendered by the London hospitals, not only to the poor of the metropolis, but to patients from all parts of the country, have long been recognised by those who are conversant with the work of the metropolitan charities An appeal which has just been made on behalf of St Thomas's Hospital by the treasurer, Mr J G Wainwright, reminds us of this and calls attention to the great increase in the demands made on that hospital in recent years involving *a heavy addition to the expenditure without there being any* corresponding augmentation of the permanent sources of income Last year relief was given in 150,000 cases The income of the charity from its landed estate in 1880 was £39,373, and the expenditure for that year amounted to £40 979 For the year ending December, 1900, these estates yielded £42 810, but the necessary expenditure had risen to £52 011, leaving the sum of nearly £10 000 to be provided by benefactions and subscriptions The surgical cases calling for operative treatment have risen from 589 in 1880 to 2127 in 1900 We know very well that a vast amount of poverty and suffering exists in the immediate vicinity of the hospital, and we sincerely trust that Mr Wainwright s appeal may meet with a favourable reception.

## CIRCULARS ON TROPICAL DISEASE

SINCE the United States have occupied Cuba, Porto Rico and especially the Philippine Islands, the necessity of a competent knowledge among its army surgeons of tropical diseases has been constantly in evidence The *Medical Record* has urged upon the Government the need of the establishment of a school of tropical medicine, but up to the present its pleas have been of no effect However, some time ago, Colonel Charles Greenleaf, then Chief Surgeon of the United States army in the Philippines concluded that it would be in the interests of the American medical profession if the results of the investigations made by the Army Pathological Laboratory workers in the Philippines were published Accordingly, a series of medical circulars treating of diseases encountered in those islands have been from time to time issued The circulars in question are sent out under the direction of First Lieutenant Richard P Strong, U S.A , in charge of the Army Pathological Laboratory in Manila. Several numbers have already been published, but perhaps the most interesting is one on bubonic plague. This circular gives a remarkably full and lucid account of that malady, and while nothing novel with regard to its origin, spread diagnosis, or prognosis is given some of the final remarks as to treatment are worthy of note. These are "Yersin serum has been found useless here Recently, however, a small quantity was obtained from Tokyo with the use of which two out of three patients have recovered Protective inoculations are not practical for the following reasons Enormous plant necessary to produce the material, working force needed to inoculate the inhabitants opposition of the people to the inoculation, and temporary benefit derived therefrom While statistics are favourable to protective inoculation study of the epidemiological features of the disease throws considerable doubt on its value "

## THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC

AS will be seen by the report printed in another column a general meeting of the governors of this hospital was held on Jan 9th for the purpose of electing a new board of management on which will fall the duty of carrying into force the new rules which were recently adopted 10 seats had to be filled and for them 10 gentlemen were nominated by an influential section of the governors who are desirous of seeing the interests of the hospital placed in good hands Needless to say this list did not include any member of the late board, two of whom, however, offered themselves for re election The latter were nominated by one of their few remaining adherents and it was characteristic of the methods employed all through the controversy by this party that they were not content with a defeat of their candidature at the meeting but sacrificed the time and the money of this charity by demanding a ballot It is to be hoped that this will not overthrow the verdict of those governors who were sufficiently interested in the matter to present themselves at the general meeting , at the same time, there is comfort in the reflection that even if two of the discredited old board are re elected they will be powerless to oppose the determination of the new members to carry out the many reforms which are so urgently needed and which have been so bitterly opposed A bright feature of the meeting, and one which bodes well for the future, was the election to the post of President of the Earl of Dudley who may be relied upon to play a most important part in rescuing this deserving hospital from the brink of ruin

## SENSATIONAL SIMPLIFICATION

WHEN a *scientific fact, familiar enough to men whose* affair is science falls upon the ear of an average newspaper reporter the printed results are often remarkable and startling Not long ago a daily contemporary described a method of "infusing life which was nothing more or less than the process of transfusion into a vein familiar to all medical men Yet to readers of the newspaper it would seem that an epoch making discovery had been recently triumphantly achieved It is unfortunate that very often the name of a genuine scientific worker is incorporated in this manner with the most exaggerated accounts of what he would describe as simply unfinished scientific observation in the pursuit of which he is engaged, the results of which are not yet obvious and the publication of which, therefore, is entirely premature We make little doubt that Professor Loeb of Chicago, whose experiments with the eggs and larvæ of the sea urchin are well known, would thus regard the sensational reports upon his work recently appearing in daily newspapers According to the ingenious writer, Professor Loeb s experiments upon the eggs of an organism which is often hermaphrodite if not parthenogenetic—experiments which are described by the reporter as achieving the development of an unfertilised egg—entail not only an explanation of cancer, but also herald the greatest discovery of the Christian era and bring us within reach, if not of the creation at any rate of the indefinite prolongation, of existence. In another newspaper we are told that "Professor Loeb's announcement is expressed in 14 statements couched in scientific language unintelligible to the laity " The reporter s made but in which the eruption prevented any reliable observation as to cicatrices; and (3) "Unvaccinated"—i.e., cases admittedly unvaccinated, or bearing no marks of the operation, and as to which no statement was made.

The gross mortality is given as 24·28 per cent. It must, however, be borne in mind that in arriving at this figure many cases of recent admissions have been included because they have been completed by death; whereas the contemporary cases which will nearly all ultimately recover cannot be included until completed by discharge. The result being that the rate of mortality above given is undoubtedly higher than it will be when all the cases have been completed and the final rate ascertained.

he total mortality-rate per cent. of vaccinated cases was 14·21; of ıbtful cases, 65 08; and of unvaccinated cases, 50 52

t is useful to consider the statistics as grouped under age periods. der 10 there were only 12 vaccinated cases and no death; six ıbtful cases, all of whom died; and 95 unvaccinated cases, of whom died—a percentage of 54 74.

Jnder 20 there were 161 vaccinated cases, of whom three died—a centage of 1·87; 12 doubtful cases, of whom seven died—a percentage of 58·33, and 161 unvaccinated cases, of whom 79 died—a centage of 49 07.

here appears to be a distinct diminution in the protective power orded by primary vaccination after the age of 20 years. The death e rising from 9 85 in vaccinated cases between 20 and 25 years of age 28 95 in cases between 35 and 40.

*ncidence of disease on public officials and other persons brought, ile in the performance of their duties, into contact with small-pox es.*—Amongst the patients admitted during the year there were no er than 21 who were employed on disinfecting work (of whom one d), most of them being servants of borough councils. Not one of se persons had been revaccinated since infancy. There were also mitted two sanitary inspectors, two dustmen, one undertaker (who d), and one medical officer of an infirmary; and three other persons, of whom assisted in removing a small pox case from an infirmary, e scrubbed the ward from which a small-pox patient had been noved, and one made beds in the lodging-house in which cases had urred. All these persons ought to have been protected by revaccination.

Against this we draw attention to the experience of the managers at their small-pox hospitals and in the ambulance service for many years past, in both of which services revaccination is always performed on engagement.

Of 2198 persons employed at the small-pox hospitals between 1884 and 1900 inclusive, in which period 17,900 small-pox cases were received into the hospitals, only 17 persons contracted small-pox, of whom 13 were not revaccinated until after they had joined the ship and four were workmen who escaped medical observation.

During the past year a very large number of new staff have joined the ships and the Gore Farm Hospital (the exact number cannot be given at present), but not one case of small-pox has occurred. Not one of the staff of the hospital ships has ever died of small pox and not one has even suffered from the disease for the past eight years.

From the year 1881 to the end of 1901 there have been employed in the ambulance service of the Board 1282 persons. Four of these persons contracted small-pox, of whom one escaped vaccination when appointed; he died; one was unsuccessfully revaccinated on joining the service, and the operation was not repeated; she died; the two others had been revaccinated and recovered.

The facts which we have briefly set forth in this report in our opinion confirm the conclusions arrived at by the special committee appointed by the managers to collate statistics after the small-pox epidemic of 1870–1–2. That committee in their report, dated July 11th, 1872, said:—

"The necessity of revaccination, when the protective power of the primary vaccination has to a great extent passed away, cannot be too strongly urged. No greater argument to prove the efficacy of this precaution can be adduced than the fact that out of upwards of 14,800 cases received into the hospitals only four well-authenticated cases were treated in which revaccination had been properly performed, and these were light attacks. Further conclusive evidence is afforded by the fact that all the nurses and servants of the hospitals, to the number at one time of upwards of 300, who are hourly brought into the most intimate contact with the disease, who constantly breathe its atmosphere, and than whom none can be more exposed to its contagion, have, with but few exceptions, enjoyed complete immunity from its attacks. These exceptions were cases of nurses or servants whose revaccination in the pressure of the epidemic was overlooked and who speedily took the disease; and one case was that of a nurse who, having had small-pox previously, was not revaccinated and took the disease a second time."

(Signed) V. B. KENNETT BARRINGTON, Chairman.

## APPENDIX.

TABLE GIVING PARTICULARS OF 1017 CASES OF SMALL-POX TREATED IN THE MANAGERS' HOSPITALS TO RECOVERY OR DEATH DURING THE YEAR 1901, THEIR CONDITION IN RELATION TO VACCINATION, AND THE MORTALITY PER CENT.

| Ages. | Vaccinated | | | Doubtful. | | | Unvaccinated. | | | Total cases and deaths. | | | Ages. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cases | Deaths | Mortality per cent. | Cases | Deaths | Mortality per cent. | Cases. | Deaths | Mortality per cent. | Cases. | Deaths. | Mortality per cent. | |
| Under 1 ... ... | — | — | — | — | — | — | 17 | 15 | 88 23 | 17 | 15 | 88·23 | Under 1 |
| 1 to 5 . .. | 1 | — | — | 2 | 2 | 100 00 | 44 | 24 | 54 54 | 47 | 26 | 55·32 | 1 to 5 |
| 5–10 . ... | 11 | — | — | 4 | 4 | 100 00 | 34 | 13 | 38 20 | 49 | 17 | 34·69 | 5–10 |
| 10–15 ... .. | 42 | 1 | 2 38 | 3 | 1 | 33·33 | 41 | 14 | 34 14 | 86 | 16 | 18 60 | 10–15 |
| 15–20 . .. | 107 | 2 | 1·87 | 3 | — | — | 25 | 13 | 52 00 | 135 | 15 | 11·11 | 15–20 |
| Total under 20 | 161 | 3 | 1·87 | 12 | 7 | 58 33 | 161 | 79 | 49 07 | 334 | 89 | 26 64 | — |
| 20–25 ... .. | 132 | 13 | 9 85 | 8 | 3 | 37·50 | 9 | 4 | 44 44 | 149 | 20 | 13·42 | 20–25 |
| 25–30 ... .. | 141 | 15 | 10 64 | 5 | 4 | 80 00 | 10 | 5 | 50 00 | 156 | 24 | 15·38 | 25–30 |
| 30–35 ... | 96 | 17 | 17 71 | 8 | 4 | 50 00 | 3 | 3 | 100 00 | 107 | 24 | 22 43 | 30–35 |
| 35–40 ... ... | 76 | 22 | 28 95 | 5 | 3 | 60 00 | 3 | 2 | 66 67 | 84 | 27 | 32 14 | 35–40 |
| 40–50 . ... | 102 | 27 | 26 47 | 14 | 12 | 85 71 | 6 | 5 | 83 33 | 122 | 44 | 36 06 | 40–50 |
| 50–60 .. | 42 | 8 | 19 05 | 5 | 3 | 60·00 | 1 | — | — | 48 | 11 | 22 92 | 50–60 |
| 60–70 ... .. | 10 | 3 | 30 00 | 3 | 2 | 66 67 | 1 | — | — | 14 | 5 | 35 71 | 60–70 |
| 70–80 .. ... | — | — | — | 3 | 3 | 100 00 | — | — | — | 3 | 3 | 100 00 | 70–80 |
| Total between 20 and 80 .. | 599 | 105 | 17 52 | 51 | 34 | 66 66 | 33 | 19 | 57 57 | 683 | 158 | 23 13 | — |
| Grand total .. | 760 | 108 | 14 21 | 63 | 41 | 65 08 | 194 | 98 | 50 52 | 1017 | 247 | 24 28 | — |

## NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

A SPECIAL general meeting of governors and members of the National Hospital for the Paralysed and Epileptic (Albany Memorial) was held at the hospital, Queen square, Bloomsbury, on Jan. 9th. The Earl of Dudley was elected President after he had been voted into the chair for that meeting.

Mr. H. L. **BISCHOFFSHEIM** proposed the following list of names to be elected members of the board of management: Mr. Ernest De La Rue, Mr. Melvill Green, Mr. Frederick Orridge Macmillan, Sir Alexander Mackenzie, Sir John Rahere Paget, Mr. John Danvers Power, Mr. Arnold Royle, Mr. Edgar Speyer, Rev. Prebendary Henry Wace, D.D., and Mr. James Wigan.

Dr. **GRIFFITHS** seconded.

Mr. H. H. **NELSON** said they were there that day to do what was best in the interests of the charity they had instituted, and he thought that the step proposed of turning away the old board of management and having nothing more to do with them was a very great mistake. Was it wise in the interests of the institution to eliminate from the management the whole of the members of the lay board? He proposed, therefore, that to that board should be added two members of the late board, Mr. John Pearman and Mr. F. C. Capel.

Mr. C. A. **CAMPBELL** seconded.

Mr. F. **NETTLEFOLD** spoke in favour of Mr. Nelson's views. He considered that the hospital might lose the support of a large section of subscribers who might not like this apparently off-hand way of dealing with the old governors. After all, though they had made mistakes they had been the first to acknowledge the mistakes they had made. Some consideration was due to the old board, and especially when it was borne in mind the influence which their names exerted over a large number of the subscribers.

The question was raised whether the meeting was held under the delegates cannot set to work too soon. An opportunity for such a meeting has occurred, and the provisional bureau advises that it should be utilised. The Prince of Monaco, who has distinguished himself in the field of scientific research, takes the greatest interest in the scientific press and has offered every facility and extensive hospitality to those who are striving to establish an International Association of the Medical Press. This invitation has been accepted and the delegates of the various national associations of the medical press are now called upon to meet at Monte Carlo on April 3rd next. It is important that the British medical press should take immediate action to be worthily represented. The two main points to be discussed are the protection of literary property and the statutes of the International Association of the Medical Press. If something like an agreement can be arrived at on these points, then it will be possible to convoke a large international congress to confirm or to amend the proposals made and to take action for the purpose of bringing about the practical application of the principles which will then have been widely endorsed. The first step, therefore, is to elect at the earliest possible date the British representatives. When this has been done these delegates will receive from the provisional bureau the agenda of the forthcoming meeting and other details. They will then be able to submit these documents to their respective associations and to receive instructions as to the course which they must follow on April 3rd when they meet the representatives of the other nationalities.

## THE EFFECTUAL PRESERVATION OF EGGS.

ON no subject, perhaps, is there a greater conflict of opinion than on the preservation of eggs. Some urge that the newly-laid egg should be kept dry and others that it should be kept moist or even immersed in a fluid. Of course, by effectually sealing the pores of a shell as with wax or grease the moment the egg is laid no difference in weight by the loss of moisture can occur, and it is unlikely that anything can enter the egg from the outside. There is little doubt that the change from a fresh to a stale condition is partly a question of the loss of moisture and partly a disturbance of equilibrium by external agencies. The simple method described by Sir W. T. Gairdner in our columns about a year ago would appear to establish this view. The method consists merely in greasing the eggs the moment they are laid and before they have cooled. This procedure is so successful that eggs so treated are said to be as fresh to the taste when weeks and even months old as they are when eaten an hour after being laid. It is also suggested to immerse eggs in a strong solution of silicate of soda or water-glass. In this case the preservative effect is probably due to the formation of a hard glassy silicate of lime within the substance of the shell, forming, so to speak, a perfectly airtight envelope of glass. The egg is in a way hermetically sealed. This, however, is no argument in favour of wet storage, and even by the silicating process we imagine that the absolutely newly-laid warm egg must be selected for the purpose. It is well known, further, that water-glass possesses a powerful antiseptic action. Eggs treated in this way are said to preserve their fresh milky taste for six months and to be indistinguishable from the egg taken straight from the nest. Eggs, of course, merely submerged in water would probably get stale more quickly than when kept under dry conditions. The question of the effectual preservation of eggs is of the utmost importance and one which British producers have persistently ignored, an inexplicable attitude by which much valuable food is wasted and a source of profit thrown away.

# Pharmacological Notes.

### IPECACUANHA IN PNEUMONIA.

WITH the object of depleting the lung, and as a consequence so modifying its tissues that microbic infection is counteracted, Perreau has introduced the following method of treating pneumonia.[1] One gramme of powdered ipecacuanha root is mixed with 100 grammes of mucilage and a measured tablespoonful of the mixture is given every hour for about eight hours. A certain amount of practice is necessary in order to avoid either vomiting or diarrhœa by carefully lengthening the intervals between the doses. The method is said to give satisfactory results, especially if employed early in the course of the disease.

### THE NITRO-PROPIOL TEST FOR SUGAR IN URINE.

Dr. Carstairs Douglas,[2] in an address before the Glasgow Medico-Chirurgical Society, recently discussed the value of the nitro-propiol test for sugar in urine, basing his conclusions on 200 observations. The test was fully described in THE LANCET of Feb. 17th, 1900, and a note also appeared upon its clinical application in THE LANCET of April 6th, 1901, p. 1028. Dr. Douglas concludes from his experiments that reducing agents other than sugar, which are from time to time found in urine, affect nitro-propiol in the same way as they affect the copper tests. As glucose is the most active reducing agent met with in urine its presence is frequently assumed when the reagent employed undergoes a prompt reduction. This assumption is not warranted unless the reduction is very marked and abundant. When absolute certainty is required in the case of quantities of sugar too small to act with the yeast test, the phenyl-hydrazine test is by far the most trustworthy for clinical purposes. However, when a copious and speedy formation of indigo-blue takes place on boiling diluted urine with nitro-propiol it is almost always the case that the reduction is due to sugar. The chief advantages of the nitro-propiol test are: (1) the striking and distinctive character of the reaction when positive; (2) the delicacy of the test exceeds that of Fehling's solution or the yeast test, though not phenyl-hydrazine; and (3) but little urine is required.

## VACCINATION AND THE METROPOLITAN ASYLUMS BOARD.

THE following report was presented at the meeting of the Board held on Saturday, Jan. 11th:—

### REPORT OF THE STATISTICAL COMMITTEE.

10th January, 1902.

*Statistics concerning completed cases of small-pox treated in the Board's hospitals during the year 1901.*—Instead of waiting until the issue some months hence of our usual annual report on the statistics obtainable from the whole of the Board's various institutions we take the earliest opportunity of submitting this special report upon the statistics concerning small pox in the metropolis during the year 1901. In doing this we believe we are meeting the wishes of the managers and the public. It must be understood that this document is in the nature of an interim report, and is not in substitution for the later and fuller one.

*Small-pox in London, 1901.*—Small-pox may be said to have been practically absent from London in the first five months of the year. It is true that towards the end of January five cases were admitted into the Board's hospitals, and one in the middle of February; but during March, April, and up to May 29th not a single case occurred. On the last-mentioned date a patient was admitted from Islington, on June 10th one from Whitechapel, on the 29th one from Hackney, and on the 28th and 29th one on each day from Wandsworth. During the month of July and up to August 21st single cases occurred in various parts of London. From August 22nd and onwards, however, the disease appears to have obtained a hold in the parishes of St. Marylebone and St. Pancras. Subsequently cases occurred in every one of the 31 Poor-law parishes and unions comprising the Metropolitan Asylum District.

*Vaccination.*—We have found it impossible so soon after the close of the year to prepare the usual elaborate tables of vaccination statistics. We have therefore prepared the table annexed hereto (Appendix), dealing only with cases completed—that is, died or recovered—during the year.

The cases have been divided into three classes—namely, (1) "Vaccinated"—i.e., cases having visible cicatrices; (2) "Doubtful," which includes (a) cases stated to have been vaccinated, but bearing no visible evidence thereof; and (b) cases in which no statement was

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[1] Chemist and Druggist, vol. ii., 1901, p. 1043.

[2] Glasgow Medical Journal, January, 1902, p. 17.

# THE LANCET RELIEF FUND.

***Almoners.***

THIS Fund, which came into operation on the 1st of February, 1889, has for its Almoners the President of the Royal College of Physicians of London (Sir WILLIAM SELBY CHURCH, Bart., M.D. Oxon, F.R.C.P. Lond.), the President of the Royal College of Surgeons of England (Mr. HENRY GREENWAY HOWSE, M.B., F.R.C.S. Eng.), the President of the General Medical Council (Sir WILLIAM TURNER, K.C.B., M.B. Lond., F.R.C.S. Eng. and Edin., F.R.S.), Mr. THOMAS WAKLEY, F.R.C.S. Eng., and Mr. THOMAS WAKLEY, jun., L.R.C.P. Lond., with Sir HENRY PITMAN, M.D. Cantab., F.R.C.P. Lond., as Honorary Auditor.

***Scope of the Fund.***

FOR the guidance of those seeking assistance and of those desirous of recommending deserving cases, it may be useful to record that THE LANCET Relief Fund is sustained solely by the Proprietors of THE LANCET, who provide every January the sum of at least £300, which is administered free of cost, with the object of affording immediate pecuniary assistance to registered medical practitioners, or to their widows and orphans, in cases of distress and emergency, by the grant of money by way of loans free of interest, or gifts, as the circumstances of the various cases may require. In the case of widows and orphans, in order to come within the scope of the Fund, the death of the Husband or Father must have been of recent occurrence.

***Chronic Cases ineligible.***

WHEN the Fund was inaugurated considerable misapprehension existed as to the precise objects for which it had been established, and, as a result, the majority of the earlier applications, being cases of *chronic* distress, and not coming, therefore, under the designation of *emergency*, could not be entertained. As the Almoners still receive applications for assistance for cases which are obviously of a *chronic* character, it is thought advisable to append a statement concerning cases of this nature which appeared in THE LANCET of Feb. 16th, 1889:—

> "We are requested by the Almoners to state that, from the character of a number of the applications received, both personally and by letter, for relief, it is evident that in many cases the object for which this Fund has been established is not quite clearly understood; and if relief had been afforded in the cases of those who suffer from chronic distress the Fund would have been completely exhausted within the first few days of its existence. They would therefore be greatly obliged if those readers of THE LANCET who may be asked to endorse applications would carefully peruse the Application Form and explain the precise object of the Fund to those applicants whose cases do not seem to come within the scope of the purpose for which the Fund has been established, which is to afford prompt aid to registered medical practitioners, or to the widows or orphans of members of the profession, who, in consequence of the supervention of some unexpected emergency, which is not likely to recur, have pressing need of immediate and temporary pecuniary relief"—

And who, it may be again pointed out, are likely to be permanently benefited thereby.

## *THIRTEENTH ANNUAL REPORT of the ALMONERS*

*For the year ending December 31, 1901.*

IN presenting their Thirteenth Annual Report, the Almoners have to record that the balance in hand on Dec. 31st, 1900, was £352 17*s.* 4*d.*, to which, on Jan. 1st, 1901, the Proprietors of THE LANCET added the sum of £300, making a total sum of £652 17*s.* 4*d.* available for grants during the year 1901.

The number of applications for assistance received by the Almoners during the year was 82, of which 21 were so obviously outside the scope of the Fund that they were rejected by the Secretary by virtue of the discretionary power conferred upon him by the Almoners at their meeting on Jan. 1st, 1890; 4 were rejected by the Almoners after due consideration; in 14 cases Forms were sent but failed to be returned—probably the applicants recognised that their cases were outside the scope of the Fund; 1 applicant returned the Form but failed to comply with the rules as to the necessary testimonials; 1 applicant had been misinformed as to the nature of the Fund, and "preferred to try to battle with my present troubles rather than expose my poverty" by seeking the required testimonials; 3 applications remained uncompleted at the end of the year; 35 applicants were relieved by gifts of money ranging from £5 to £20; 2 applicants were granted loans; and 1 applicant was relieved by a guarantee of his funeral expenses, which enabled him to enter a convalescent home. The relief of the 37 cases, a detailed list of which is given in the accompanying Statement of Accounts, involved the expenditure of the sum of £383 10*s.*—the largest amount granted in any one year since the inauguration of the Fund in 1889.

The most gratifying feature in the administration of the Fund is the letters received by the Almoners from those whom they have helped, expressing their gratitude for the prompt relief which has enabled them to mitigate, and in not a few cases to overcome, their difficulties. In this connexion it may not be uninteresting to record the fact that on several occasions the Almoners have been able to consider cases and to grant relief on the actual day on which the application was received.

With reference to the gradually decreasing number of loans advanced from the Fund—in the year under review there were but two—the Almoners desire to point out that they are becoming more and more averse to affording assistance by this means, as their experience is that in but very few cases are loans ever repaid. The Almoners do not offer any explanation why there should be this neglect on the part of borrowers to fulfil their obligations: they are content to record the fact, and to act in the future on the principle of *Experientia docet.*

It is as unavoidable, perhaps, as it certainly is very regrettable, that in the administration of such a Fund as new rules and whether *ex-officio* governors could vote. The solicitor to the hospital, Mr. G. H. Bower, said that in his opinion *ex officio* governors were not entitled to vote because the meeting was under the old rules. This would exclude the medical staff from voting.

Lord DUDLEY said that he would put the question to the sense of the meeting. It did not seem to him primarily a matter of the direct interpretation of any definite rule, it was rather a matter of realisation of the general position and a common sense interpretation of the spirit of the rules. It was absurd to hold a meeting under a new constitution and to govern its proceedings by rules which related to a previous constitution. The regrettable differences between the old board of management and the members of the medical staff had ended in a decision given by the governors that the medical staff must be represented in the management of the hospital, and the medical staff were therefore made *ex officio* governors for that purpose. It was absolutely nonsensical to give them a vote with one hand and with the other to take away the new franchise for two years. He personally considered that it was a matter of common sense, and whether or not they chose to haggle and argue over the interpretation of any particular words in a transitional rule the only reasonable thing to do was to adopt what had been laid down in the report of Sir Edward Fry's committee, and as far as possible decline to raise the old issue. They should all strive to let the commencement of that year be the commencement of a new and happier era in the history of that hospital

Mr J. D. POWER said that the clear intention of the rules was that the staff should be *ex-officio* governors and should be allowed to vote immediately. There could not be a shadow of an atom of doubt on the subject, otherwise the rules which were worded in plain English did not mean what they said.

Mr. JOHN PEARMAN proceeded to remark that if certain governors were entitled to vote they had not received notices of the meeting. He was met with loud cries of "Why not?" It would, he explained, take weeks to discover who they were. This remark was greeted with interruptions, but he was allowed to go on with his speech by saying to the meeting, "*Pray do not cry out against me if I am making a* mis statement. I am only making a statement which I am informed is correct"

Mr. WALFORD said he did not consider there was any governor there who was so foolish as to be really anxious to quibble over the rules. There was no practical question before the meeting and he asked the Chairman to put the matter to the vote.

Lord DUDLEY then put it to the meeting whether *ex officio* governors should vote, and this was agreed to by 20 against 6

The meeting then proceeded to vote for the names submitted for the new board of management and the figures were as follows · Mr. Ernest de la Rue, 33; Mr. Melvill Green, 32; Mr. Frederick Orridge Macmillan, 32; Sir Alexander Mackenzie, 31; Sir John Rahere Paget, 28; Mr John Danvers Power, 31; Mr. Arnold Royle, 28; Mr. Edgar Speyer, 28; Rev. Prebendary Henry Wace, 34; Mr. James Wigan, 30; Mr. F. C. Capel, 17; Mr. J Pearman, 16

Lord DUDLEY declared all but the last two duly elected, whereupon Mr NELSON demanded a *ballot*.

Lord DUDLEY fixed Jan 23rd as the day on which the votes should be counted and the result of the ballot declared

The proceedings then terminated with a hearty vote of thanks to Lord Dudley for taking the chair

# THE LORD MAYOR'S APPEAL FOR GUY'S HOSPITAL.

THE Lord Mayor (Alderman Sir J. Dimsdale, M.P.) presided over a meeting held at the Mansion House on Jan. 15th for the purpose of supporting the appeal for funds which is now being made for Guy's Hospital. The meeting was an exceptionally large one and the proceedings throughout were marked with great enthusiasm. The most important part of them was, perhaps, the announcement of the total sum of money contributed towards the £180,000 required for the renovation and building fund, and much satisfaction was expressed when it was found that no less than £64,000 had been subscribed.

The LORD MAYOR opened the meeting by a speech in which he gave some historical facts concerning Guy's Hospital. He said that the rich and the well-to-do were quite as much assisted as the suffering poor by reason of the teaching carried on in the medical schools and the results of the untiring labours of the hospital physicians and surgeons. The results of the education given in the schools and wards were not confined to the hospital alone or to the great metropolis alone, but were at the disposal of the community at large and benefited not only this kingdom but the empire. It was a regrettable fact that owing to the want of funds wards were still closed and could not be re-opened until the benevolent public gave the wherewithal to keep them in active use Since the year 1880 agricultural depression had caused a depreciation in the income of the hospital amounting to nearly 50 per cent. The financial statement of the affairs could be put in a nutshell. To carry on the hospital efficiently and well and to make it worthy of being one of the great hospitals of London it was necessary to have an income of £60,000 a year. The only reliable income was £35,000 a year, and £25,000 a year were required in addition for the proper carrying out of the work of the institution after it had been repaired and renovated so as to make it abreast of the times. It was certain that unless its wards were healthy and sanitary the hospital had better not exist. £180,000 were wanted to bring the hospital up to date; the fabric itself wanted renovating, the wards and the adjuncts of the wards required reorganisation; and the theatres, the medical college, and the nurses' home, all required money. They must have as well a first-rate laundry and proper sanitary arrangements. The Lord Mayor then gave in detail the work that was done by the hospital.

Mr. COSMO BONSOR, the treasurer of the hospital, said that to open 150 closed beds under modern conditions of medical science and professional nursing required a heavy expenditure The sum of money necessary to build a nurses' home for 230 sisters and nurses was large, but the governors had been encouraged to do this by the generosity of the late Mr. H. Raphael who called upon Mr. Bonsor one very cold morning in the winter and, after having seen the attics in which the nurses were lodged and noted the crowded condition of their sleeping accommodation, gave a cheque for £20,000 for a nurses' home.

The following motion was proposed by Mr. LEOPOLD DE ROTHSCHILD, seconded by the Hon. ALBAN GIBBS, M.P., supported by Mr. A. C. COLE and Mr. R. K. CAUSTON, M.P., and carried unanimously:—

> That this meeting having heard the speech of the Right Hon. the Lord Mayor and the statement of the treasurer showing the present urgent financial needs of Guy's Hospital, earnestly commends the same to the support of the citizens of London and to the benevolent public throughout the country, in the hope that sufficient assistance may be immediately rendered to enable the governors to maintain the work of that great institution in a state of completeness and efficiency.

Dr. FREDERICK TAYLOR, senior physician of the hospital, in moving a vote of thanks to the Lord Mayor thanked him for affording the opportunity of making that appeal at the Mansion House.

Mr. H. G. HOWSE, President of the Royal College of Surgeons of England and senior surgeon to the hospital, in seconding the motion for the vote of thanks, drew attention to the enormous change that had taken place in surgery in the last 30 years, requiring surgeons to spend a large part of their time in operating theatres.

Mr. COSMO BONSOR declared the vote of thanks to be passed with acclamation, and after a short reply from the LORD MAYOR the proceedings ended.

CREDITON SICK NURSING ASSOCIATION.—The annual meeting of the promoters of this association was held at the Masonic Hall, Crediton, on Jan. 9th, when Lady Audrey Buller, president of the association, occupied the chair. The report of the association stated that the work during 1901 had pursued its usual even course. The financial report was satisfactory, the subscriptions and donations amounting to £103 16s 10*d*., and the receipts from paying patients to £16 5s 6*d* The nurse's statement of work showed that 327 cases had been attended during the year and the nurse had paid 4416 visits Of these patients 66 had recovered, 30 had been relieved, three had been removed to the workhouse, 17 had died, one had been removed to a convalescent home, and 15 were still on the books. Of the £10 granted for relief £8 18*s*. had been expended. The financial statement showed the total receipts to be £127 17*s*. 10*d*. and the expenditure to amount to £100 18s., leaving a balance in hand of £26 19*s*. 10*d* The endowment fund stood at £197 5*s*. 10*d*., against £222 5s. 10*d* in the previous year, £25 having been transferred to the maternity fund.

SEAMEN'S HOSPITAL SOCIETY.—At a quarterly general court of the governors of the Seamen's Hospital Society held at the Institute of Chartered Accountants, Moorgate-place, E.C., on Jan 10th, it was stated that the work of the society had been progressing satisfactorily and that 25,249 patients had been treated in the various hospitals and dispensaries of the society during the past 12 months. 72 students had entered the School of Tropical Medicine during the past year. The committee of management regretted to state that the society's income had fallen short of the expenditure *during the past 12 months, so much* so that the offer of a convalescent home had been refused, as the committee had not felt that they could undertake the liability of its maintenance

# VITAL STATISTICS.

### HEALTH OF ENGLISH TOWNS.

IN 75 of the largest English towns 9422 births and 5183 deaths were registered during the week ending Jan. 11th. The annual rate of mortality in these towns, which had been 20·1 per 1000 in the preceding week, declined last week to 18·3 per 1000. In London the death-rate was 18·6 per 1000, while it averaged 18·1 in the 74 other large towns. The lowest death-rates in these towns were 5·5 in Hornsey, 9·3 in Wallasey, 9 5 in East Ham, 10 3 in Kings Norton, 10·7 in Northampton, 10·8 in Walthamstow, 11·0 in Smethwick, 11 6 in Barrow-in-Furness, and 12 2 in Handsworth; the highest rates were 22 6 in Reading, 23·3 in Rotherham, 23·6 in Bootle, 25·2 in Preston, 26·3 in Rhondda, and 28 8 in Wigan. The 5183 deaths in these towns included 482 which were referred to the principal zymotic diseases, against 510 in the preceding week; of these 482 deaths 124 resulted from measles, 82 from diphtheria, 78 from whooping-cough, 58 from scarlet fever, 53 from small-pox, 45 from "fever" (principally enteric), and 42 from diarrhœa In Hornsey, Norwich, Rochdale, Huddersfield, and in nine other smaller towns, no death was recorded during the week from any of these diseases; in the other towns they caused the highest death-rates in Norwich, Birmingham, Aston Manor, Grimsby, Salford, Preston, Rotherham, York, and Middlesbrough. The greatest proportional mortality from measles occurred in Great Yarmouth, Aston Manor, Grimsby, Preston, Sheffield, Rotherham, York, and South Shields; from scarlet fever in Wolverhampton, St. Helens, and Middlesbrough; from diphtheria in Hanley and Cardiff; from whooping-cough in East Ham and Rhondda; from "fever" in Smethwick and Birkenhead; and from diarrhœa in Wolverhampton and Bury. Small-pox caused 45 deaths in London, four in West Ham, two in East Ham, one in Croydon, and one in Willesden, but not one in any other of the 75 large towns. There were 872 cases of small-pox under treatment in the Metropolitan Asylums hospitals on Saturday, Jan. 11th, against 506, 538, and 666 at the end of the three preceding weeks; 305 new cases were admitted during the week, against 161, 226, and 261 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 3033 and 3137 on the two preceding Saturdays, had further declined to 2864 at the end of last week; 250 new cases were admitted during the week, against 247, 263, and 313 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 393, 425, and 452 in the three preceding weeks, declined again last week to 361, and were 284 below the corrected average number. The causes of 73, or 1 4 per cent., of the deaths in the 75 towns last week were not certified either by a registered medical practitioner or by a coroner All the causes of death were duly certified in Portsmouth, Bristol, Norwich, Leicester, Nottingham, Bolton, Salford, and in 39 other smaller towns; the largest proportions of uncertified deaths were registered in St. Helens and Northampton.

### HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 21 5, 22 6, and 23 2 per 1000 in the three preceding weeks, declined again to 19 6 during the week ending Jan 11th, but exceeded by 1 3 the mean rate during the same period in the 75 large English towns. The rates in the eight Scotch towns ranged from 10·9 in Perth and 16 0 in Paisley to 20 5 in Glasgow and 21·0 in Greenock. The 633 deaths in these towns included 23 which were referred to measles, 19 to diarrhœa, five to whooping-cough, four to diphtheria, three to "fever," and two to scarlet fever. In all 56 deaths resulted from these principal zymotic diseases last week, against 86 and 70 in the two preceding weeks. These 56 deaths were equal to an annual rate of 1·7 per 1000, which was also the mean rate last week from the same diseases in the 75 large English towns. The fatal cases of measles, which had been 36 and 30 in the two preceding weeks, further declined again last week to 23, of which 19 occurred in Glasgow and four in Dundee. The deaths from diarrhœa, which had been 23 and 12 in the two preceding weeks, rose again to 19 last week, and included 11 in Glasgow, three in Aberdeen, and two in Paisley. The fatal cases of whooping-cough, which had been seven and 12 in the two preceding weeks, declined again last week to five, of which two were registered in Glasgow and two in Edinburgh. The two deaths from scarlet fever were both recorded in Greenock and two of the three fatal cases of "fever" in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 188, 166, and 182 in the three preceding weeks, declined again last week to 142, but exceeded by 19 the number in the corresponding period of last year. The causes of 28, or more than 4 per cent., of the deaths in these eight towns last week were not certified.

### HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 25·9, 26·8, and 29·4 per 1000 in the three preceding weeks, declined again to 25·0 per 1000 during the week ending Jan. 11th. During the past four weeks the death-rate has averaged 26·8 per 1000, the rates during the same period being 19 6 in London and 20 9 in Edinburgh. The 182 deaths of persons belonging to Dublin registered during the week under notice showed a decline of 32 from the number in the preceding week, and included 10 which were referred to the principal zymotic diseases, against 15, 10 and nine in the three preceding weeks; of these three resulted from diphtheria, three from "fever," two from whooping-cough, one from measles, and one from diarrhœa. These 10 deaths were equal to an annual rate of 1·4 per 1000, the zymotic death-rate during the same period being 1·9 in London and 0 6 in Edinburgh. The fatal cases of diphtheria, which had been three, two, and three in the three preceding weeks, were again three last week. The deaths referred to different forms of "fever," which had been four, five, and two in the three preceding weeks, rose again last week to three. The mortality from whooping-cough exceeded that recorded in the preceding week; while that from diarrhœa showed a decline. The 182 deaths in Dublin last week included 23 of children under one year of age and 57 of persons aged upwards of 60 years; the deaths both of infants and of elderly persons were slightly less numerous than in the preceding week. Five inquest cases and six deaths from violence were registered; and 79, or more than one-third, of the deaths occurred in public institutions. The causes of 20, or more than 10 per cent., of the deaths in Dublin last week were not certified.

### VITAL STATISTICS OF LONDON DURING DECEMBER, 1901.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in each of the cities and boroughs in the county of London. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 10·6 per 1000 of the population, estimated at 4,543,757 in the middle of last year. In the three preceding months the rates had been 12·4, 13·8, and 11 6 per 1000 respectively. The rates were considerably below the average in Kensington, City of Westminster, St Marylebone, Shoreditch, Lambeth, and Woolwich; while they showed the largest excess in St. Pancras, Holborn, Bethnal Green, Southwark, and Camberwell. During the four weeks ending Dec. 28th, 656 cases of small-pox were notified in London, against 157, 347. and 413 in the three preceding months; of these cases 99 belonged to Holborn, 84 to Stepney, 73 to St. Pancras, 48 to Southwark, 41 to Battersea, 32 to Poplar, and 30 to Finsbury. The number of small-pox patients under treatment in the Metropolitan Asylums hospitals, which had been 163, 284, and 427 at the end of the three preceding months, had further risen to 666 on Dec. 28th; the weekly admissions averaged 173, against 44, 72, and 110, in the three preceding months. The prevalence of scarlet fever showed a considerable decline from that recorded in any recent month; among the various metropolitan boroughs this disease was proportionally most prevalent in Stoke Newington, Finsbury, Bermondsey, Camberwell, Deptford, and Greenwich. The Metropolitan Asylums hospitals contained 3080 scarlet fever patients on Dec. 28th, against 3096, 3281, and 3186 at the end of the three preceding months; the weekly admissions averaged 297, against 288, 412, 939, and 352 in the three preceding this—the very essence of the object of which is *prompt* relief in urgent cases—there should be a loophole for the fraudulent obtaining of its assistance. To give that immediate relief so necessary in the majority of cases, the Almoners must necessarily rely largely upon the statements made by the applicants and upon the covering testimonials required from medical men and from clergymen or ministers of religion in the districts in which the applicants reside. Two instances of fraud—both committed by the same person—have, the Almoners regret to say, been brought to their knowledge during the past year, in which grants were obtained in the year 1900 by means of false statements and of forged testimonials. It is difficult to devise a means of wholly defeating such infamous conduct without subjecting worthy applicants for assistance to unnecessary delay and possibly painful inquiry into the causes of their distress; but every practicable effort will continue to be made to safeguard the funds at the disposal of the Almoners.

Mr. Henry Greenway Howse, F.R.C.S. Eng., having succeeded the late Sir William Mac Cormac as President of the Royal College of Surgeons of England in July last, thereupon became an Almoner of the Fund. The present Almoners desire to record their appreciation of the late Sir William Mac Cormac's services to the Fund for five years and the excellent advice which he was ever ready to give

(Signed)

| | |
|---|---|
| W. S. CHURCH (Chairman). | H. G. HOWSE. |
| | THOMAS WAKLEY. |
| WM. TURNER. | THOMAS WAKLEY, Jun. |

# THE LANCET RELIEF FUND.

## *STATEMENT OF ACCOUNTS FOR THE YEAR ENDING DEC. 31st, 1901.*

| DR. | £ | s. | d. |
|---|---|---|---|
| To Balance at the London and Westminster Bank, Limited (Westminster Branch), Jan 1st, 1901 ... ... ... | 352 | 17 | 4 |
| ,, Proprietors of THE LANCET, Jan 1st, 1901 ... | 300 | 0 | 0 |
| ,, Repayment of Loans ... ... ... ... | *Nil.* | | |
| | £652 | 17 | 4 |

| CR. | | £ | s. | d. | £ | s. | d. |
|---|---|---|---|---|---|---|---|
| By Loans:— | | | | | | | |
| Case No. | 492 ... ... ... | 10 | 0 | 0 | | | |
| ,, | 513 ... ... ... | 30 | 0 | 0 | | | |
| | | | | | 40 | 0 | 0 |
| By Gifts:— | | | | | | | |
| Case No | 491 ... ... ... | 20 | 0 | 0 | | | |
| ,, | 493 ... ... ... | 5 | 0 | 0 | | | |
| ,, | 494 .. ... .. | 5 | 0 | 0 | | | |
| ,, | 495 . ... ... | 5 | 0 | 0 | | | |
| ,, | 496 .. ... ... | 10 | 0 | 0 | | | |
| ,, | 497 ... ... | 10 | 0 | 0 | | | |
| ,, | 498 . ... ... | 10 | 0 | 0 | | | |
| ,, | 499 ... ... | 10 | 0 | 0 | | | |
| ,, | 500 ... ... | 15 | 0 | 0 | | | |
| ,, | 502 ... ... | 10 | 0 | 0 | | | |
| ,, | 504 . .. ... | 10 | 0 | 0 | | | |
| ,, | 505 ... .. | 5 | 0 | 0 | | | |
| ,, | 506 .. ... | 10 | 0 | 0 | | | |
| ,, | 508 .. ... | 6 | 0 | 0 | | | |
| ,, | 509 ... ... | 10 | 0 | 0 | | | |
| ,, | 510 ... ... | 10 | 0 | 0 | | | |
| ,, | 514 .. ... | 20 | 0 | 0 | | | |
| ,, | 515 .. .. | 10 | 0 | 0 | | | |
| ,, | 516 ... ... | 5 | 0 | 0 | | | |
| ,, | 517 . .. | 5 | 0 | 0 | | | |
| ,, | 518 . .. | 10 | 0 | 0 | | | |
| ,, | 519 .. .. | 10 | 0 | 0 | | | |
| ,, | 520 ... ... | 20 | 0 | 0 | | | |
| ,, | 521 ... ... | 15 | 0 | 0 | | | |
| ,, | 522 .. ... | 5 | 0 | 0 | | | |
| ,, | 524 ... ... | 10 | 0 | 0 | | | |
| ,, | 525 .. ... | 10 | 0 | 0 | | | |
| ,, | 526 .. ... | 10 | 0 | 0 | | | |
| ,, | 527 ... ... | 10 | 0 | 0 | | | |
| ,, | 529 ... ... | 10 | 0 | 0 | | | |
| ,, | 530 .. ... ... | 20 | 0 | 0 | | | |
| ,, | 531 . ... ... | 10 | 0 | 0 | | | |
| ,, | 532 . ... .. | 12 | 10 | 0 | | | |
| | | | | | 343 | 10 | 0 |
| *Balance at Bank, Dec. 31, 1901* ... | | | | | 269 | 7 | 4 |
| | | | | | £652 | 17 | 4 |

I find by the Bankers' Book that the actual Balance on Jan 1st, 1901, to the credit of the Fund was £352 17*s* 4*d*., to which the sum of £300 was added by the Proprietors of THE LANCET on Jan. 1st, 1901

The balance at the Bank on Dec. 31st, 1901, was the sum of £269 7*s* 4*d* I have also checked the receipts for disbursements and find the above account strictly accurate

January 6th, 1902. HENRY A. PITMAN, Hon Auditor.

months. Diphtheria was also less prevalent during December than it had been in either of the two preceding months; the greatest proportional prevalence of this disease occurred in Fulham, St. Pancras, Hackney, Bethnal Green, and Camberwell. There were 1369 diphtheria patients under treatment at the end of last month, against 1499, 1570, and 1504 at the end of the three preceding months; the weekly admissions averaged 160, against 248, 243, and 200 in the three preceding months. The prevalence of enteric fever showed some diminution as compared with that in recent months; among the various metropolitan boroughs the greatest proportional prevalence of this disease occurred in Chelsea, Stoke Newington, Hackney, Holborn, Bethnal Green, Bermondsey, and Camberwell. The number of enteric fever patients under treatment in the Metropolitan Asylums hospitals, which had been 292, 291, and 245 at the end of the three preceding months, had further declined to 195 on Dec. 28th; the weekly admissions averaged 21, against 50, 38, and 32 in the three preceding months. Erysipelas was proportionally most prevalent in Hackney, Holborn, Bethnal Poplar, Southwark, and Camberwell. The 18 cases of puerperal fever included three in Islington, and two each in St. Pancras, Poplar, Camberwell, and Lewisham.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various metropolitan boroughs, the deaths occurring in the public institutions of London having been distributed among the boroughs in which the deceased persons had previously resided. During the four weeks ending Dec. 28th the deaths of 6558 persons belonging to London were registered, equal to an annual rate of 18·8 per 1000, against 15·4, 15·4, and 20·0 per 1000 in the three preceding months. The lowest death-rates last month in the various metropolitan boroughs were 11·4 in Hampstead, 13·7 in Stoke Newington, 15·0 in Wandsworth, 15·5 in Paddington, 16·0 in Woolwich, and 16·2 in Lewisham; the highest rates were 22·7 in Bermondsey, 23·4 in Finsbury, 24·2 in Bethnal Green, 24·4 in Hammersmith, 24·7 in Holborn, and 25·2 in Shoreditch. The 6558 deaths from all causes during the month included 655 which were referred to the principal zymotic diseases; of these 90 resulted from small-pox, 244 from measles, 52 from scarlet fever, 128 from diphtheria, 63 from whooping-cough, 28 from enteric fever, and 50 from diarrhœa. The lowest death-rates from these diseases were recorded in Chelsea, St. Marylebone, Hampstead, Stoke Newington, and Woolwich, and the highest rates in Kensington, Hammersmith, Islington, Holborn, Shoreditch, and Bethnal Green. The fatal cases of small-pox, which had been 24, 29, and 73 in the three preceding months, further rose last month to 90, of which 12 belonged to Holborn, 11 to Hammersmith, 11 to Stepney, seven to St. Pancras, six to Southwark, and five to Bermondsey. The 244 deaths from measles showed a slight increase over the average number in the corresponding periods of the 10 preceding years; among the various metropolitan boroughs this disease was proportionally most fatal in Kensington, Hammersmith, City of Westminster, Islington, Shoreditch, and Bethnal Green. The 52 fatal cases of scarlet fever were considerably less than the corrected average number; the greatest proportional fatality from this disease occurred in Kensington, St. Pancras, Bethnal Green, Southwark, and Bermondsey. The 128 deaths from diphtheria were 83 below the average number in the last four weeks of the 10 preceding years; the metropolitan boroughs in which the greatest proportional mortality from this disease was recorded were Fulham, St Pancras, Finsbury, Bethnal Green, and Deptford. The 63 fatal cases of whooping-cough showed a decline of more than 100 from the corrected average number; this disease was proportionally most fatal in Stepney, Poplar, Lambeth, Camberwell, and Lewisham. The 28 deaths referred to enteric fever were 111 less than the average number in the corresponding periods of the 10 preceding years; the highest "fever" death-rates last week were recorded in City of Westminster, Islington, Holborn, and Battersea. The 50 fatal cases of diarrhœa were slightly below the corrected average number; among the various metropolitan boroughs the greatest proportional fatality from this disease occurred in Hammersmith, Fulham, St. Marylebone, Hampstead, Shoreditch, and Poplar. In conclusion, it may be stated that the aggregate mortality in London from these diseases during December was more than 18·8 per cent. below the average.

Infant mortality in London last month, measured by the proportion of deaths among children under one year of age to registered births, was equal to 173 per 1000. The lowest rates of infant mortality were recorded in St. Marylebone, Hampstead, Hackney, Holborn, Southwark, and Camberwell; and the highest rates in Hammersmith, Chelsea, Finsbury, City of London, Shoreditch, Bethnal Green, and Bermondsey.

# THE SERVICES.

### ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeons: W. S. Lightfoot to the *Eagle;* E. H. Saunders to the *Vivid* for Keyham Naval Barracks; J. Dudley to the *Lion;* and A. Patterson to the *Vivid* for Devonport Dockyard. Staff Surgeons: J. Barry to Haslar Hospital, temporary; J. Jenkins to the *Andromache;* R. Miller to the *Liffey;* and A. MacLean to the *Collingwood.* Surgeons: G. T. Bishop to Haslar Hospital; G. M. O. Richards to the *Irresistible;* A. H. Prichard to the *Redbreast;* and J. S. Dudding to the *Antelope.*

### ROYAL ARMY MEDICAL CORPS.

Colonel J. H Moore, retires on retired pay on account ill-health.

### VOLUNTEER CORPS.

*Royal Engineers:* 2nd Gloucester (the Bristol): Surgeon-Lieutenant T. Carwardine resigns his commission. *Rifle:* 2nd Volunteer Battalion the Northumberland Fusiliers: Surgeon-Lieutenant D. K. Muir to be Surgeon-Captain. 2nd (Hertfordshire) Volunteer Battalion the Bedfordshire Regiment: The undermentioned officer resigns his commission, with permission to retain his rank and to wear the uniform of the battalion on retirement: Surgeon-Captain R. L. Batterbury. 3rd Volunteer Battalion the South Wales Borderers: John William Davies is re-appointed Surgeon-Captain. 3rd (the Blythswood) Volunteer Battalion the Highland Light Infantry: Surgeon-Lieutenant J. W. Logie to be Surgeon-Captain.

### SOUTH AFRICAN WAR NOTES.

Civil Surgeon Reid who was reported to be severely wounded at Tweefontein was Godfrey Forrest Reid, M.A., M.D., B.Ch. Dub., late district surgeon at Bethlehem, Orange River Colony, South Africa. He died on Dec. 27th, 1901.

The following have been discharged from hospital to duty: Major D. R. Hamilton, R.A.M.C., Captain C. B. Martin, R.A.M.C., and Lieutenant W. J. P. Adye-Curran, R.A.M.C. Major D. R. Hamilton is returning home from South Africa in the *Kildonan Castle.*

### AFFAIRS IN SOUTH AFRICA.

As regards our military progress and the general aspect of affairs in South Africa the reports from that country are on the whole satisfactory. Among the many other unexpected things which have occurred in the course of this war no one appears to have foreseen that while Mr. Kruger was safely taking his opulent ease in Europe his *confrère,* Mr. Steyn, would be still found in the field, and that many of the hardest and most obstinate of our foes as well as some of the most redoubtable leaders of the Boers should have come from his part of the country and not from the Transvaal; but so it is. It was only to be expected that with the present season there should be an increase of enteric fever among our troops serving in South Africa, and a glance at the sick returns which have been recently published suffices to show that such has been the case. There is, unhappily, a good deal of this fever at the present time and the causes of it must be indeed widely spread, for it would seem that wherever there are British troops cases of enteric fever are almost sure to occur. Both in this country and in the colonies there exists naturally enough a good deal of indignation at the accusations of all kinds that have appeared in the continental press—of Germany in particular—against our officers and men in South Africa. We need not say that they are utterly unfounded and are so base and absurd, indeed, that it is surprising they should ever have been published, or if published, credited, by intelligent and decent people.

### THE PRINCIPAL MEDICAL OFFICER IN INDIA.

Colonel Sir Thomas Gallwey, K.C.M.G., C.B., R.A.M.C., who is selected for appointment as Principal Medical Officer in India with the rank of Surgeon-General, is

## ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING DECEMBER, 1901.

(*Specially compiled for* THE LANCET.)

| Cities and Boroughs. | Estimated population in the middle of 1901. | Notified Cases of Infectious Disease. | | | | | | | | | | | Deaths from Principal Infectious Diseases. | | | | | | | | | | | Deaths from all causes. | Death rate per 1000 living. | Deaths of infants under one year to 1000 births |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Small pox. | Scarlet fever. | Diphtheria * | Typhus fever. | Enteric fever. | Other continued fevers. | Puerperal fever. | Erysipelas. | Cholera. | Total. | Annual rate per 1000 persons living | Small pox. | Measles. | Scarlet fever. | Diphtheria.* | Whooping-cough. | Typhus fever. | Enteric fever. | Other continued fevers. | Diarrhœal diseases. | Total. | Annual rate per 1000 persons living. | | | |
| LONDON... ... ... ... ... ... ... | 4,543,757 | 656 | 1475 | 953 | — | 198 | 2 | 18 | 405 | — | 3707 | 10·6 | 90 | 244 | 52 | 128 | 63 | — | 28 | — | 50 | 655 | 1·9 | 6553 | 18·8 | 173 |
| *West Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| *Paddington* ... ... ... ... ... .. | *144,154* | *8* | *32* | *36* | — | 7 | — | 1 | 10 | — | 94 | 8·5 | — | 7 | — | 4 | — | — | — | — | 2 | 13 | 1·2 | 171 | 15·5 | 155 |
| Kensington ... ... ... ... ... ... | 176,737 | 5 | 39 | 16 | — | 5 | — | — | 15 | — | 80 | 5·9 | 1 | 36 | 5 | 2 | 2 | — | — | — | 3 | 49 | 3·6 | 264 | 19·5 | 200 |
| Hammersmith ... ... ... ... ... | 112,619 | 23 | 12 | 13 | — | 4 | — | — | 11 | — | 68 | 7·9 | 11 | 23 | 2 | — | — | — | — | — | 3 | 39 | 4·5 | 211 | 24·4 | 244 |
| Fulham ... ... ... ... ... ... ... | 138,426 | 15 | 40 | 60 | — | 6 | — | — | 15 | — | 136 | 12·8 | 3 | 9 | 1 | 8 | 1 | — | 1 | — | 7 | 30 | 2·8 | 193 | 18·2 | 172 |
| Chelsea ... ... ... ... ... ... ... | 73,879 | 1 | 18 | 15 | — | 4 | — | — | 1 | — | 39 | 6·9 | 1 | — | 1 | 2 | 1 | — | — | — | — | 5 | 0·9 | 109 | 19·2 | 228 |
| City of Westminster ... ... ... .. | 182,502 | 18 | 26 | 17 | — | 5 | — | — | 7 | — | 73 | 5·2 | 4 | 22 | — | — | — | — | 3 | — | 1 | 30 | 2·1 | 242 | 17·3 | 182 |
| *North Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| St. Marylebone ... ... ... ... ... | 133,060 | 13 | 25 | 12 | — | 7 | — | 1 | 9 | — | 67 | 6·6 | 1 | 1 | 2 | 2 | — | — | — | — | 3 | 9 | 0·9 | 195 | 19·1 | 129 |
| Hampstead ... ... ... ... ... ... | 82,287 | 1 | 26 | 12 | — | 2 | 1 | 1 | 3 | — | 46 | 7·3 | — | — | — | — | — | — | — | — | 2 | 2 | 0·3 | 72 | 11·4 | 143 |
| St. Pancras ... ... ... ... ... ... | 235,297 | 73 | 83 | 101 | — | 11 | — | 2 | 26 | — | 296 | 16·4 | 7 | 10 | 4 | 13 | 3 | — | 2 | — | — | 39 | 2·2 | 349 | 19·3 | 147 |
| Islington ... ... ... ... ... ... ... | 335,325 | 16 | 106 | 77 | — | 16 | — | 3 | 22 | — | 240 | 9·3 | 4 | 45 | 4 | 13 | 2 | — | 6 | — | 2 | 76 | 3·0 | 497 | 19·3 | 187 |
| Stoke Newington ... ... ... ... ... | 51,328 | 9 | 24 | 6 | — | 5 | — | — | 3 | — | 47 | 11·9 | 2 | — | — | 1 | — | — | 1 | — | — | 4 | 1·0 | 54 | 13·7 | 154 |
| Hackney ... ... ... ... ... ... ... | 219,780 | 10 | 75 | 83 | — | 12 | — | — | 31 | — | 211 | 12·5 | 1 | 2 | 3 | 10 | 3 | — | 2 | — | 1 | 22 | 1·3 | 278 | 16·5 | 146 |
| *Central Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Holborn ... ... ... ... ... ... ... | 59,205 | 99 | 17 | 15 | — | 4 | — | — | 8 | — | 143 | 31·5 | 12 | — | 1 | 2 | — | — | 2 | — | — | 17 | 3·7 | 112 | 24·7 | 99 |
| Finsbury .. .. .. ... ... ... ... | 101,263 | 30 | 46 | 11 | — | 2 | — | — | 10 | — | 99 | 12·7 | 2 | 2 | 1 | 6 | 2 | — | — | — | — | 13 | 1·7 | 182 | 23·4 | 201 |
| City of London ... .. ... .. ... | 26,627 | 4 | 10 | 7 | — | 2 | — | — | 1 | — | 24 | 11·7 | 2 | — | — | 1 | — | — | — | — | — | 3 | 1·5 | 42 | 20·6 | 297 |
| *East Districts* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Shoreditch . ... .. ... ... .. | 118,564 | 11 | 21 | 13 | — | 3 | — | 1 | 8 | — | 57 | 6·3 | 4 | 16 | 1 | 1 | 2 | — | — | — | 3 | 27 | 3·0 | 229 | 25·2 | 242 |
| Bethnal Green ... .. .. .. ... | 129,700 | 15 | 50 | 40 | — | 8 | — | 1 | 17 | — | 131 | 13·2 | 1 | 12 | 5 | 10 | 2 | — | — | — | — | 30 | 3·0 | 241 | 24·2 | 218 |
| Stepney ... ... ... ... ... ... ... | 298,834 | 84 | 100 | 54 | — | 10 | — | — | 28 | — | 276 | 12·0 | 11 | 10 | 4 | 5 | 9 | — | 2 | — | 5 | 46 | 2·0 | 445 | 19·4 | 171 |
| Poplar ... ... ... ... ... ... ... | 168 837 | 32 | 50 | 39 | — | 8 | — | 2 | 21 | — | 152 | 11·7 | 4 | 6 | 1 | 4 | 8 | — | 2 | — | 5 | 30 | 2·3 | 258 | 19·9 | 164 |
| *South Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Southwark ... ... ... ... ... ... | 206,219 | 48 | 90 | 34 | — | 11 | — | — | 24 | — | 207 | 13·1 | 6 | 3 | 5 | 5 | — | — | 1 | — | 1 | 21 | 1·3 | 323 | 20·4 | 119 |
| Bermondsey ... ... ... ... ... ... | 130,348 | 19 | 70 | 11 | — | 9 | — | — | 9 | — | 118 | 11·8 | 5 | — | 4 | 2 | 1 | — | — | — | — | 12 | 1·2 | 227 | 22·7 | 234 |
| Lambeth ... ... ... ... ... ... ... | 302,460 | 19 | 64 | 42 | — | 12 | 1 | — | 20 | — | 158 | 6·8 | 1 | 16 | 1 | 9 | 7 | — | 2 | — | 2 | 38 | 1·6 | 440 | 19·0 | 156 |
| Battersea ... ... ... ... ... ... ... | 169,364 | 41 | 58 | 19 | — | 9 | — | — | 10 | — | 137 | 10·5 | 1 | 7 | 1 | 2 | 2 | — | 3 | — | 3 | 19 | 1·5 | 225 | 17·3 | 184 |
| Wandsworth ... ... ... ... ... ... | 233,943 | 14 | 65 | 53 | — | 6 | — | 1 | 25 | — | 164 | 9·1 | 2 | 8 | 1 | 4 | 2 | — | — | — | 2 | 19 | 1·1 | 270 | 15·0 | 180 |
| Camberwell ... ... ... ... ... ... | 259,897 | 20 | 169 | 82 | — | 14 | — | 2 | 35 | — | 322 | 16·2 | — | 2 | 3 | 10 | 6 | — | — | — | 1 | 22 | 1·1 | 350 | 17·6 | 143 |
| Deptford ... ... ... ... ... ... ... | 110,732 | 1 | 50 | 23 | — | 3 | — | — | 4 | — | 81 | 9·5 | 1 | 1 | 1 | 7 | 1 | — | — | — | 1 | 12 | 1·4 | 150 | 17·7 | 152 |
| Greenwich ... ... ... ... ... ... | 96,183 | 6 | 47 | 23 | — | 5 | — | — | 10 | — | 91 | 12·3 | 3 | 1 | — | 3 | — | — | 1 | — | — | 8 | 1·1 | 125 | 16·9 | 179 |
| Lewisham ... ... ... ... ... ... | 123,423 | 5 | 35 | 31 | — | 3 | — | 2 | 14 | — | 90 | 9·1 | — | 3 | 1 | 2 | 8 | — | — | — | 2 | 16 | 1·6 | 160 | 16·2 | 172 |
| Woolwich... ... ... ... ... ... ... | 117,619 | 11 | 26 | 8 | — | 4 | — | 1 | 8 | — | 58 | 6·4 | — | 2 | — | — | 1 | — | — | — | 1 | 4 | 0·4 | 144 | 16·0 | 169 |
| Port of London .. ... ... .. | — | — | 1 | — | — | 1 | — | — | — | — | 2 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

* Including membranous croup.

of Gloucester, the honorary secretary of the Jenner Society, she will get every information. The society does a most valuable work and is worthy of every support —Ed. L.

*To the Editors of* The Lancet.

Sirs,—Referring to the excellent annotation in your issue of Jan 11th (p. 104) on the Relation of the Church to Sanitary Reform may I say that for the last 25 years in the administration of the cup at Holy Communion I and my colleagues have invariably used a small linen cloth to cleanse the lip of the cup after each communicant has participated? There are more reasons than one for so doing, and I have received the thanks of many for observing a precaution which unfortunately is not universally adopted. And at the communion of the sick I always request the sick person, who, of course, communicates last, to finish what little wine remains in the cup, and this is in strict accordance with the sixth rubric at the end of the Office for the Administration of Holy Communion.

My experience extends to some thousands of communicants per year, and, so far as I can trace, not one instance of mischief has resulted from the passing on of the sacred cup with the simple precaution above named.

I am, Sirs, yours faithfully,

Jan. 11th, 1902. Vicar.

## CANCER IN INDIA AND IN CHINA.

*To the Editors of* The Lancet.

Sirs,—As a correspondence on this subject is going on in your columns, it has occurred to me that your readers might like to hear the results of inquiries made by me in this direction.

In the absence of statistical reports as to the prevalence of cancer and other diseases in India, all estimates hitherto made must be regarded as tentative and conjectural. The great extent of the country and the teeming millions of its population, make it very difficult even for those who have been long resident there in a professional capacity to arrive at correct conclusions. The few hospitals in India draw their patients from immense multitudes and vast areas, so that although many cases of cancer may be constantly under treatment, the proportionate prevalence of the disease in the general population, may be much less than the medical officers of these institutions are apt to believe. It is, however, certain that neither the rice-eating Hindoos nor the flesh-eating Mahomedans are exempt. Nearly all those who have specially studied this subject believe that cancer is comparatively rare in India—much rarer, for instance, than in England. This was Walshe's opinion, and he supported it by reference to the annual report of the Bengal Medical College (1844–45), which showed that of 4080 male patients under treatment there, during a period of three years, only three were affected with cancer; and of 701 female patients, only two were cancerous, the uterus being the organ affected in both cases.

Among recent authors Davidson is of the same opinion and in support he mentions the fact that of 2657 operations at the Afzulgung Hospital at Hyderabad in 1886 only two were for cancer, while in Bombay only one per 1000 of the total deaths were due to it.

On the other hand, McLeod states[1] that malignant tumours are common among the natives of Bengal, both in hospital and private practice; in females the breast is the part chiefly affected, and in males the cutaneous system, oral cavity, and especially the penis. Hendley's experience at the Jeypore Hospital accords with this, for during the period 1880–88—when the hospital was under his charge—102 major operations were undertaken for the treatment of malignant disease. As further information seemed desirable I wrote to Surgeon-Lieutenant-Colonel Lawrie of Hyderabad calling his attention to the foregoing statement. He kindly replied as follows: "My experience of cancer is that it is as frequent in India as in England, and I have formed this opinion from observations in Calcutta, Lahore, and Hyderabad. The Afzulgung Hospital was under my charge in 1886, and that year was no exception to the rule. The small number of operations for cancer shows nothing, except that the people are averse to operation for most diseases other than stone and cataract."

With regard to the prevalence of malignant tumours in the vast North-Western Provinces and the Punjab I am indebted to Mr. Freyer for the following information. He writes: "The general impression on my mind, after 17 years of active surgical work among the poor and rich of this part of India, is that tumours of all kinds—including cancer and sarcoma—are extremely common. Epithelioma of the tongue and penis and scirrhus of the breast are particularly common." Four-fifths of the inhabitants of these provinces are Hindoos who, with few exceptions, in accordance with the precepts of their religion, never eat meat. The other fifth—being Mahomedans—may eat meat, but they are practically vegetarians, as they can seldom afford the luxury of animal food. Among these people stone also is very common.

In Kashmir, Orissa, Madras, Anam, and Cochin cancer is said to be more prevalent than in adjacent communities. The report of the Kashmir Mission Hospital for 1898, by Dr. Neve, shows that 195 operations for tumours were done in the course of the year, 70 for cancer (including 11 of the female breast), and 16 for sarcoma (including a very large one of the lower jaw and another of the abdominal wall).

Nearly all the older writers on the geographical distribution of cancer agree in stating that cancer is more prevalent in China than in any other Asiatic country. Desiring to obtain recent information on this subject I wrote to Mr. Cantlie who was then Government surgeon at Hong-Kong. He very obligingly replied as follows: "I do not think I have been without a case of malignant disease under my care ever since I came to China six years ago." Of 3608 consecutive Chinese hospital in-patients under his care 114 had cancer, or 3·1 per cent. This proportion is almost identical with that met with in large London general hospitals, like St. Bartholomew's, where I have ascertained that 3·5 per cent. of the in-patients have cancer. Of Mr. Cantlie's 114 Chinese cancer patients the primary seats of the disease were as follows: female breast, 38; upper jaw, 25; lower jaw, 14; penis, 9; uterus, 8; parotid, 5; hip, 5; tongue, 4; lip, 3; and thigh, 3. At Dr. Kerr's hospital in Canton during the year 1887 30 cases of malignant tumours were operated on, including 11 amputations of the female breast. Strange to relate Mr. Cantlie has never met with cancer of the stomach among the Chinese. With regard to their diet he says: "All Chinamen eat fish and pork at morning and evening meals. Fowls and ducks are always on the table of all but the most humble of the coolie class, and they do not have them because they cannot afford them. I hope this will be a sufficient answer to those who maintain that Chinamen live on rice. It is not nearly so true as that the Scotch live on porridge." Dr. Elizabeth Reifsnyder of Shanghai (1895) says that cancer of the uterus and female breast is very common in that part of China, where ovarian cystomata are also often met with.

I am, Sirs, yours faithfully,

Clifton, Bristol, Jan. 10th, 1902. W. Roger Williams.

*To the Editors of* The Lancet.

Sirs,—In The Lancet of Dec. 21st, 1901, p. 1763, your readers are told by Lieutenant-Colonel J. Maitland, I.M.S., that "Mr. C. B. Keetley, writing upon the subject of cancer, states that he had been informed by Dr. C. N. Saldanha that 'Hindoos suffer comparatively little from cancer.' Upon this statement of the comparative immunity of Hindoos from cancer both Dr. Saldanha and Mr. Keetley base certain arguments regarding the prophylaxis of the disease." Now, my hypotheses as to *carcinoma* were published in The Lancet of August 31st (p. 584), the abstract of Dr. Saldanha's letter not until Oct. 5th (p 939), and my comment on this letter was simply that my hypotheses "seemed to receive a certain small measure of support from some of the facts stated—e g., the freedom of the Hindoos from cancer and their carefulness to cleanse their skins." I no more made myself responsible for Dr. Saldanha's statements than I am going to for Lieutenant-Colonel Maitland's; and my hypothesis is no more based on them than Somerset House is based on Waterloo Bridge. Again, in The Lancet of Jan. 4th Captain C. Donovan, I.M.S., intervened, writing that "it was a pity Mr. Keetley did not refer to the annual reports of the medical institutions of India, obtainable at three or four accredited booksellers in London, before accepting the *ipse dixits* of Dr. Saldanha." I am much obliged to Captain Donovan for telling me about these reports and these booksellers, and should be more now in his forty-ninth year. He will pass over the heads of a number of officers of his rank; but in the present list of surgeon-generals there are many who are not far from retirement for age. Surgeon-General W. S. M. Price, A.M.S., now acting as Principal Medical Officer in India, has seen his fifty-eighth birthday, and was disqualified for the Indian Government, it is understood, because he had less than three years to serve before retirement by age.

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[1] Operative Surgery in Calcutta, 1885, p. 102.

MEDICAL AID FOR SOLDIERS ON FURLOUGH.

Soldiers on furlough who require medical aid and who are unable by reason of distance from a military station to apply for it to the officer commanding, may in future obtain the services of a civil medical practitioner, to whom they are to show their furlough paper, and the medical man will be allowed to claim from the War Office for attendance, medicines, and the like at the rate laid down in the Royal Warrant.

NAVAL MEDICAL SUPPLEMENTAL FUND.

At a quarterly meeting of the directors of the Naval Medical Supplemental Fund held on Jan. 14th, Sir J N. Dick, K.C.B, being in the chair, the sum of £75 was distributed among the several applicants.

# Correspondence.

"Audi alteram partem."

## SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

*To the Editors of* THE LANCET.

SIRS,—In the autumn of 1900 you were good enough to allow me to call the attention of the younger metropolitan members of the profession to the advantages offered by the above society. The result was that last year we enrolled 35 new members. May I venture again to trespass on your kindness in order to point out that any qualified medical man residing within 20 miles of Charing-cross can be proposed as a member, the annual subscription being two guineas, payable for 25 years? But any annual subscriber may become a life-member within 10 years of his election by making up his subscription to 25 guineas if he shall have been under 30 years of age, to 30 guineas if he shall have been under 40 years of age, and to 35 guineas if he shall have been over 40 years of age at the time of his election as a member of the society. For the especial benefit of young members I may point out that a member under 30 years of age at the time of his election can compound for a single payment of 20 guineas, under 40 for 25 guineas, and over 40 for 30 guineas, thereby *becoming a life-member* and his widow at *once being eligible* for a grant should her circumstances unfortunately justify it. The secretary is Mr J B Blackett, 11, Chandos-street, Cavendish-square, London, W.

I am, Sirs, yours faithfully,
CHRISTOPHER HEATH, President.
Jan. 13th, 1902.

## AN UNUSUAL COMPLICATION OF INFLUENZA.

*To the Editors of* THE LANCET.

SIRS,—Although it is an ungrateful task to call in question the accuracy of a brother practitioner's diagnosis, particularly in a case which one has not himself seen and examined, yet I venture to ask Mr. J. G. Carruthers whether the case reported by him under the above heading in THE LANCET of Jan 11th, page 89, may not bear another interpretation. Certainly the diagnosis of influenza does not carry with it conviction to my mind. Surely "typical influenza" would not progress "in the usual manner" from Nov. 11th to Dec. 1st. It is, of course, a matter for regret that no post-mortem examination was made But from the clinical side alone the case reads very like one of typhoid fever terminating fatally in the fourth week by intestinal hæmorrhage Perhaps Mr. Carruthers will kindly furnish your readers with the details of the case, *particularly in regard to the behaviour* of the temperature, in order that, in accordance with his request, they may be in a better position to offer an explanation of the complication which he describes

I am, Sirs, yours faithfully,
JOHN W. MOORE.
Dublin, Jan. 11th, 1902

## THE RELATION OF THE CHURCH TO SANITARY REFORM.

*To the Editors of* THE LANCET.

SIRS,—Most of the remarks in the leading article entitled, "The Church and Sanitary Reform," in THE LANCET of Jan. 11th (p. 104), are very timely and will be welcome to the clergy who (like myself) set a high value on the close alliance which has subsisted since the time of Jesus Christ and His apostles between spiritual teaching and physical healing. I fear that the structural defects of our churches from the sanitary standpoint are almost beyond our reach as *clergy, for architects are proverbially self-opinionated*; but I doubt whether places of public assembly are one-hundredth part so dangerous as the badly-ventilated rooms where people habitually dwell. Our churches, even when crowded on Sundays, are tolerably full of fresh air most of the week, and after a large experience of public halls I can safely say that the air is purer there than in most dwellings. Had you instanced the ventilation of our elementary day-schools there would have been better support for your arguments. Most of them at 4 P.M. are scandalously oppressive.

With regard to the last part of your article I do not think that the rubric alluded to contemplates the question of infection at all. The only rubric that does so is the last one in the office for communicating the sick; in which you will see there is special provision for excusing friends and neighbours from participation Clergy who officiate at private no less than at public celebrations are expected reverently to consume all that remains of the consecrated elements, and therefore the Church accepts (for the ministry at any rate) whatever risks there may be. Life assurance societies are agreed that they are very few. This problem would become a negligible quantity if ministers who hand the chalice to communicants would wipe the edge with a fair linen cloth as they pass from one to another. The subsequent treatment of such "purificators" is very well understood Anglicans consider withholding the chalice from the *laity to* be an evasion of the words, "Drink ye all of this"; and there is a suggestion of fellowship and affection in the mutual use of one vessel for many communicants which we should be loth to lose.

I am, Sirs, yours faithfully,
C. ARTHUR LANE.
St. Mark's Lodge, New Barnet, Herts, Jan. 13th, 1902.

*To the Editors of* THE LANCET.

SIRS,—With reference to the annotation on "The Relation of the Church to Sanitary Reform," in THE LANCET of Jan. 4th, p 104, there is much truth, no doubt, in what is said therein, though it is to be questioned whether in these days of independent thought and action the influence of the clergyman is not over-estimated. I am writing, however, to express a much-felt want in connexion with the vaccination question—viz., that of good serviceable "literature" in the form of pamphlets, circulars, and bright, telling tracts suitable for distribution, reading at mothers' meetings, and for posting the clergy and others up in the incontestible facts and figures which are necessary to convince the obdurate *Even we clergymen's wives* might do something for the cause amongst the women if we had such. The subject of vaccination was recently put down for debate at a working-man's club in this parish, but the leader lamented to me beforehand that he had no statistics on which to rely, only a general sense that vaccination was wise and desirable. We are frequently inundated with pamphlets from the anti-vaccinationists, anti-vivisectionists, non-flesh-eating, and kindred faddists, but of the sort mentioned above none come our way. Is it not time, with the probability of the near spread of small-pox, that this should be remedied? I am *emboldened to add name and* address in the hope that one of your readers may either send us some such literature or enlighten us as to where it may be obtained.

I am, Sirs, yours faithfully,
ELLEN HOWELL.
*All Saints' Vicarage, Derby, Jan 14th, 1902.*

⁂ If our correspondent will write to Dr. Francis T. Bond should afford such facilities to the poorer classes, but to allow the well-to-do to escape a just toll must react eventually injuriously on one and all. Precisely as cheap medical and surgical institutions are unsound in principle and harmful to the majority, so also are cheap pathological institutes. I think gratitude is owed to Mr. White for bringing forward this important question once more.

I am, Sirs, yours faithfully,

Plymouth, Jan. 11th, 1902. F. BUSHNELL.

## FIRST AID FOR PRIMARY HÆMORRHAGE: THE WRONG TEACHING GIVEN TO AMBULANCE CLASSES.

*To the Editors of* THE LANCET.

SIRS,—"The notions stated to have been acquired at ambulance classes" are certainly startling if the holders of first-aid certificates "have got the idea fixed in their minds that they must always apply some sort of an improvised tourniquet to the limb above the bleeding part," and this treatment to include "cases of ruptured varicose veins, *superficial lacerated wounds, and compound fractures.*" It is still more startling to be told that these "notions" are in accordance with what "they had been taught to do." I do not suppose that I have either more or less common sense than any of the other honorary surgeons of the St. John Ambulance Association, but for my own part I strongly repudiate such absurd teaching as Mr. Walter G. Spencer lays to the charge of ambulance teachers. I quite agree with him as to the great danger of the tourniquet in the hands of ambulance pupils. Will Mr. Spencer kindly state what the comrades ought to have done in the following case which I extract from the *Daily Mail* of Jan. 7th? "Wm. Hickman had both his legs cut off in a chaff-cutting machine which he was working yesterday at Messrs. Whittome and Co.'s, Islington. He died before he could be taken to hospital." I am, Sirs, yours faithfully,

Ongar, Essex, Jan. 8th, 1902. J. B. G. GIDLEY-MOORE.

*To the Editors of* THE LANCET.

SIRS,—Permit me to endorse the opinions of my co-lecturers and examiners of the St. John Ambulance Association whose letters on first aid in primary hæmorrhage appeared in THE LANCET of Jan. 11th, p. 117. The first-aid treatment of hæmorrhage is most clearly and soundly laid down in the text-book of the association, and I submit that no one can take exception to that instruction, which I find, after a considerable experience as an examiner, is most strongly emphasised by the lecturers. *It is not always easy to instil* these principles into the minds of some of our pupils, but such ones seldom succeed in gaining the certificate. Moreover, many of the pupils fail to see the necessity of attending more than one course of lectures and hence forget the knowledge they have gained. But these facts do not detract from the correctness of the instruction which is given to the classes.

Your correspondent Mr. Fenoulhet is right in suggesting that a somewhat more prolonged course of instruction would be beneficial, but in a great number of classes this plan is carried out by lecturers, much to the advantage of the pupils. I am quite sure that when intelligently carried out first aid has been often the means of bringing to the doors of medical men "living" patients instead of "dead" people.

I am, Sirs, yours faithfully,

Streatham, S.W., Jan. 13th, 1902. M. COATES.

*To the Editors of* THE LANCET.

SIRS,—Permit me through your columns to express my thanks to Mr. Walter G. Spencer for his admirable letter upon this subject. I am sorry to say that I have taught the errors alluded to until this winter, but having seen many cases on a par with those so fully stated by him I had no difficulty in convincing myself that the present teaching was as erroneous as it was injurious and for the first time decided not to teach a class except in my own way. Here arose difficulties which I could not brush aside. If I taught my own views my pupils would not pass the necessary examination, and their chances of gaining the valuable cups, &c., given for competition would be *nil*, and to teach as formerly was out of the question. In this dilemma I wrote to the secretary of the Fife Colliery Surgeons' Association asking permission to express my views on the subject at its next meeting on Nov. 23rd, 1901. He replied that he was pleased to hear of my intentions, but unfortunately this letter was followed by another on Dec. 3rd in which it is stated that my "remarks could be received only informally, the main object of the association hitherto being for the ethical side of our profession."

After such a snub I need scarcely add that my paper was not read, that my class is still unopened, and my pupils as anxious as ever. My views and cases run parallel with those mentioned by Mr. Spencer, and with very slight modifications I agree with his treatment. Now, Sirs, What am I to do? I trust that Mr. Spencer's letter will be more successful in arousing the profession *generally* to take an interest in this matter which I failed to obtain *locally*—and that someone will reply to my query—What am I to do?

I am, Sirs, yours faithfully,

JOHN MACDONALD, L.R.C.P. Edin.

Lochgelly, Fife, N.B., Jan. 15th, 1902.

## THE SANATORIUM TREATMENT OF CONSUMPTION.

*To the Editors of* THE LANCET.

SIRS,—It would be wise to pause and to consider whether the money now being provided for sanatoriums to *cure* consumption could not be more advantageously spent to *prevent* the same by producing over large areas the hygienic conditions under which tuberculous diseases slowly and surely die out. Dr. Lubbock of Norwich, who taught an out-door active life, open windows in dormitories, beef-steaks and porter, has done much good for those who have condescended to learn of a *provincial* Englishman.

I am, Sirs, yours faithfully,

Framlingham. GEO. E. JEAFFRESON.

## REVACCINATION.

*To the Editors of* THE LANCET.

SIRS,—In view of the present epidemic of small-pox in London it would be highly instructive as well as interesting to know what percentage of persons attacked by the disease had been *successfully revaccinated*, and whether cases have occurred of persons who had recently (say, within six months) been revaccinated contracting the disease. Perhaps some of your correspondents who are on the medical staff of the small-pox hospitals would kindly afford me this information.

*I am, Sirs, yours faithfully,*

Jan. 8th, 1902. J. BRANDER, L.R.C.P. & L.R.C.S. Edin.

## SUSCEPTIBILITY TO REVACCINATION.

*To the Editors of* THE LANCET

SIRS,—While thoroughly agreeing with Dr. F. W. Andrewes that the publication of statistics by various practitioners would be of use to the cause of vaccination, I fear that there *will be great discrepancies owing to* the various methods of vaccination employed, and this will be well instanced by a comparison of the results obtained by Dr. Andrewes and by myself. Curiously enough he has vaccinated at St. Bartholomew's Hospital 171 persons, and in the midst of a large number of vaccinations recently performed by me I have a batch of 193 revaccinations performed at one place—namely, the office of the Ocean Accident Corporation in Moorgate-street, E.C.; of these 162 were males and 31 were female clerks or officials on the staff. Out of the whole number of revaccinations there was not one single failure, all the arms developing well-marked vesicles in the three places scarified. Among these cases six had been recently vaccinated with negative result, but in my hands they showed no insusceptibility. In 140 cases the vesicles were large and well formed, being 72·53 per cent.; in 31 cases the vesicles were moderate in size, being 16·06 per cent.; and in 22 cases the vesicles were small but not under a quarter of an inch in diameter, being *just under 11·4 per cent.*

With regard to these results I think it right to say that the only lymph used was that of the Jenner Institute, obtained through Messrs. Allen and Hanbury, and the method of vaccinating was as follows: The arms were first washed with obliged if he had added the address of one of the accredited persons.

I will now deal with Lieutenant-Colonel Maitland and Captain Donovan exactly on the same principles as those which I applied in dealing with Dr. Saldanha, and Captain Donovan will find the process quite different from a mere acceptance of *ipse dixits*. Lieutenant-Colonel Maitland says that in Madras "cancer is very prevalent amongst Hindoos." Captain Donovan says that "Colonel Maitland speaks for the Madras General Hospital where cases from all over the Madras Presidency come for operation." Lieutenant-Colonel Maitland I myself may add, occupies the high position of senior surgeon to that hospital and professor of surgery in the university. The population of the Madras Presidency *is 40,000,000 and that of the city 500,000*, of whom nearly four-fifths are Hindoos. What does Lieutenant-Colonel Maitland write when he comes to figures? He says: "In the wards of the Madras General Hospital cases of cancer affecting Hindoos are *almost* always to be found. At the time that I write I have *three* Hindoos in my wards suffering from the disease" The italics are mine, "*almost* always." "*Three.*" And they come from among 40,000,000 of people, 30,000,000 of whom are Hindoos!

No one has said that the Hindoos *never* suffer from cancer. What I said in my paper of August 31st was that they rarely suffered from cancer of the *stomach*. Neither Lieutenant-Colonel Maitland nor Captain Donovan mention the stomach, although they refer to cancer of "the penis, the jaws, throat, cervix uteri, and breasts, &c." Unless the reference is somewhere concealed in this "&c." I am at a loss to know what bearing Captain Donovan's letter really has on the substance of my paper, or why he should plunge into the discussion at all, especially in a manner so reckless that, even in correct*ing the form "Hindoo,"* his reproof falls as heavily on Colonel Maitland and on the dictionaries as on me. He goes on to say, "Of course, the word 'Hindoos' is employed by Mr. Keetley in a very loose sense and might have passed muster 50 years ago as of sufficient scientific accuracy, but in this more enlightened twentieth century," &c., in the same style. The term "Hindoos" is employed by me as referring to Hindoos only. It is not used by me at all except in reference to Dr. Saldanha's letter. In my original paper I asked gentlemen for facts bearing on my hypothesis, and particularly requested (1) that the distinction between carcinoma and sarcoma should be carefully observed, and (2) for exact references to published sources of information. In spite of this "enlightened twentieth century" and its "scientific accuracy," neither Captain Donovan nor any of the other gentlemen who have responded has paid the slightest attention to these reasonable requests. Each flings his general impressions at my head as if they were half-bricks. But each gentleman, whether gentle or otherwise, remains responsible for his own statements so long as I refer to him when referring to them.

Perhaps some Indian medical officer will kindly tell me whether the Mahomedans circumcise or not. I have asked a number of well-informed and travelled people this question in vain. Of the four parts to which Lieutenant-Colonel Maitland refers as "very common" seats of cancer in Madras two are the penis and the uterus. He also says that cancer is much more common among Hindoos than among Mahomedans. Now, in THE LANCET of Dec. 1st (p. 1764), Dr. H. R. Andrews, quoted by Dr. James Braithwaite, says that "the Jews are much less subject to cancer than we are and that they are especially free from cancer of the uterus." Dr. Braithwaite says that this is because the Jews take so little salt, but on that point Mr M. Bernstein contradicts him absolutely in the same page (p. 1764). There is one, and perhaps only one, point of difference between Jews and most Christians on which we shall all agree—viz., that the Jews have less foreskin and therefore less accumulation of smegma præputialis than persons with foreskins. Now the first part of my hypothesis, as given on August 31st, is that the "specific cause" of carcinoma "flourishes in either the secretions or the cells of the skin-glands, including the mammary gland—e.g., milk, butter, cheese, *sebaceous material, and sweat*"; smegma præputialis I specially mention in THE LANCET of Oct 5th (p. 939). The bearing of this on the occurrence of cancer of the uterus is obvious. Its bearing on the frequency of cancer elsewhere is also clear, though less obvious, and it is important, because if carcinoma is in any way a contagious disease any increase or decrease of cancer in a situation like the penis or the uterus, where it is attended by discharge, is an increase or decrease of foci of infection, and therefore leads to increased or decreased general frequency of the disease.

There are other ways, I acknowledge, in which circumcision may diminish the frequency of carcinoma—viz., by lessening liability to syphilis and gonorrhœa and to other causes of chronic ulcerations which may lead the way to carcinoma.

Lastly, may I wish success to your efforts to obtain the appointment of a commission to inquire into the causes of cancer? I am, Sirs, yours faithfully,

Grosvenor-street, W., Jan. 10th, 1902. C. B. KEETLEY.

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## VOLKMANN'S CONTRACTURE.

*To the Editors of* THE LANCET.

SIRS,—A point of great importance has been omitted from my paper on Volkmann's Contracture owing to a mistake of mine during the correction of the proof-sheets. It is to the effect that Professor Oppenheim of Berlin refers briefly to ischæmic paralysis in his "Text-book of Nervous Diseases," 1900. Here he emphasises the importance of *normal* electrical reactions as the most characteristic feature in the diagnosis of this deformity.

I am, Sirs, yours faithfully,

Jan. 11th, 1902. LEONARD S. DUDGEON.

*To the Editors of* THE LANCET.

SIRS,—I have read Mr. Leonard S. Dudgeon's paper on "Volkmann's Contracture" in THE LANCET of Jan. 11th, p. 78, with great interest. "Volkmann's contracture" appears to me to be so much better a way of naming the deformity than "ischæmic paralysis"; it commits us to no theory as *to causation. There is one slight error in the paper which* I hope I may be pardoned for correcting. Mr. Dudgeon says, "Tendon lengthening first advised by Mr. Page has since been carried out by Mr. Littlewood, Mr. Barnard, and others, &c." If Mr. Dudgeon will again refer to the cases he has quoted he will see that I performed the operation on Dec. 5th, 1898, and that Mr. Page performed his operation on Dec. 20th, 1898, 15 days later. Since performing the two operations referred to I have operated on a third case, with a very satisfactory result, the inclosed short notes of which I shall be glad if you will insert. A female child, aged three years, was admitted under my care into the Leeds Infirmary on August 12th, 1900. She was suffering from the typical deformity—Volkmann's contracture. This had appeared after a fracture of the lower end of the right humerus in May, 1900. The fracture was treated with an anterior rectangular splint, which was kept on for five days; on being removed a large sore was found on the anterior surface of the forearm, near the elbow-joint. At the time of the operation there was a large scar in this position and the contracture was extreme. The operation was performed on August 28th, 1900. All the tendons were lengthened on the front of the forearm. It was a difficult operation, as the tendons were such slender structures. In this case I lengthened them so that I could put up the fingers in the slightly hyper-extended position. The patient made a good recovery. I saw her yesterday (Jan. 12th, 1902). She has now quite an excellent hand, with full use in it.

I am, Sirs, yours faithfully,

Leeds, Jan. 13th, 1902. H. LITTLEWOOD.

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## THE LIVERPOOL PATHOLOGICAL DIAGNOSIS SOCIETY.

*To the Editors of* THE LANCET.

SIRS,—As clinical pathology is in its infancy and will claim an increasing number of workers the question as to the fees of the above society and of pathologists generally should be now considered by a representative committee. I trust Mr. C Powell White will initiate such action. *I think* no one will seriously deny that the work is worthy of consulting fees. Such is the opinion of most London hospital medical staffs. There can only remain the broader question whether medical services are adequately rewarded when compared, say, with the legal profession or trade. The comparison is unfavourable, more especially when we consider the value of our work to the community. It would be to the interests of both the profession and the public to consider fully whether this branch of medicine alone should be underpaid. *Public bodies and charitable institutions* the cause of the attack. It is a commonly noted fact that the very sick seldom sneeze and they do not take cold easily, although they often suffer severely when a cold is epidemic, so perhaps a certain amount of vigour is necessary to develop a non-infectious cold, and it may be the expression of an effort of nature to protect the subject exposed, and may be compared to the uselessly excessive inflammation that often follows injuries. There is a tendency in writers on this interesting subject to rush from one extreme to the other, as our profession has so often done in the past. The infectious cold is now publicly recognised, but with our present knowledge I am sure it is premature to declare it to be the only cold and to advise general isolation. It would mean, amongst other things, the closing of all elementary schools whenever the wind was in the east and the turning out from public meetings any who coughed or sneezed. I believe that the key to the problem lies in differentiating the various kinds of colds, and if we can do this clinically the bacteriologist will have a far better chance of helping us.

I read Dr. Gardner's letter with great pleasure, and I sincerely hope that he may be right, for it would be a delightful thing to get rid of the "cold" bogey and to be no longer compelled to keep the youngsters off the wet grass. If we could obtain some positive knowledge on this subject we should remove a great reproach from our profession, for at present it is said that we know neither the cause nor the cure even of such a common thing as an ordinary cold.

I am, Sirs, yours faithfully,
O. Clayton Jones, M.B. Oxon.

Ilfracombe, Dec. 14th, 1901.

## CONTRACT PRACTICE IN NORTH WALES.

*To the Editors of* The Lancet.

Sirs,—I should be much obliged if you would allow me to make use of your columns to draw the attention of your readers to the following facts. Up to this year all the friendly societies in this town were attended by one firm of two brothers. During the year 1901 the various societies started a movement to change their club rules in order that each member might at the beginning of each year choose which of the five resident medical practitioners he would have to attend him in case of illness. Under the old rule the rate of pay was 3*s.* 6*d.* per member per annum. After two of the societies—of which there are three in question—had altered their rules to this effect the resident medical practitioners met in conference and decided that under the new conditions 5*s.* per member per annum would be the minimum that they could accept, and an intimation to this effect was made to the societies. This they all rejected as being an exorbitant demand, and instead of sending the new rules for ratification to the Registrar of Friendly Societies they tried to get an outside practitioner to take them all at the old rate. I am glad to be able to state that one gentleman with whom they were in communication has, after becoming acquainted with all the facts, absolutely declined to accept the post.—I am, Sirs, yours faithfully,

Dolgelly, Jan. 10th, 1902. A Dolgelley Practitioner.

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**A Patient's Aversion to Medical Men and its Consequence.**—Last week we referred to the death of a man at Derby who preferred to be attended by an unqualified practitioner. On Jan 11th the coroner for West Bromwich held an inquest at the Dartmouth Hotel, West Bromwich, concerning the death of a woman, aged 45 years, who died suddenly on Jan. 9th. The deceased had been ailing since August last and had occasionally seen a medical man, but had not during the last four months received proper medical attention, because she had a strong aversion to medical men. In spite of protest by her husband and daughter she always declined to see a qualified medical man, but becoming worse on Jan. 9th a medical man was called in The woman, however, died from heart disease. It was stated that the deceased was a very hard-working woman and would prefer to spend what money she had on her family rather than on medical attendance for herself. The coroner thought that in these cases the services of the parish medical officer should be obtained and that his attendance would avert the necessity of holding a public inquiry. The jury returned a verdict of "Death from natural causes," but added that the woman's end was brought about in a measure by over-work and self-neglect.

## THE ORGANISATION OF THE PROFESSION.

(From our Special Commissioner.)

### The Working-classes and the Birmingham General Dispensary.

Now that the practitioners of Birmingham have organised a strong medical union the problems to be solved assume a practical as well as a theoretical interest. Prominent among these is the question of the Birmingham General Dispensary. The importance of this institution can be gathered from the figures given in the last annual report. The receipts from all sources then amounted to £9554. The cost of the surgeries, the surgical appliances, and the drugs is put down at £1786. The consulting physician received £157 10*s.* and the consulting surgeon £157 10*s.* The salaries of the resident medical officers amounted to £2179, those of the dispensers to £836; the secretary's collecting office expenses to £598; the servants' wages to £729; and the cab-hire for the medical officers to £298. The rest was spent in advertisements, insurances, coal, gas, and taxes, and £105 were given to the District Nursing Society. There is generally a good credit balance carried over. The number of patients treated on presentation of a ticket has greatly increased. In 1880 there were 17,759 such patients. In 1890 they increased to 26,030 and in 1895 the figure was 32,774. In 1900, the number of patients admitted by ticket was 43,678, which is an augmentation of 2513 on the previous year. It will be seen, therefore, that the number of patients has more than doubled in 20 years. Can it be said that the number of persons who are worthy subjects of charity has more than doubled in the last 20 years? Has England sunk so low, has the misery in these islands become so wide-spread, that charities must be doubled in extent so as to bring the needed relief? Evidently this is not the case and the increase of patients at this dispensary has no relationship whatsoever with the increase of poverty. The very reverse is the case. Whatever may be the effect of the war on the wages and incomes of the inhabitants of Great Britain taken as a whole, it is absolutely certain that the inhabitants of Birmingham have been reaping a golden harvest. Never were the working classes there so fully employed and never was so much overtime done. If other industries have suffered that of the manufacture of small arms, of cartridges, and of dynamite, for which Birmingham is the centre, has been overwhelmed with orders and with work. Therefore the need of charity in the form of medical relief should have considerably decreased while the war provided so much extra employment But we find, on the contrary, that there were 2513 more patients who applied to the Birmingham General Dispensary in the year 1900 than in the year 1899. Evidently, therefore, the increase of patients is not due to an increase of poverty. Consequently there must be an abuse of this charity.

The rule is, that every person who subscribes a guinea to the dispensary may vote for the election of the governors, and he receives eight tickets, which he may give to poor patients, and such patients will be entitled to medical treatment for one month. But it is also stated that "every governor recommending a person as a patient shall satisfy himself that the person is a proper object for charitable relief." If these were the only rules then there would be no further abuse than that which under similar circumstances arises all over the country, and which is due to indiscretion and carelessness on the part of those who give away the tickets. In our series of articles on Hospital Abuse numerous instances of such indiscretion have been given, and, taken by itself, this constitutes a serious grievance. Nevertheless this is a comparatively easy matter to deal with. The fault clearly lies with those who give away the tickets They should be more careful and should take the trouble to ascertain whether the persons among whom they distribute the tickets are really worthy subjects for charitable relief. These remarks do not apply especially to Birmingham or to dispensaries, but also to hospitals and to every part of the kingdom where tickets are given in exchange for subscriptions to charitable institutions. The grievance special to Birmingham and which accounts for the enormous increase of patients attending at the Birmingham General Dispensary finds its origin in the weekly collections made in factories soap and warm water and, in the cases of the men, shaved; the region where vaccination was to take place was then well rubbed with hot boric acid solution (saturated) and afterwards dried with boric lint. The vaccine was placed on the skin in three places and the epidermis was scratched through the vaccine with a blunt lancet; hardly any blood was perceptible, merely a slight discolouration appearing. The ages of the persons revaccinated were between 15 and 65 years, and all ranks of life were represented, from the higher official at £1000 a year to the engineer's labourer at 30*s* a week. In these cases and in a large number of others I have had no failure, every case, in all sorts and conditions of men and women, taking well without undue inflammation or enlargement of glands. The women have all been vaccinated on the shoulder at their own request and have as a consequence suffered much more than the men who have been vaccinated on the outer side of the left forearm where the vesicles cause little inconvenience.

I have carefully tested the results of the use of shields or covering of any kind during the last three months and I am confirmed in my previous conviction that every appliance of the sort is injurious and harmful, the inflammation being increased by heat or pressure or by both; great pain is caused by lint sticking to the vesicles, and I have especially noticed that the wire guards by circumscribing the area of the swelling cause very much increased suffering. I have had the best results when the following directions have been carried out: the undervest sleeve should be turned up and nothing worn under the sleeve of the white shirt which is always very loose; where a coloured shirt is worn, a piece of clean, soft, old cambric handkerchief should be tacked to the inside of the coloured sleeve The vesicles are in this way hardly touched by the sleeve and the arm is kept cool. The only application I recommend is a liberal and frequent dusting with vinolia powder and I find that with these precautions the vesicles are, as a rule, dry and unbroken.

In large offices there will always be a certain number of conscientious objectors When I began at the Ocean Office many declined to be vaccinated, others went to private vaccinators, but when the results of the arms were seen, everyone came to me; and I mention this as I feel sure that the results were due to careful antiseptic methods, the lancet being sterilised with boiling water between each separate vaccination.—I am, Sirs, yours faithfully,

ALBERT BENTHALL, F.R.C.P. Edin.

*Tavistock square, W.C., Jan. 12th, 1902.*

## THE SANITARY CONDITION OF LEICESTER INFIRMARY.

*To the Editors of* THE LANCET.

SIRS,—As I notice an article in THE LANCET of Jan. 11th, p. 113, on the sanitary condition of Leicester Infirmary, summarising the results "of a joint conference between the weekly board and the honorary medical staff of the Leicester Infirmary" with respect to my recommendations as to the sanitary condition of that institution, which report agrees with almost all of my recommendations, but in which there is a sentence which you have quoted as follows:—

> Sufficient cause has not been shown to justify Professor Corfield's opinion that "the whole of the present drainage arrangements must be condemned and removed entirely and new drains laid, &c."—

I write to inform you that my reason for giving that opinion was that all the drains tested by the architect or by myself were found to leak badly—a fact which, in my opinion, quite justifies the recommendation, which is, I consider, one of the most important and necessary recommendations in my report. It is nowadays axiomatic amongst sanitarians that the drains, especially those of such an institution, whether inside or outside the building, should be watertight.—I am, Sirs, yours faithfully,

W H. CORFIELD.

Consulting Sanitary Adviser to His Majesty's Office of Works.

Savile-row, W., Jan 15th, 1902

## ARTIFICIALLY MATURED (?) WHISKY.

*To the Editors of* THE LANCET.

SIRS,—I notice in THE LANCET of Jan 11th, p. 109, a short annotation on the artificial maturation (?) of spirits. Although no reference is made, I presume the article was partially occasioned by the paper which I read before the Society of Chemical Industry on Monday, Jan. 6th. I would point out that the process I proposed affected only the aldehydes of the spirits, the higher alcohols, fatty acids, esters and basic constituents remaining untouched. Under no circumstances can I think it very advantageous to leave in aldehydes, especially furfurol, when one considers the work of Curoi, Magnan, and Laborde and the later publication of Brunton and Tunnicliffe in THE LANCET of Dec. 8th, 1900, p. 1643. As a chemist I should be very glad to know what are the opinions of physiologists on the effect of aldehydes.

I am, Sirs, yours faithfully,

East London Technical College, Jan. 11th, 1902 J. T. HEWITT.

## THE DANGERS OF A COMMON COLD.

*To the Editors of* THE LANCET.

SIRS,—Dr. H Willoughby Gardner, in his interesting letter in THE LANCET of Dec. 14th, 1901, p 1697, advances many striking arguments, but he does not prove his thesis. That there is an infectious cold no medical man who goes about with his eyes open, as your correspondent says, can doubt, but the question is whether this is the only kind. The immunity of isolated bodies of men may show that this is the commoner kind, but as the examples given were lusty adults they do not prove that it is the only kind. Men in good condition seldom catch cold. It is a rare thing for a rowing crew to catch cold, although the coxswain and coach often suffer The stories are incomplete, for they do not show that this complaint existed in the European settlements where the travellers caught their first cold. In the case of Conway's men it was a "bad cold," and to make the story complete we should know whether bad colds were troubling the little settlement. It would be a curious complication of the question if temporary immunity leads to a worse cold in the end. The immunity in long sea-voyages is better evidence, for the manner of life is that of civilisation, but the ordinary sailor is notorious for his dislike to ventilation; so here it is difficult to understand why colds, if infectious, should die out, for one attack certainly does not protect. If the immunity of open-air sanatoriums is complete this is strong evidence, especially as they receive so many catarrhal subjects; but the inmates are living an artificial life and their immunity may be due to other causes than the absence of infection. They eat largely without indigestion, but this does not prove that dyspepsia is due to specific infection. On the whole, the evidence of "no infection, no cold" is strong, but not conclusive.

On the other side is the weight of almost universal opinion in the past, both lay and medical, which ought to go for something, although Dr. Gardner may well smile at the ready histories of exposure given by subjects of an obviously contagious cold; there is similarly a history of an accident connected with most gouty joints But there is other evidence. Colds, especially amongst the children of the poor, are far more common when the wind is in the east and when, therefore, sudden chills are common. A cold wind will set up eczema and conjunctivitis and therefore it seems probable that it may cause catarrh of the nasal mucous membrane. The phenomenon of what is termed "hay fever" seems to prove that coryza can be set up by causes other than infection, and in many patients a cold much resembles an attack of hay fever. The variations in duration of the incubation period, and of the length of the established attack, the common occurrence of abortive attacks, and the fact that one attack does not protect, all militate against the view that there is a single definite infection.

I feel sure in my own mind that there are persons, for example, who suffer from a cold if they sit in wet boots, and that the symptoms come on within a few hours and are generally ushered in with sneezing; I think this happens with sufficient certainty to exclude infection. Of course, there may be an infection generally distributed throughout the civilised world, and a chilled blood-stream may let this enemy in, but this is hardly what is meant when colds are said to be due to a specific infection. More probable is the view that these rapidly developing colds are, like migraine, a disturbance of the vaso-motor system. A recent writer states, I know not on what authority, that "sneezing is a sign of life in the east but of death in the west" It certainly is a sign of a commencing cold in the west, and when this symptom commences almost immediately on exposure to cold it is difficult to believe that infection has any part in at the dispensary there is a more lavish distribution of bandages and ointments, &c. Therefore, many workmen prefer paying to go to the dispensary instead of subscribing to a benefit society or to a medical aid association. Of course, if they went to the dispensary and offered to buy a ticket it would be refused, but the secretary of a works club, if he has exhausted his tickets can get others without giving another guinea, for he can buy them for 3*s.* 6*d.* each, and is then at liberty to give them or to sell them to whom he pleases. Thus a workman can buy a ticket from the secretary of his club, though he cannot buy one from the dispensary. This roundabout process altogether fails, however, to impress on the workman's mind that he is in receipt of charity. He does not understand charity that costs him 3*s.* 6*d.*, but he quickly realises that he is getting medicine and medical advice at a very cheap rate. As, on the other hand, the medical men have not yet made it evident that they object to this, the workmen naturally conclude that the medical men know their business best and therefore do not scruple to avail themselves of the advantages within reach.

Undoubtedly it is partially the medical men's own fault that the system has been allowed to mature. The medical officer accepts service with the dispensary because he imagines that the patients whom he will see are only poor people who could never consult a private practitioner, and that therefore he is not interfering with or underselling his brother practitioners. Some medical men only go to the dispensary for a few months so as to lend a hand, as they imagine, in a charitable work. Now it will be the business of the Birmingham and District Medical Practitioners' Union to make it clear that the dispensary is no longer wholly and solely a charity, but that in many instances it competes disastrously with the general practitioner. It will be its mission to find, first, a remedy for the abuse, and, secondly, a means of enforcing this remedy, and it must be confessed that this is no easy task. Evidently a wage-limit, or something equivalent to that, will have to be imposed.

But this is far from being the only task that has to be taken in hand. The battle of the clubs will have to be fought on a very large scale, for the abuses arising out of the contract system are also wide-spread throughout the district. Nothing can be accomplished unless it be with the aid of a strong organisation and united action. Now, however, that more than 200 general practitioners are in union there should be less difficulty in inducing the remainder to join also, and thus a practical unanimity may be secured in course of time. In these endeavours the Birmingham and District Medical Practitioners' Union will be supported by the organised members of the profession throughout the kingdom, and the medical profession generally will unite in wishing it every success.

# NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

*The Plague Epidemic.—The Malarial Convention at Nagpur.—Indian Jails.—Condition of the Jails in Bengal.—The Continued Famine.*

OWING to the Christmas holidays the plague figures have not been published in time for the mail, but detailed returns since Dec. 14th show that there has been an increase of the epidemic in Bengal, in the North-West Provinces, and in the Madras Presidency, while a decline is recorded for the Bombay district. In Mysore and the Punjab the continued high mortality shows that the disease is but little under control, although the latest figures from the Punjab point to some improvement. The Kapurthala State has become infected for the first time, and the Patiala State shows an increase in the mortality. In Bombay city the deaths from plague continue about the same, but in Calcutta there has been a drop during the past week to 15 deaths. The general mortality has again advanced in Bombay but is exceptionally low in Calcutta. In the latter city the rate is about 32 per 1000, while in the former it is about 52 per 1000. The returns are now calculated according to the results of the recent census, so that comparison with former years is unsatisfactory.

A Malarial Convention is to be held at Nagpur, Central Provinces, on Dec. 27th and following days, when the attendance of medical men from all parts is expected. In the Nagpur Central Jail is a large collection of malarial cases as well as a collection of many varieties of mosquitoes. The members of the Malarial Commission of the Royal Society will be present, so that we may expect some interesting discussions.

A resolution of the Government of India on the reports on the administration of jails in the provinces of British India for the year 1900 refers amongst other things to the increase of 21 per cent. in the admissions, which is attributable to scarcity and high prices. In Burma and Assam, where these influences were absent, there was no increase. There was an increase of 40 per cent. in the numbers convicted of offences against property, and there was an extraordinary increase of no less than 57 per cent. in the number of juveniles sentenced to imprisonment. The percentage of previous convictions of those admitted to jail was 14·15. In this connexion it is satisfactory to hear that more attention is being given to finger-tip impressions, and that a larger number of prisoners were identified by these means. The sickness and mortality tables show a death-rate of 33·46 for all the jails, which is higher than that of the previous year but is said to compare favourably with the rate of mortality recorded among the free population (38·6). This is hardly a fair comparison, because infants, young children, and women in child-birth, not to speak of chronic invalids (too ill for crime), are excluded. The famine is put down as the cause of the increase in admissions; the accommodation of the jails was greatly strained and the high prices ruling occasioned an increase in the cost of maintenance.

In the current number of the *Gazette of India* is given an abstract of the sanitary sheets of the most unhealthy jails in Bengal. They are nearly all described as overcrowded for some period during the year. In the Mymensing Jail temporary buildings were necessitated, but they are described as unusually damp and dirty. In the Dacca Central Jail return it is said that the sanitary defects in the surroundings were too numerous to mention. At Chittagong the rice was poor in quality, badly stored, and weevil-eaten. At Backergunge the water-supply is obtained from the tanks and is very bad. At Burdwan the ventilation of the wards is very defective and the ground around the jail is waterlogged for months in the year. At Rangpur the climate is extremely malarious and almost all the inhabitants suffer. At Ranchi there was an epidemic of pneumonia. At Chupra the country around is waterlogged all through the rains and the water-supply is very unsatisfactory. These few extracts show what an enormous amount is required to be done to improve the sanitary condition not only of the jails but of the towns in which they are situated. The prisoners must offer an immense field for clinical investigation.

The famine figures show a slight increase. There are still nearly 100,000 persons under relief.

Dec. 27th, 1901.

# MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

*Proposed University for Manchester.*

THE special meeting of the Court of Governors of the Owens College held on Jan. 7th was signalised by the passing of an important motion, closely resembling that of the Owens College Associates recorded in THE LANCET of Jan. 4th, p. 60. It was moved by Mr. E. Donner, seconded by Professor Tout:—

> That the time has arrived when steps should be taken to secure that there should be, as originally proposed by the Owens College, an independent university in Manchester.

16 members voted for the motion and none against it. On the 10th a special meeting of the Victoria University Court was held at the Owens College to discuss, and if need be to take action on, the report of a committee appointed on June 29th to consider the course to be taken if University College, Liverpool, should apply for a university charter. The questions given in the report for solution were whether (*a*) the three colleges—Owens, with those of Liverpool and Leeds—should remain as constituent colleges of the university; or whether (*b*) there should be a separate university in Liverpool and "a university in Manchester without liability to admit or remain in association with any other college," and also "a university established having its seat in Leeds." The first alternative may be

and workshops on behalf of the Hospital Saturday Fund. The working-classes are imbued with the principle that payment confers the right to vote, a principle confirmed by the rule of the dispensary which gives a vote and eight tickets to the donor of one guinea. But as no individual working-man was likely to give a guinea it was not supposed that working-men would elect governors and they were still less likely themselves to become governors. In this, however, no account was taken of the spirit of organisation bred out of the Hospital Saturday Fund. The weekly levies would not have been tolerated for so long had they not been made to confer rights; and so large is the sum thus obtained that the working-classes are beginning to imagine that they have bought up every institution in the town. The working-man is far too well acquainted with the advantages of organisation to give his pennies directly to the dispensary. That would be an act of pure charity on his part, for he would receive nothing in return. He therefore institutes what is called a works club. All the workmen engaged in a factory pool their subscriptions till they have collected a sum of perhaps £2 2*s.* for the dispensary, and then the secretary of the works club hands over this sum to the dispensary and consequently receives 16 tickets and is entitled to vote for the election of governors. Thus the working-men not only vote, but they have elected fellow-workmen as governors of the dispensary. These working-men governors are by far the most energetic and regular attendants on the committee of management. They have a personal interest at stake, whereas the rich people who subscribe guineas do so purely from benevolent motives and do not anticipate utilising the dispensary for their own purposes. The workmen, on the contrary, look upon the dispensary as a means of obtaining cheap medical attendance and of thus economising the medical fees which they would otherwise have to pay. They do not give the tickets they receive in exchange for the guineas which they have collected to persons who are "proper objects for charitable relief," but they utilise them for themselves or their families.

The idea, however, that the dispensary was a charity was somewhat humiliating, and the workmen having obtained representation on the board of management the rules were forthwith altered. The tickets given to the secretaries of the works clubs no longer bear the inscription, "a proper object for charitable relief," but the words, "whom I believe to be deserving of medical relief." A gentleman who gives his medical adviser a liberal fee is certainly deserving of medical relief, and the workman who has subscribed regularly to his works club does not fail to consider himself equally deserving of medical relief. He pays less, but the relief is given in a less costly manner. Consequently the workman concludes that he only receives that to which he is fully entitled, and he would be deeply offended if he were considered the recipient of charity Yet it cannot be insisted too often and too clearly that he *is* in receipt of charity. The charity is twofold: it is a charity in hard cash and a charity in the form of underpaid or partially gratuitous medical service Eight tickets are given for a guinea, that is 2*s* 7½*d* per ticket. The annual report says that in 1900 the average cost of the patients was 3*s.* 9·2*d.*, or 1*s* 2*d.* less than it was in the previous year. Therefore each patient cost in hard cash and on an average over 1*s.* last year, and over 2*s* the previous year, more than the sum actually paid for him, and this does not take into account the value of the professional advice which was given and which should represent a much larger sum. Therefore the dispensary remains a charity in spite of the pretension of the subscribers to works clubs that they pay for what they receive.

One of the worst features of this system and one which works out very injuriously to the interest of the medical profession, is that it gives relief just when it is least needed and does not give relief when it might be legitimately claimed It has been calculated that on an average the members of works clubs can receive two tickets per annum. As this entitles the bearer to a month's treatment for each ticket he need not pay medical fees when suffering from an ordinary illness. This, however, is just the time when artisans and other persons of small means can afford to pay medical fees. On the other hand, should the illness be of so prolonged and serious a character that it lasts more than two months, then even those who when well are in receipt of good wages may be excused if they can no longer continue to pay for medical attendance. But it is just at this moment that the assistance rendered by the works club fails. The patient, having had his two tickets for the dispensary, cannot claim more, and yet by that time his resources are exhausted. Thus he obtains charity when he has no legitimate claim and when at a later period of sickness he might fairly be considered to be a worthy subject for charitable assistance it is withheld from him It will be seen that the system is altogether wrong. What was intended as a pure charity has become in part a provident organisation. The subscribers to the works clubs take great care to let the medical officers of the dispensary know that they are not like the other patients, but have paid. By this they infer that they are not in receipt of charity; but this is a false conception. The figures given above show that they are in receipt of charity, and the ugliest feature of the abuse is that these thrifty, industrious, and careful workmen who have the forethought to subscribe regularly to their works club are, by receiving this charity, depriving the poor who really need it and for whom it was intended. The genuine poor find considerable difficulty in getting tickets for the dispensary. They must go about and beg for them, whereas the thrifty and well-to-do artisan has his ticket waiting for him at the works where he is employed. He has but to say a word and it is given to him, for he can claim it as a right. It is only when he ceases to be in a good position, when prolonged illness has exhausted his savings, when he really and urgently needs help, that the help is no longer forthcoming. It is for men in this latter stage, for those who are in real distress, that the medical officers are willing to give their services for nothing or for very reduced rates of payment. As matters now stand the opposite obtains. If there were not so many well-to-do patients frequenting the dispensary the whole, instead of only a part, of the resources of that institution would be available for the relief of the genuine poor. On the other hand, the general practitioner would have many more private paying patients among that class which can well afford to pay at least for a short period of time the usual small fees charged. It is only when the resources of the patient are exhausted that he should be allowed to claim the assistance of a charitable institution such as the Birmingham General Dispensary.

There are actually 11 resident medical officers employed by this institution, and, if properly managed, it would afford a very good opening for young practitioners. The medical officers are first engaged for £150 a year and £30 more are allowed for cab-hire. As no account has to be rendered it is probable that this latter sum is not all spent in cabs. Then the medical officer has a residence provided for him at the central offices in Union-street. After a while he is promoted to one of the branches and on removing he generally obtains an increase in his salary of £20. Of course, he is not allowed to have any private practice After one or two years of branch work he may suggest another increase and sometimes he will get it, sometimes it will be refused When accorded it generally amounts to another £20. Out of the 11 resident medical officers there are now four who have obtained this second increase in their salaries. The patients are well disciplined. The door for receiving messages asking the medical officer to call on a patient is closed punctually at 10 in the morning. The medical officers have, as a rule, about 15 visits to pay every day; but, of course, in this there is no regularity, and sometimes there are as many as 45 visits to be paid in a single day. Generally speaking, however, these patients can all be attended to in the morning. Then the out-patients come to the surgery at 2.30 P.M. As the greater number are suffering from chronic diseases—bronchitis, phthisis, &c.—it is frequently only necessary to repeat the mixture previously prescribed. Such patients can be disposed of very rapidly and thus a considerable amount of time may be devoted to a new and interesting case This latter consideration may contribute to explain the popularity of the dispensary. The ordinary club medical officer is likely to be in a hurry to go to see his private and paying patients. Time is of greater object to him. The dispensary medical officer is young, is seeking to acquire experience, he has no private patients, the whole afternoon and evening are before him, and he is but rarely called out at night. This is all excellent in its way and very fortunate for the poor, but it altogether misses its mark if it attracts well-to-do patients. There is also an impression prevalent that the medicines given out at the dispensary are of a superior quality. This is erroneous, but nevertheless it serves to attract many patients. It is, however, true that there were five candidates, and eventually Dr. W. H. Cooke and Mr. H. L. Brownlow were elected.

### *The Prevention of Tuberculosis.*

A meeting was recently held at Wells, Somerset, under the presidency of the Mayor, with the view of considering the best means of promoting the interests of the National Association for the Prevention of Consumption and Other Forms of Tuberculosis in Wells, Shepton Mallet, and Glastonbury districts. Amongst those present were the Bishop of Bath and Wells, the Dean of Wells, Dr. W. Fairbanks, Dr. W. A. Lauder Smith, and Dr. L. A. Weatherly. The last-named in the course of his speech stated that a site had been purchased at Winsley for the sanatorium, and he added that the committee had a balance in hand of nearly £5000, but it had been decided not to erect the building until they had at least £9000 promised over and above the expenditure in the purchase of the site. After some discussion it was determined that a local committee should collect subscriptions towards the Winsley sanatorium.

Jan. 13th.

## SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

### *Glasgow University.*

A MEETING of the Glasgow University Court was held on Jan. 9th. The subject of chief interest was a discussion on the report of a committee dealing with the use of the apparatus in the engineering laboratory. The laboratory has cost £40,000 and is an annual charge upon the University funds to the extent of some £600. Hence it is felt in some quarters that it ought not to be monopolised by the professor of engineering. Under the present arrangement the professor has sole control of the laboratory and may use it not only for teaching but also for his own private work, and for the latter purpose may employ technical and other assistants. In these circumstances it is held that a proportion of the fees earned should be paid into the University chest and that a special committee should be placed in charge of the laboratory to regulate the use that is to be made of it apart from teaching purposes. In the course of the discussion the question was raised as to whether it was legally competent for the court to adopt this position, and the matter was therefore adjourned in order that a legal opinion might be obtained.—Mr. R. M. Mitchell has been re-appointed to the court as one of the representatives of the town council for a further period of four years.—The recommendation of the finance committee that a sum of £5000 should be voted to the University led to a long discussion at the meeting of the town council on Jan. 9th, and was ultimately carried by a large majority. The money is placed at the disposal of the authorities to be used either for the improvement of the general equipment of the University or for the establishment of a lectureship on social philosophy. In connexion with this vote an appeal has been issued from the University asking for contributions to a further sum of £5000 in order that the lectureship may be at once founded with an endowment of £350 per annum. Towards this Sir James Bell, Bart., has given a donation of £1050; other sums amounting to £500 have also been promised.—Professor J. G. McKendrick, who has been suffering from an attack of erysipelas, is making satisfactory progress towards recovery; he hopes shortly to resume the duties of his chair.—Professor Bower delivered one of the University free lectures on Jan. 13th, taking for his subject "A Grain of Wheat." In speaking of wheat as an article of diet he described it as being rather deficient in proteids and as having too large a proportion of carbohydrates with some deficiency of the fats. He pointed out that the Italian fared better on his macaroni, prepared as it was from highly nitrogenous wheats, than did the Glasgow children on white bread; for these a return to porridge and milk would be an enormous advantage. Professor Bower also discussed the economic aspect of his subject and urged the establishment of stores of wheat to secure an abundant food-supply in the event of war.

### *Bequests to Glasgow Institutions.*

In accordance with the directions of the will of the late Mr. William Langlands of Glasgow the following legacies have been distributed:—Glasgow Royal Infirmary, £1000; Western Infirmary. £1000; Sick Poor and Nursing Institution, Training Home for Nurses, and Cancer Hospital, each £500; Sick Children's Hospital, Home for Incurables, and Quarrier's Homes, each £250. Various other charitable and philanthropic institutions receive bequests, making a total of over £9000

### *Unusual Legal Action.*

An action of a somewhat unusual nature has recently been successfully instituted against the Corporation of Glasgow. The pursuer, a labourer in the employ of the corporation, was during the summer of last year, in the course of his duty, engaged in making concrete blocks and in painting copper bonds. As a result he suffered from the consequences of metallic poisoning. In his claim against the corporation he urged that this resulted from the paint supplied to him and contended that it was the duty of the defenders to have warned him of the risks to which he was exposed. As they did not do this they were, he argued, responsible for the harm which he had sustained. The case has been settled out of court, the defenders paying to the pursuer £225 in satisfaction of his claim.

### *Society of Antiquaries of Scotland.*

At a meeting of this society, held on Jan. 13th, Dr. Thomas H. Bryce of Glasgow University gave an account of a series of explorations in the Cairns of Arran and described the human remains there discovered. The work was commenced on the initiative of Dr. Ebenezer Duncan and has received financial support from the Society of Antiquaries. The results, together with those obtained in 1860 by Dr. James Bryce when investigating the stone circles of Arran, give a fairly complete view of the prehistoric sepulchral monuments of the island.

### *The Carnegie Trust.*

A meeting of the executive committee of the Carnegie Trust was held in Edinburgh on Jan. 13th, Lord Elgin being in the chair. The secretary and treasurer submitted their reports for the period ending Dec. 31st, 1901. These showed that fees had been paid by the trust for 2441 students, the sum thus expended amounting to £22,941 16*s.* 6*d.* The annual meeting of the trustees is to be held in London, and the report will probably be made public after this meeting.

### *King's College Class, Aberdeen, 1864–68.*

For the first time since it separated the King's College Class, 1864-68, met for dinner in the Palace Hotel on the evening of Jan. 10th. Professor Davidson (Aberdeen) was chairman and Dr. Thomas Milne (Aberdeen) and the Rev. Dr. Bruce (Banff) were croupiers.

### *Report of the Aberdeen Public Library.*

The arrangement with the Aberdeen University library by which, on payment of a modified subscription of 5*s.* per annum, anyone entitled to borrow books from the public library may become entitled to borrow also from the University library, has worked smoothly throughout the year and has been taken advantage of by 24 borrowers, to whom 193 volumes were issued.

### *Aberdeen University Extension Fund.*

The students of the various faculties at Aberdeen University have subscribed the sum of £205 towards the extension of the University buildings. The list will close on Feb. 20th.

Jan. 13th.

## IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

### *Mercer's Hospital, Dublin.*

A LARGE number of the friends of, and subscribers to, Mercer's Hospital, Dublin, were invited by the governors to be present on Jan. 10th on the occasion of the opening of a new children's ward by Lady Arnott. Lord Justice Fitzgibbon occupied the chair, and in his address alluded to the fact that the hospital, founded in 1734, was one of the oldest institutions of its kind in Dublin. Lady Arnott, after a few kindly remarks as to the importance of hospital charity to children, declared the new ward open. Mr. T. W. Russell, M.P., as one of the governors of the institution, proposed a vote of thanks to the medical staff and subscribers and made interesting reference to his experience considered as out of court. Liverpool will without doubt have her university and no one can say that she is unworthy of it. Nor is there any need to attribute her wish to local jealousy, though Sir William Houldsworth said that "they were told that Birmingham had got a university and that Liverpool would have one. ...... It seemed to him merely a question of rivalry between these great towns." After much discussion paragraph (*b*) of the third section of the report was carried by a large majority, and the Victoria University Court has decided that Manchester shall have her own university. With Liverpool gone the Victoria University would then consist only of the Owens College and her younger sister at Leeds. Principal Boddington remarked that "it had been discourteously said that the Yorkshire College held to the federal scheme through consciousness of its own weakness." Whoever said that did not know Yorkshire. With its wealth, public spirit, and north-country grit Principal Boddington might well say that "he had not the slightest doubt that Yorkshire would do its share in the creation of a Yorkshire university." So disintegration is to be the order of the day. Many will regret with Lord Spencer, Sir William Houldsworth, Sir Ughtred Kay Shuttleworth, and others, the break-up of the university federation, and fear that it is not in the interests of higher education. On the other hand, great weight must be attached to the opinion of Dr. A. W. Ward, who was so long and intimately associated with the Owens College and the Victoria University as professor, principal, and vice-chancellor, and who now speaks with still more authority as Vice-Chancellor of Cambridge University, that he voted for a university for Manchester "in the full and firm belief that he was voting in the interests of higher education." The Owens College will therefore in all probability stand alone, as it did for four years, as the only college of the Victoria University. It was further resolved that a committee should be appointed to report on "terms and conditions," &c., that the Chancellor (Lord Spencer) should nominate a certain number of names, and then that he should fix the members to be appointed by each college. It may be hoped that the inevitable rivalry between these various universities will be directed towards raising and not lowering the standard of education.

### *The Manchester Infirmary.*

The question of re-building the Manchester Infirmary has not been brought prominently under notice for some time, though the urgent need for extension has long been the text of the honorary staff. An important paper, however, was read by Mr. W. T. Rothwell at a meeting of the Manchester Statistical Society on Jan. 8th, advocating the removal of the infirmary to Stanley Grove and the relief of the Free Reference Library and the Arts Gallery from their present cramped positions by building on the present infirmary site "a temple of learning and a palace of art" for their accommodation. A vote of thanks to Mr. Rothwell for his paper was moved by Mr. Marshall Stevens, who suggested "that a building of 20 storeys high might be built for the purposes suggested on the infirmary site." This grotesque and transatlantic suggestion was animadverted upon by Mr. T. C. Horsfall who seconded the vote of thanks. He said that there were plenty of buildings of 20 storeys, "but they were only found in towns where there was the grossest indifference to the conditions needed for human welfare." All will agree, I think, with Mr. Horsfall as to this matter. The deterioration of race takes place rapidly enough in our towns as they are at present, but it is slow compared with what it would be in a town consisting of 20-storeyed barracks. Dr. T. Harris said that increased accommodation was wanted and could not be provided by extension of the present premises. He did not think that the site was bad and it was central and convenient. A new infirmary was wanted and the accommodation could be increased from 300 beds to 500 on the Piccadilly site "without encroaching very much on the space available and without building 10 or 20 storeys high." The board of management is practically debarred from building on the space around the infirmary, and it is very questionable whether 500 patients could be accommodated in the best manner on the area covered by the present buildings. Though the present infirmary is central the objections to its removal are very much a matter of sentiment and Stanley Grove would come soon to be considered equally convenient. It is no doubt within the range of fog, which, however, is less pungent than that which at times almost chokes the patients in the centre of the city.

### *Small-pox.*

Small-pox is gradually extending in this part of the country. Manchester, which had been free for more than a year, has one case, one has occurred in Salford, four have occurred in the Stalybridge district, and one case has been notified at Bolton.

Jan. 14th.

## WALES AND WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

### *The New Chancellor of the University of Wales.*

THE Court of the University of Wales, at a special meeting held at Shrewsbury on Jan. 10th, unanimously elected H.R.H. the Prince of Wales as Chancellor of the University in succession to His Majesty the King who was Chancellor from the foundation of the University in 1893. A special meeting of the court is to be held to decide upon the town in which the ceremony of installation shall take place. The corporations of Cardiff, Aberystwith, Bangor, and Swansea have each extended invitations to the court. There are constituent colleges in all of these towns, with the exception of Swansea, and in Cardiff there is a medical school. Not the least noticeable portion of the proceedings at Shrewsbury was the graceful manner in which the senior deputy chancellor (Dr. Isambard Owen) responded to the deputations who urged the claims of their respective towns.

### *Small-pox near Swansea.*

A sudden outbreak of small-pox, directly traceable to a patient who was allowed to travel from London on the ninth day of the disease, has occurred at Ystalyfera, a parish in the Pontardawe Rural District, about 15 miles from Swansea. The patient was a girl who came to South Wales on Dec. 23rd, 1901, and from that day until Jan. 4th, 1902, she was in no way isolated, consequently eight persons, who had been in some way associated with her, have developed small-pox. There is absolutely no means of isolating infectious diseases of any kind in the Pontardawe district, although there is a working-class population of over 20,000 persons, and the constant inter-communication between the inhabitants of the district and those of Swansea renders it especially desirable that there should be means at hand for speedily checking such an outbreak as the present one.

### *Kingswood Sewage Works.*

The Royal Commission on Sewage Disposal has asked to have placed at its disposal the sewage works belonging to the Kingswood Urban District near Bristol for the purpose of taking records and making observations. The system of treatment is by means of a closed tank and continuous filtration upon the lines laid down by Mr. F. W. Stoddart, the city analyst of Bristol.

### *Weston-super-Mare Isolation Hospital.*

The Weston-super-Mare Urban District Council has decided to make no charge for the treatment in the isolation hospital of patients received from working-class families in which the bread-winner is earning less than 25*s.* weekly. Patients from other households will be charged upon a varying scale, with a maximum of two guineas weekly.

### *Vaccination Fees.*

The Axbridge Board of Guardians has declined to accede to the request from the Cardigan Board of Guardians to take steps to obtain the reduction of the fees paid to public vaccinators and vaccination officers. The Axbridge board very properly considered that such reduction would check rather than encourage vaccination and that it would not be desirable to reinstate the public vaccination station.

### *Cardiff Infirmary.*

Dr. O. T. Vachell has been elected honorary consulting physician to the Cardiff Infirmary upon his retirement as honorary senior physician, a position which he has held for the past 15 years Dr. Vachell has been officially connected with the infirmary for 23 years.

### *Royal United Hospital, Bath.*

At the meeting of the committee of the Royal United Hospital, Bath, held on Jan. 6th Mr. H. G. Terry and Mr. F. Lace, assistant surgeons to the institution, were elected full surgeons vice Mr. R. J. H. Scott and Mr. F. K. Green who have been placed on the honorary consulting staff. For the vacancies thus caused on the assistant staff

2. Anyone committing such offence and especially by communicating to a third party or knowingly communicating to any one of the parties interested before any examination the text or matter of the subject of examination, or who shall make use of false documents such as diplomas, certificates of birth, and the like, or who shall act as a substitute for the real candidate, shall on conviction be liable to a term of imprisonment varying from one month to three years and to a fine of from 100 to 10,000 francs or to any one of these penalties respectively.

3. Those found guilty of being accessories shall be liable to the same penalties.

4. Article 463 of the Penal Code is applicable to facts provided for by the present law.

5. The public action at law shall not estop disciplinary action in any case in which the law has provided for this latter course.

### *Chloroform Anæsthesia in Patients with Morbus Cordis.*

M. Huchard does not admit that either morbus cordis or angina pectoris is a contra-indication to the administration of chloroform. He maintains that all patients suffering from morbus cordis, whether mitral or aortic, can be anæsthetised. The only contra-indication, according to him, is when the patient is suffering from toxic alimentary dyspnœa or from a very weak systolic action of the heart. In the latter case anæsthesia is possible, but in the former case the patient should be fed on milk diet so as to get rid of the toxæmia before anæsthesia is undertaken. M. Huchard lays great stress upon the point that anæsthesia should be absolutely complete especially in the case of patients suffering from morbus cordis. In these latter cases the principal danger lies in incomplete anæsthesia so that all reflex action is not completely abolished, and reflex actions are the principal causes of the sometimes fatal syncope which occurs under anæsthesia.

### *Hygiene in the Army.*

On the recent occasion of young soldiers joining the colours the military governor of Paris directed the adoption of the following measures with a view to the limitation of venereal diseases in the army :—1. One of the hygienic conferences held by regimental surgeons for the information of officers and non-commissioned officers shall be devoted to an explanation of the dangers of venereal diseases and the manner of dealing with them. 2. The monthly medical inspection ordered by Article 71 (infantry) of the service regulations shall be of a personal nature as far as possible, each man being examined separately. 3. Measures shall be taken to ensure that non-commissioned officers may be able to consult the regimental surgeons without the fact coming to the knowledge of their subordinates. 4. The supervision of special patients shall be guaranteed by means of a special register or cards for each person kept by the medical officer himself and stored in the poison cupboard of which he alone has the key. Men suffering from the diseases in question shall also be examined periodically so that they may be certified as being still under treatment. 5. Punishment shall not, as a rule, be inflicted in connexion with venereal diseases except in flagrant cases of concealment. This last regulation has already been adopted throughout the greater part of the service ; in general only those soldiers are punished who refuse to give information as to the place where they contracted their disorder and who thereby impede the authorities in the taking of measures to protect their comrades. It would be a good thing if this last condition were maintained. Attention is also just now being given to the question of tuberculosis in the army. M. Lachaud has submitted to the Chamber of Deputies two reports recommending that the *conseils de revision* should be empowered (1) to reject young men suspected of a tendency to become tuberculous and (2) to establish sanatoriums for soldiers who have become tuberculous during their period of service. This last condition would have the effect of modifying the law relating to discharge with certificate No. 2 for soldiers thus attacked. These recommendations were submitted to the Chamber on Dec 19th, 1901, at the instance of the Commission of Public Hygiene, with the result that the Chamber has recognised their urgency and has remitted them to the Army Commission.

Jan. 14th.

## CANADA.

(FROM OUR OWN CORRESPONDENT.)

### *Death of Dr. Lesslie M. Sweetnam.*

TORONTO lost one of her foremost and most distinguished surgeons when Dr. L. M. Sweetnam died at Johns Hopkins Hospital, Baltimore, Maryland, U.S.A., on Dec. 11th. Two or three weeks before his death Dr. Sweetnam was operating on a young man with a gangrenous arm the result of a gunshot wound and had the misfortune to cut one of his fingers during the operation. The patient subsequently died from malignant œdema. Dr. Sweetnam contracted blood-poisoning, but for a week or 10 days he continued at his work. Then he went to Baltimore for rest and recuperation. He was recovering from the septicæmia when convulsions suddenly occurred which terminated fatally. Dr. Sweetnam was only 42 years of age, but had already reached the top of his chosen profession. He graduated in 1881 from Toronto and Victoria Universities and at the time of his demise was Associate Professor of Surgery in Toronto University and surgeon to St. Michael's Hospital and to the General Hospital, Toronto.

### *Canadian Field Hospital for South Africa.*

It seems to be very gratifying to the medical profession, particularly to military surgeons, that the offer of a Canadian field hospital for service in South Africa has been accepted by the Imperial Government. It will be a distinct unit and will have no connexion with the Canadian Mounted Rifles which will shortly leave Halifax, Nova Scotia, for the seat of war. Dr. A. N. Worthington of Sherbrooke, Quebec, will be in charge as surgeon-colonel, that officer having already seen service in the South African campaign, and he will have associated with him Dr. Carleton Jones of Halifax as surgeon-major ; Dr. H. D. Johnson, Charlotte Town, Prince Edward Island, as surgeon-captain ; and Dr. Roberts and Dr. H. E. Tremayne as surgeon-lieutenants, the last two being young practitioners of Toronto.

### *Canadian Medical Protective Association.*

The prospectus of this recently formed association has just been issued to the medical profession in the Dominion. Two years ago, when the Canadian Medical Association met in Ottawa, a strong committee was appointed to report on the formation of such association at the next annual meeting. This was done at the last annual meeting held at Winnipeg, with the result that the organisation was at once perfected and the officers were appointed for the first year. These at once got to work and it is understood that already many members have been secured. The annual fee is $2 50, and the object of the association is the protection of its members from suits at law for alleged malpractice. A meeting of the association will be held annually at the same time and place as the annual meeting of the Canadian Medical Association. A marked feature of the constitution appears in the sentence : "In no case shall the association compromise." The new organisation has absorbed the Medical Defence Union which existed in the eastern townships of the province of Quebec in connexion with the St. Francis District Medical Association. The president is Dr. R. W. Powell, Ottawa, a past-president of the Canadian Medical Association, and the secretary is Dr. F. W. McKinnon, Ottawa.

### *Dean of McGill Medical Faculty.*

After serving for many years as dean of the medical faculty of McGill University Dr. Craik has resigned, and Dr. Thomas G. Roddick, M.P., selected unanimously by his fellow members of the faculty, has been appointed successor by the governors of the University. Dr. Craik has been honoured by being appointed a member of the Board of Governors, the second instance in the history of this famous University where such a distinction has been conferred on a member of a teaching faculty. The new dean has had a distinguished career in the Canadian medical profession. Born at Harbour Grace, Newfoundland, in 1846, he entered McGill University and graduated M.D. as Holmes Gold Medalist in 1868. His connexion with the medical faculty of McGill University began in 1872 and he at present holds the chair of surgery in that institution. He is a past-president of the Montreal Medico-Chirurgical Society, of the Canadian Medical Association, and of the British Medical Association, being the first colonial to be the recipient of the last-named honour. In 1896 he was first elected to the Canadian House of Commons, and ever since he has been prominently identified with bringing about inter-provincial registration between the various provinces of the Dominion. It is fully expected that Dr. Roddick's Bill in this connexion will receive Parliamentary sanction at the coming session of the Dominion House.

### *Vaccination in Quebec.*

The Board of Health of the Province of Quebec, owing to the extensive outbreak of small-pox which has existed now of hospitals while a member of the English Local Government Board.

### *Chair of Physiology, Trinity College, Dublin.*

At a special meeting of the President and Fellows of the Royal College of Physicians of Ireland held on Jan. 10th Dr. William H. Thompson, Dunville Professor of Physiology, Queen's College, Belfast, was elected to the chair of Institutes of Medicine in the School of Physic, Trinity College, Dublin, rendered vacant by the resignation of Professor J. M. Purser.

### *Ulster Medical Society.*

The third meeting of the Ulster Medical Society for this session was held in the Belfast Museum on Jan. 10th, Professor W. Whitla, the President, being in the chair. A report having been received from the council in reference to the new medical institute, it was moved by Dr. P. Redfern and seconded by Mr. F. E. MacFarland to accept the very generous offer of the President to build and to equip a medical institute for the society. It was also decided, on the motion of Dr. A. Dempsey, seconded by Professor J. A. Lindsay, to accept the site offered by the President—that is, a plot of ground having a frontage of 50 feet along College-square North, by 93 feet in depth, at a fee farm rent of £60 annually, said rent to begin on May 1st, 1902, and possession to be given at once. Dr. W. Calwell showed (1) a case of Paralysis of the Hypoglossal Nerve, and (2) a case of peculiar Congenital Acro-Dystrophy-Hyperkeratosis, Recurrent Bullæ, &c. Dr. John McCaw showed a case of Birth Palsy of the Hemiplegic Type. Dr. A. B. Mitchell read notes of (1) a case in which six feet of the Small Intestine were successfully Resected; and (2) a case of Intussusception in which Laparotomy was performed. An interesting discussion followed the reading of these communications.

### *Kissing the Book.*

His Honour County Court Judge Kisbey at the Lurgan Quarter Sessions on Jan. 9th made some most sensible remarks on the methods of swearing witnesses. As a plaintiff was about to go through this process his Honour remarked that he wished to impress upon those who found it necessary to attend that court and give evidence that it was not absolutely necessary for them to kiss the book, it being perfectly legal and equally as binding on them to be sworn with uplifted hand, and the same punishment could in that case be inflicted if a witness were found to be perjuring himself. He referred to this matter because of the controversy that had recently taken place in England in regard to it. There the judges, acting, as he thought, with the greatest propriety, had been telling witnesses that they were just as entitled to take the oath with uplifted hand as by kissing the book. No doubt the latter method had great antiquity to justify it, but seeing that the book was kissed by persons in various stations in life, some of whom might be suffering from some disease, he thought the uplifting of one hand the safest method. For instance, it would be very dangerous, he pointed out, for a healthy person to kiss a book that had been similarly used just previously by a consumptive. Of course, if people wished to kiss the book they could do so, but he only desired to inform them that the taking of the oath by uplifting the hand was equally as good. Nothing could be more sensible or more in accordance with sound sanitary views than these most apt remarks of Judge Kisbey.

### *The Water-supply of Port Ballintrae.*

Owing to the lamented death of Mr. James Traill, son of Dr. Anthony Traill of Trinity College, which took place after residing at the favourite watering-place of Port Ballintrae, situated in North Antrim, near Portrush, on Nov. 11th, a great deal of discussion has arisen as to the drainage and water-supply of the district. Mr. D. Huey, the medical officer of Bushmills Dispensary District, has, in a report, urged on the Ballymoney Rural Council the importance of employing an expert to examine the proposed new water-supply (the present is from wells liable to pollution). An architect has been appointed to prepare plans and specifications for the new water-supply.

### *Queen's College, Belfast.*

On Jan. 7th a dinner in honour of Professor Purser, M.A., LL.D., D.Sc., was given in the great hall of Queen's College, Belfast, on the occasion of his retirement from the professorship of mathematics, a position which he has occupied with such marked distinction for a lengthened period of 38 years—that is, more than two-thirds of the whole life of the college. The President of the college occupied the chair and after the usual loyal toasts Dr. Joseph Larmor, Fellow of St. John's College, Cambridge, and secretary of the Royal Society, a Belfast man who was a former distinguished pupil of Professor Purser, proposed, in very happy terms, the toast of the evening, "The Health of Professor Purser," to which that gentleman very feelingly replied. The meeting was a most successful one, many of Professor Purser's old students, arts and medical, coming long distances to do their old teacher honour on his retirement.

### *The Forster Green Hospital for Consumption.*

At the annual meeting of the supporters of this hospital, held on Jan. 13th, it was reported that during the past year, beginning with 23 patients there had been in addition 142, or a total of 165, dealt with. In the out-patient department there had been 1655 attendances, 474 of which were those of new patients. Though the number of deaths from consumption in England and Scotland had decreased during the last 10 years, in Ireland there had been an increase, and in the whole of Ireland there was for the working classes an accommodation of only 85 beds, of which a large number were not free. Financially there was only a deficit of £254 1*s.* 3*d.* The public had given £26 in contributions more than last year, but the increased cost of keeping the extra number of patients amouted to between £600 and £700 The Earl of Shaftesbury sent a donation of £50 for the hospital.

### *The Belfast Asylum.*

The city corporation of Belfast, which took away 60 acres (of which one half is arable, the remainder being wood and stream) of the grounds of the Purdysburn Asylum, for an infectious diseases hospital, has now decided to acquire a farm of 88½ acres adjoining the asylum grounds at £80 per statute acre. When this is added to the asylum grounds it will give a total of about 166 acres.

Jan. 14th.

## PARIS.

(FROM OUR OWN CORRESPONDENT.)

### *Death of Dr. Le Baron.*

DR. LE BARON, founder and honorary president of the Society of Medical Practitioners of the Seine, and the delegate of the various medical syndicates to the Conseil Supérieur de la Mutualité, died on Jan. 2nd. He was born at Segré in 1855, and studied medicine at Paris. On April 2nd, 1891, he gathered together sundry of his professional brethren and founded the Syndicate of Medical Practitioners of the Seine, and ever since that date he has worked for the benefit of this association with unbounded patience and energy. He gave all his time to this work and for some time held the office of vice-president of the Association of Medical Syndicates in France. He was the first and only person who dared at the congress of friendly societies which was held at Bordeaux in 1892 to raise the question of the medical side of friendly societies and to reproach the members with the shameless way in which medical men's services were exploited by a certain number of friendly societies. Dr. Le Baron was an archæologist of no small merit, and in his capacity as a member of the Society for the Preservation of Parisian Monuments he succeeded in preserving from destruction the ruins of the old school of medicine in the Rue de la Boucherie. His death will be a great source of regret to his numerous friends

### *Resignation of Professor Lannelongue as President of the General Association of French Medicine.*

Professor Lannelongue has just sent in his resignation as President of the above association. The resignation dates from the discussion recently held as to the admission of women to the association—that is to say, not merely the admission of women medical practitioners, but also of the wives of medical men. Professor Lannelongue had no hesitation in voting with the younger members of the association in the cause of progress. Pressing inquiries have been made of Dr. Brouardel as to whether he would accept the office in succession to his colleague.

### *Examination Frauds*

With a view to doing away with fraudulent practices in examinations the following laws have been passed:—

1. Every fraud committed in connexion with public examinations by the passing of which the candidate enters the public service or acquires a State diploma shall constitute an offence (*délit*).

have been considerably enlarged. Seating accommodation has been provided for out-patients who formerly used to wait about in the street outside the hospital. It is contemplated to enlarged the wards for children and to erect a new casualty room—A meeting of the dental profession was recently held in Sydney to adopt a constitution for a Dental Hospital. The constitution, with a few alterations, was adopted. It provides for gratuitous advice and treatment in all diseases of the mouth to such poor and necessitous persons as are unable to procure the same at their own expense, and that honorary physicians and surgeons shall be appointed to render assistance in administering anæsthetics and in such operations as are not within the scope of ordinary dental surgery.—The Mayoress of Sydney recently opened a new wing of the Infants' Home at Ashfield. At present the home accommodates 20 women and 50 children; in future it will take in 64 children, and comfortable quarters for nurses are provided.

### *Appointments, &c.*

The following have been appointed Examiners at the Sydney University for the Faculty of Medicine:—Anatomy, Dr. A. E Mills; physiology, Professor E. C. Stirling; pathology, Dr. G. E. Rennie; materia medica, Dr. A. Watson Munro; medicine, the Hon. Dr. Mackellar; surgery, Mr. G. T. Hankins; midwifery, Dr. S. H. MacCulloch; gynæcology, Dr. Fourness Barrington; clinical medicine, Dr. P. Sydney Jones; clinical surgery, Dr. T. Fiaschi; psychological medicine, Dr. Eric Sinclair; ophthalmic medicine and surgery, Dr. W. Adillo Maher; medical jurisprudence and public health, Dr. W. G. Armstrong.—A "Government Gazette" announces the regrading of the Government medical officers, whose classification, without change in regard to salary, will in future be as follows: Dr. R T. Paton, Government medical officer and vaccinator for Sydney and visiting surgeon, Darlinghurst Gaol; Mr. G. H. Taylor, second Government medical officer and vaccinator for Sydney, pathologist and assisting visiting surgeon, Darlinghurst Gaol.

### *Obituary*

Mr. Clifton Sturt of Bulli (New South Wales) died suddenly from aneurysm while away on a holiday trip in New Zealand. He was away for his health. It may not be generally known that Dr. James Foulis, who died recently in Edinburgh, was a Sydney boy, the son of the late Dr. John Foulis who had a large practice in Sydney. In his younger days Dr. James Foulis was a noted cricketer and played as wicket-keeper for the New South Wales eleven. He took his B A. degree at the Sydney University. He was the first white boy born in Lord Howe Island.

Dec. 10th, 1901.

## Medical News.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—On Jan. 8th the quarterly court of the directors of this society was held, Mr. Christopher Heath, the President, being in the chair. Two new members were elected and the deaths of four members were reported, as well as that of Mr. J. R. Upton, an honorary member who for many years had kindly given his services as solicitor to the society. The election of a member was declared void. A fresh application for grants was made by a widow, aged 74 years, and relief at the rate of £30 per annum was given. It was resolved to distribute £1282 among the 52 widows, 13 orphans, and the four recipients from the Copeland Fund, now receiving half-yearly grants. The Christmas present, £569, had been given on Dec. 18th, 1901. The expenses of the quarter were £77 7*s.* 6*d.*

THRIFT AND SOCIAL REFORM.—At a council meeting of the National Thrift Society held on Jan. 11th the report for last year was approved and adopted. The report stated that the society's operations had been vigorously carried on in various parts of Great Britain and Ireland, whilst a special feature of the year's work had been the establishment of a Social Reform Branch which had in hand the petition to the authorities respecting the abatement of unnecessary street noises throughout the metropolis. It was proposed to continue this branch of the work under the name of the "Betterment of London Association."

NEW COTTAGE HOSPITAL AT SUTTON, SURREY.—At Sutton, on Jan. 7th, a cottage hospital, the gift of Mr. Passmore Edwards, was opened to the public. The hospital will provide accommodation for 12 patients and advantage has been taken of modern improvements in hospital building and furnishing. The hospital has cost £3000.

HOSPITAL FOR SICK CHILDREN.—It is announced that a bazaar in aid of the Hospital for Sick Children, Great Ormond-street, will be held about the time of the Coronation under the immediate patronage of Her Majesty the Queen, the Prince and Princess of Wales, Princess Louise Duchess of Fife and the Duke of Fife, and Prince and Princess Charles of Denmark.

THE Chelsea Hospital for Women has received from "H. M. E" another sum of £500. This and the preceding similar contribution from the same benefactress have been placed on deposit as a guarantee fund against emergency. The hospital already owes the greater part of its recent improvement to "H. M. E."

LUNACY IN DORSETSHIRE.—At a special meeting of the County Council of Dorset held at the Shire Hall, Dorchester, on Jan. 8th, the Visiting Committee, through its chairman, Lord Digby, submitted a proposal for additional buildings at an estimated cost of about £40,000. The proposal of the Visiting Committee, which is to build a detached house for 100 private patients, was unanimously approved, and the plans, which have been prepared by the architect of the council, Mr. G. T. Hine, gave complete satisfaction to the members. As Dorsetshire was the first county in England to take advantage of Section 255 of the Lunacy Act, 1890, by providing accommodation for private patients in connexion with the county institution this new and further development of the private side of the institution will be watched and followed by many keen and critical eyes.

DINNER TO DR. WILLIAM CAYLEY.—At the Prince's Restaurant, Piccadilly, on Jan. 9th, a most successful dinner was given to Dr. William Cayley by a large number of his former house physicians and clinical clerks, on the occasion of his retirement from the post of senior physician to the Middlesex Hospital, with which institution he had been actively connected for 35 years. The toast of "The Guest of the Evening" was very eloquently proposed by the chairman, Mr. E. A. Fardon, who, after some apposite remarks from Mr. J. Bland-Sutton, presented Dr. Cayley, on behalf of those present, as well as of many who were prevented from attending, with a loving cup suitably inscribed. On Dr. Cayley rising to reply the enthusiasm was unbounded, and it was some minutes before he could obtain a hearing. At the conclusion of his speech the loving-cup was filled and passed round.

FREEMASONRY.—*The Rahere Lodge, No. 2546.*—An ordinary meeting of the Rahere Lodge was held at Frascati's Restaurant, Oxford-street, W., on Jan. 14th, Bro. P. S. Abraham, M.D. Dub., W.M., in the chair. Bros. Scott and Edge were admitted to the third degree, Bro. Walton Read was admitted to the second degree, and Messrs. Sydney L. Harke, W. Perceval Yetts, and J. C. Stoyte Dunn were initiated into Freemasonry. A sum of 10 guineas was voted from the lodge funds to each of the masonic charities. A past grand officer's jewel was given to W. Bro. the Rev. Sir Borrodaile Savory, Bart., Grand Chaplain. The lodge also contributed the sum of 10 guineas towards a gift to W. Bro. Clement Godson, M.D. Aberd., Treasurer, on the occasion of his silver wedding.—*University of London Lodge, No. 2033.*—The members of the University of London Lodge held their first meeting in 1902 at Freemasons' Tavern on Thursday, January 9th, under the presidency of Dr. Samuel Hague, Mr. W. R. McConnell, K C., and Dr. A. E. Sansom supporting the chair. After the masonic ceremonies were completed about 25 of the brethren dined together. This Lodge is now nearly 20 years old and numbers amongst its past masters the late Alderman Fowler, Lord Mayor; the late Lord Herschell, Lord Chancellor; the late Dr. Alfred Meadows; and his honour Judge Philbrick, K.C. The secretary is Mr. W. J. Spratling, any letters addressed to whom at Freemasons' Tavern will receive prompt attention This Lodge is in close touch with the sister University Lodges, the "Isaac Newton," Cambridge, the "Apollo," Oxford, and the "University," Durham.

in that province for some months, has recently issued a special order to all municipalities to enact legislation according to the Quebec Public Health Act and to see that such by-laws are adopted and strictly carried out with regard to vaccination. Such by-laws being in force, any person who cannot establish that he has been successfully vaccinated within seven years or unsuccessfully within six months, unless he has had small-pox or unless his health does not permit of his being vaccinated, will be liable to a fine of five dollars, with another dollar for each day of delay. In the province of Ontario small-pox continues to increase and the Ontario Board of Health has repeatedly called attention to the provisions of the Ontario Health Act. Owing to the mildness of the outbreak people are shunning and neglecting vaccination

### *Annual Medical Report of Muskoka Sanatorium for Phthisis.*

Dr. J. H. Elliott, the medical superintendent of this institution, has handed out the last annual report. The last official year ended with 61 patients in residence, although there is only accommodation for 50 patients. The increased numbers have been accommodated by the means of tents on the lawns. During the past year 99 male patients were treated; 15 were discharged apparently cured and 29 with the disease arrested. Of the 29, 14 gave promise of cure had they remained longer in the hospital. This would mean that 29 out of 99, or nearly 30 per cent., could have been apparently cured had a longer stay been possible. It is considered highly satisfactory that in 44 out of 99 patients the disease has undergone more or less complete subsidence. These 99 cases were classified on admission as follows: incipient, 24; advanced, 43; and far advanced, 32. The average gain in weight had been 13 pounds. Of the female patients 59 were admitted during the year, 87 being treated altogether. Thus the total number treated during the year amounts to 186

Toronto, Jan. 3rd.

## AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

### *The Bubonic Plague.*

A FRESH case of plague has developed in Sydney, in a man working in a produce store, but it appears to be a sporadic case, no others having occurred. The patient is progressing favourably. Rat-catching is being vigorously prosecuted, the wharves are being cleaned, and house inspection is being carried on. In the other States no special precautions have been taken as to quarantine, but vessels from Sydney are subjected to fumigation at Brisbane and rat-catching is continued in all the States. Masters of vessels leaving Sydney for other ports in the Commonwealth must be furnished with a certificate that their vessels have been properly fumigated before leaving.

### *Health of Sydney.*

The quarterly report of the officer of health for the metropolitan combined districts of Sydney (Dr. W. G. Armstrong), just published, stated that the number of deaths registered in the metropolis during the quarter ending Sept. 30th was greater than that of any consecutive three months since the year 1898 The principal factor in this increase in the deaths was pneumonia, which caused far more deaths than any other single disease Other respiratory diseases—bronchitis, whooping-cough, and influenza—were also very fatal, accounting for 24 per cent. of all deaths. Phthisis caused 145 deaths, or 14 more than the average for the same quarter during the past five years 16 deaths occurred from cerebro-spinal fever, which has been more or less epidemic in Sydney since the latter part of 1899, and appears to be increasing The number of cases of infectious disease notified during the quarter showed a considerable increase over the figures for preceding years. Scarlet fever appears to have been steadily increasing in prevalence during the whole of the year. Typhoid fever showed the usual winter fall, but was more prevalent than last year. Whooping-cough had been more fatal than for some years past.

### *The Friendly Societies of New South Wales.*

The Friendly Societies Act (1899) of New South Wales provided that within two years all friendly societies must be registered, and this registration involved that the tables of contributions payable by members should be certified to by a qualified actuary. The societies, however, do not want to register and to reveal their financial position, which with very few exceptions is thoroughly unsound According to a valuation made by the Government Actuary of Friendly Societies, the liabilities incurred by the societies on sickness and funeral benefits amounted to £3,795,013, while the funds in hand were only £537,710, and the present value of future contributions was only £2,003,472, leaving an absolute deficiency of £1,253,831, equal to 6*s.* 8*d* in the £ In Victoria the accumulated funds are double those in New South Wales and the rates are higher, and in New Zealand, with only half the number of members the funds per head are double those in New South Wales. Hence the societies in New South Wales are agitating for a repeal of the Act of 1899.

### *Prevention of Tuberculosis.*

A largely attended public meeting was held in Melbourne on Dec. 2nd, 1901, to form a Victorian Association for the Prevention of Consumption and other Forms of Tuberculosis on the lines of the National Association in Great Britain. His Excellency the Governor-General presided and made an excellent speech, remarking that while stringent laws and regulations, which have been successful in their effect, have been made to prevent the spread of hydrophobia, small-pox, fevers, and other contagious diseases the prevention of the spread of consumption had not been hitherto seriously undertaken. Nevertheless, more people were killed by it than by any other disease, and in Melbourne alone 800 people died from consumption every year, people mostly in the prime of life. But he had come to the meeting to learn, not to teach. Experts held different views on some questions connected with tuberculosis, but he believed that he was on safe, though unsavoury, ground in saying that one of the most fruitful sources of the spread of consumption was the abominable habit of promiscuous expectoration. He also thought that the inordinate length to which ladies' skirts were worn was a danger in connexion with the spread of consumption and he humbly appealed to the ladies to curtail their skirts and to leave the cleansing of the streets to the municipal authorities The proposition for the formation of an association to prevent tuberculosis was moved by the Prime Minister of the Commonwealth, who said that places should be provided for the worst cases to be treated and also for those who were less seriously affected. This meant money, and it remained to be seen whether in this first year of their nationhood they were willing to find the money to provide against a danger that was greater than war and more destructive than any war in which the Empire might be engaged Dr. D. A. Gresswell (chairman of the Public Board of Health), the mayor of Melbourne, Dr. Jamieson (the city health officer), Sir Thomas N. FitzGerald, and others addressed the meeting, and the association was formed and a standing committee was appointed to give effect to its objects.

### *Hospital Affairs*

In the New South Wales Legislative Assembly the following motion by the Minister for Works was passed:—

> That it is expedient that the proposed additions to Prince Alfred Hospital, Sydney, referred to the Parliamentary Standing Committee on Public Works, be carried out, provided that the cost does not exceed the sum of £45,000, and subject to the alterations in the details of the plans as recommended by the said committee.

Some time ago the Board of Public Health in Victoria declined to permit the erection of an infectious ward at the Melbourne Hospital in the place of the tents now used for the purpose. The committee then proposed to erect a non-infectious ward on the site. To this the board also objected as follows:—

> In the opinion of the board the construction of the buildings as proposed would not conduce to the healthfulness of the institution. If it is desired to add to the accommodation of the institution it would appear to be well to consider whether reconstruction could not be entertained so as to utilise the land to the best advantage and to gradually build in accordance with modern principles of hospital construction, and that, if it is felt to be imperative that permanent accommodation be supplied on the site at present occupied by the tents, an area absolutely clear of buildings all round to the extent of at least 35 feet should be provided; also that the board cannot give its approval to the treatment of distinctively infectious cases in any building erected on the grounds of the institution, unless it be one or two cases such as might arise in the institution and be treated in some isolated portion of the grounds.

For some months past improvements have been progressing at the Sydney Hospital. The whole of the old operating theatre has been demolished, except the outside walls, and has been rebuilt on modern principles The nurses' quarters

Fiaschi, T., M.D., Ch.D. Pisa, has been appointed Examiner in Clinical Surgery at the Sydney University, New South Wales.

Flint, T. B., M.R C.S. Eng., L.R.C.P. Lond., has been appointed Honorary Medical Officer to the Devonshire Hospital, Buxton.

Freear, A., M.R.C.S., F.R.C.P. Lond., has been appointed Resident Medical Officer at the Medway Union Workhouse.

Gemmell, James Francis, M.B. Glasg. and C.M., has been appointed Medical Superintendent of Whittingham Asylum.

Hankins, G. T., M.R.C.S., L.S.A., has been appointed Examiner in Surgery at the Sydney University, New South Wales.

Hewer, Cecil M., F.R.C.S. Eng., has been appointed Certifying Surgeon under the Factory Acts for the Tarporley Urban District of Cheshire.

Jones, P. Sydney, M.D. Lond., F.R C.S., has been appointed Examiner in Clinical Medicine in the Sydney University, New South Wales.

Lace, Frederick, F.R.C.S,, has been appointed Surgeon to the Royal United Hospital, Bath, vice F. K. Green, F.R.C.S., resigned.

MacCulloch, S. H., M.B., Ch.M. Edin., has been appointed Examiner in Midwifery at the Sydney University, New South Wales.

Mackellar, C. K., the Hon., M.B., Ch.M. Glasg., has been appointed Examiner in Medicine at the Sydney Uhiversity, New South Wales.

Maher, W. Odillo, M.D., Q.U.I., M.R.C.S., has been appointed Examiner in Ophthalmic Medicine and Surgery at the Sydney University, New South Wales.

Mills, A. E., M.B., Ch.M. Syd., has been appointed Examiner in Anatomy at the Sydney University, New South Wales.

Munro, A. Watson, M.D. Edin., has been appointed Examiner in Materia Medica at Sydney University, New South Wales.

Perry, S. H., M.R.C.S., L.R.C.P., has been appointed Medical Officer of Health under the Rural District Council of Spalding.

Pethybridge, W. L., M.D., B.Sc. Lond., M.R.C.S., L.R.C.P., has been appointed Honorary Anæsthetist to the Royal Eye Infirmary, Plymouth.

Pritchett, S. I., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer of Health for the City of Rochester, Medical Officer of Health for the Port of Rochester, and Medical Officer to the Rochester and Chatham Joint Isolation Hospital.

Ray, John Howson, Ch.M. Vict., F.R.C.S., has been appointed Surgeon to the Manchester Children's Hospital, vice Mr. G. A. Wright, F.R.C.S.

Rennie, G. E., M.D. Lond., has been appointed Examiner in Pathology at Sydney University, New South Wales.

Reynolds, F. E., M.R.C.S., has been appointed Temporary Medical Officer for the Stoke Gabriel District by the Totnes Board of Guardians.

Sinclair, Eric, M.D. Glasg., has been appointed Examiner in Psychological Medicine at the Sydney University, New South Wales.

Stirling, E. C., C.M. Glasg., F.R.S., M.D. Cantab., has been appointed Examiner in Physiology at Sydney University, New South Wales.

Terry, George Henry, F.R.C.S. Edin., M.R C.S., L.S.A., has been appointed Honorary Surgeon to the Royal United Hospital, Bath, vice R. J. H. Scott, F.R.C.S. Edin., M.R.C.S., appointed Consulting Surgeon.

Thompson, W. H., M.D. R.U.I., has been appointed King's Professor of the Institute of Medicine in the School of Physic, Trinity College, Dublin, vice J. Mallet Purser.

Twort, F. W., M.R.C.S., L R.C.P. Lond., has been appointed Assistant Bacteriologist to the London Hospital and Medical College.

Woodman, W. J., M.R C.S., L R.C.P. Lond., has been appointed District Poor-law Medical Officer for Chatham.

Wright, G. A., F.R C.S., has been appointed Consulting Surgeon to the Manchester Children's Hospital.

# Vacancies.

*For further information regarding each vacancy reference should be made to the advertisement (see Index).*

Birmingham and Midland Free Hospital for Sick Children.—Resident Surgical Officer. Salary £60 per annum, with board, washing, and attendance.

Bolton Infirmary and Dispensary.—Junior House Surgeon. Salary £80 per annum, with apartments, board, and attendance.

Borough of Doncaster, Balby-with-Hexthorpe, and Wheatley.—Medical Officer of Health and Doctor to Infectious and Small-pox Hospitals. Salary as Medical Officer £300 per annum, as Doctor to Hospitals £50 per annum.

Bradford Royal Infirmary.—Dispensary Surgeon, single. Salary £100 per annum, with board and residence.

Brecon Infirmary.—Resident House Surgeon, unmarried. Salary £100 per annum, with apartments, board, attendance, fire, and gas.

Bristol General Hospital.—Surgeon. Also Assistant Surgeon.

Bristol Royal Infirmary.—Casualty Officer for six months. Salary at rate of £50 per annum, with board, lodging, and washing.

Central London Ophthalmic Hospital, Gray's Inn-road.—House Surgeon. Salary at rate of £50 per annum, with board and residence.

Charing-Cross Hospital.—Third Anæsthetist.

Cheltenham General Hospital.—House Surgeon, unmarried. Salary £80 per annum, with board and apartments.

Children's Hospital, Sheffield (Out-patient Department).—Lady House Surgeon. Salary £70 a year, with board, lodging, and washing.

City (Fever) Hospital, Aberdeen.—Resident Physician. Salary £100, with board and rooms.

County Asylum, Rainhill, near Liverpool.—Assistant Medical Officer, unmarried. Salary £150 per annum, with increase, and apartments, board, attendance, and washing.

Derwent Valley Water Board Workmen's Village, Birchinlee, North Derbyshire.—Medical Officer.

Devonshire Hospital, Buxton, Derbyshire.—House Surgeon and Assistant House Surgeon. Salary, House Surgeon £100 per annum, Assistant £50 per annum, with apartments, board, and lodging.

East Suffolk and Ipswich Hospital.—Second House Surgeon. Salary £80 per annum, with board, lodging, and washing.

Eastern Dispensary, Leman-street, Whitechapel.—Resident Medical Officer. Salary £140 per annum, with residence, coals, and attendance.

Hospital for Sick Children, Great Ormond-street, London, W.C.—House Surgeon, unmarried, for six months. Salary £20, and board and residence.

London Hospital, Whitechapel, E.—Assistant Director of the Pathological Institute. Salary £200 per annum.

Manchester Clinical Hospital for Women and Children.—Honorary Pathologist.

Metropolitan Asylums Board.—Assistant Medical Officers, unmarried, at the Fever and Small-pox Hospitals. Salary £160 per annum, rising to £200, with board, lodging, attendance, and washing.

New Hospital for Women, 144, Euston-road, N.W.—A Senior Assistant, a Pathologist, and a Clinical Assistant (all females).

New Zealand Government, Thermal Springs.—Balneologist. Salary £1000.

Noble's Isle of Man General Hospital and Dispensary, Douglas, Isle of Man.—Resident House Surgeon. Salary £82 per year. with board and washing free.

North-Eastern Hospital for Children, Hackney-road, N.E.—House Surgeon for six months. Salary at rate of £80 per annum, with board, residence, and laundry.

Northumberland County Asylum, Morpeth.—Clinical Assistant. Board and residence provided.

Royal Albert Hospital, Devonport.—Assistant House Surgeon for six months. Salary £50 per annum, with board, lodging, and washing.

Royal Hospital for Incurables, Putney Heath.—Medical Officer. Salary £250 per annum.

Royal Infirmary, of Edinburgh.—Pathologist. Salary £400 per annum.

Royal Infirmary, Sheffield.—Senior Assistant House Surgeon. Salary £80 per annum, with board, lodging, and washing. Also Junior Assistant House Surgeon. Salary £70 per annum, with board, lodging, and washing.

Royal University of Ireland.—Examiners in Surgery, Midwifery, Pathology, and Ophthalmology.

Salford Union Infirmary, Hope, near Eccles.—Resident Medical Officer. Salary £150 per annum, with apartments and attendance.

Scalebor Park, Burley-in-Wharfedale.—Medical Superintendent. Salary £500 a year, with house, board, and attendance.

Seamen's Hospital Society (Dreadnought), S.E.—House Surgeon for Society's Branch Hospital, Royal Victoria and Albert Docks, E. Salary £50 per annum, with board and residence.

Stroud General Hospital.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

West Bromwich District Hospital.—Resident Junior House Surgeon. Salary £50 per annum, with board, lodging, washing, and attendance.

Western General Dispensary, Marylebone-road.—Honorary Surgeon.

West Herts Infirmary, Hemel Hempstead.—House Surgeon, unmarried. Salary £100 per annum, with rooms, board, fire, lights, washing, and attendance.

Westminster General Dispensary.—Honorary Surgeon.

Wrexham Infirmary.—House Surgeon. Salary £100 per annum, with board, washing, &c.

The Chief Inspector of Factories, Home Office, London, S.W., gives notice of a vacancy for a Certifying Surgeon, under the Factory Acts, at Modbury, in the county of Devon.

# Births, Marriages, and Deaths.

## BIRTHS.

Carruthers.—On Jan. 6th, at Halton, Cheshire, the wife of W Hodgson Carruthers, M.D. Edin., of a daughter.

Lee.—On Jan. 10th, at Talbot House, Storrington, the wife of F. W. Lee, M.R.C.S., L.R.C.P., of a son.

## DEATHS.

Carrington.—On Dec. 25th, 1901, at Catherstone House, Battersea-rise, S.W., Dr. William Henry Carrington, aged 45. Also on Jan. 2nd, 1902, at Gloucester, Frederick George, brother of above, aged 52.

Simpson.—On Jan. 13th, at Cotswold, Wallington, Surrey, Frederick Hamilton Simpson, F.R.C.S., aged 87 years.

Taylor.—On Jan. 11th, at Hartington-villas, Hove, John Taylor, M.D. Aberd., M.R.C.P., F.R.C.S., formerly of Queen's-road, Bayswater, in his 84th year.

*N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

BRISTOL MEDICAL CHARITIES.—The employés of Messrs. W. D. and H. O. Wills voluntarily collected during 1901 the sum of £443 for the various Bristol medical charities.

AT the Bath Police-court on Jan. 8th a music-hall performer, was summoned for being in a public place—namely, in the Lyric Theatre—on Dec. 4th, 1901, while suffering from scarlet fever. She was fined 20*s.* and costs.

UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.—On Jan 9th a meeting was held in the Park Hall, Cardiff, on the occasion of the public welcome to Mr. E. H. Griffiths, M.A., F.R S, the new Principal of the University College of South Wales and Monmouthshire.

GIFT TO DUNDEE INFIRMARY.—At a meeting of the directors of the Dundee Royal Infirmary on Jan. 9th it was stated that a gentleman who did not wish his name to be mentioned had offered to supply and to fit up a Finsen electric lamp for the treatment of lupus.

PRESENTATION.—Mr. W. M. M. Jackson, M.D. Mich, L.R C.P., L R C.S. Edin., on resigning the post of resident medical officer at the Westmorland Consumptive Sanatórium, was presented by the patients, as a mark of their esteem and in recognition of the attention which they received from him, with a silver-mounted walking-stick engraved with his initials.

BRISTOL DISPENSARY—The annual meeting of the subscribers to this institution was held on Jan. 10th, under the presidency of Mr. Fenwick Richards. The medical report stated that 10,660 patients had been treated during 1901, compared with 11,410 in the preceding year. The financial statement was satisfactory and showed that a legacy of £500 had been received.

SMALL-POX AT EXETER.—Five cases of small-pox have been notified at Exeter and the board of guardians on Jan. 7th, on the recommendation of the medical officer, decided to suspend the visiting arrangements at the workhouse. Handbills are to be posted about the city stating that persons over 14 years of age will be revaccinated by the public vaccinator free of charge.

BEQUESTS TO HOSPITALS.—The late Mr. J L. Molleson of Edinburgh has bequeathed to the Sick Children's Hospital, Edinburgh, and the Victoria Hospital for Consumption £1000 each, and to the Longmore Hospital for Incurables £2000. The residue of the estate, after certain other bequests, goes to the Edinburgh Royal Infirmary.—By the will of Mr. Charles Cleaver of Birkdale the sum of £100 is bequeathed to the Southport Hospital.

PLYMOUTH ROYAL EYE INFIRMARY.—The annual meeting of the subscribers to this institution was held on Jan. 8th, under the presidency of Mr. H. Serpell. The medical report stated that during 1901 there were 255 in-patients admitted, the daily average number in the institution being 18. The out-patients numbered 1905. The financial statement showed that the income amounted to £1284 and the expenditure to £1169. The committee appeals for subscriptions towards the building fund of the infirmary as there is a balance of £12,000 still to be raised.

LITERARY INTELLIGENCE.—Messrs. Smith, Elder, and Co. will publish shortly a work entitled, "Lectures on Chemical Pathology in its Relation to Practical Medicine," by Dr. C A. Herter, Professor of Pathological Chemistry, University and Bellevue Medical Schools, New York. The book will be issued simultaneously in the United States by Messrs. Lea Bros. and Co of Philadelphia. Messrs. Smith, Elder, and Co. will also publish immediately a fifth edition, revised and edited by Dr F J. Poynton, of Dr. Cheadle's well-known work on the Artificial Feeding of Infants.

MR. W. R. TUCK died at his residence, 1, Windsor-place, Newquay, on Jan. 4th, after a short illness. Mr. Tuck, who obtained the L.D.S. of the Royal College of Surgeons of England in 1863, practised his profession for many years in Truro, where he had an extensive practice and was for many years honorary dental surgeon to the local hospital. He contributed some articles to the medical journals and also published some "Reminiscences of Cornwall." Mr. Tuck leaves a widow, two sons (both members of the dental profession), and four daughters. The deceased gentleman took a great interest in all matters connected with his native county, and by his death one of the oldest, and at one time best-known, residents of Cornwall has passed away.

## BOOKS, ETC., RECEIVED.

BAILLIÈRE, TINDALL, AND COX, 8, Henrietta-street, Covent-garden, W.C.
The Imperial Health Manual. Being the authorised English edition of the Official Health Manual issued by the Imperial Health Department of Germany. Edited by Antony Roche, M.R.C.P. Irel., &c. Second English edition, revised from the latest German edition. Price 3*s.* net.

*CORNISH, J. E., St. Ann's square, Manchester. (MACMILLAN AND CO., London).*
The Victoria University Calendar for the Year 1902. Price 1*s.*

GOVERNMENT PRINTING OFFICE, Washington.
Index-Catalogue of the Library of the Surgeon-General's Office, United States Army. Authors and Subjects. Second series. Vol. vi. G—Hernette.

KIMPTON, HENRY, 13, Furnival-street, Holborn, E.C.
*Progressive Medicine.* Edited by H. A. Hare, M.D., *assisted by* H. R. M Landis, M.D. Volume iii. September, 1901. Price not stated.

LONGMANS, GREEN AND CO., 39, Paternoster-row, E.C.
Quain's Dictionary of Medicine. By Various Writers. Third edition. Largely rewritten and revised throughout. Edited by H. Montague Murray, M.D., F.R.C.P., assisted by John Harold, M.B., B.Ch., B A O., and W. Cecil Bosanquet, M.A., M.D., M.R.C.P. Price 21*s.* net.

PENTLAND, YOUNG J., Edinburgh and London.
The Edinburgh Medical Journal. Edited by G. A. Gibson, M.D., F.R.C.P. Edin. New series, Vol. x. Price not stated.

STEINHEIL, G., 2, Rue Casimir-Delavigne, Paris.
Formulaire Aide-Mémoire de la Faculté de Médecine et des Médecins des Hôpitaux de Paris. Par Dr. Fernand Roux. Fifth edition, revised and enlarged by Dr. Lemanski. Price 4 francs.

"THE LOCAL GOVERNMENT JOURNAL" OFFICE, 2, Dorset-street, Fleet-street, E.C.
The Local Government Annual and Official Directory, 1902. Officially corrected. Edited by S. Edgecumbe Rogers. Price 1*s.* 6*d.*

WRIGHT, JOHN, AND CO., Bristol.
"First Aid" to the Injured and Sick: an Advanced Ambulance Handbook. By F. J. Warwick, B.A., M.B. Cantab., M.R.C.S., L S A., and A. C Tunstall, M.D., F.R.C.S. Edin. Second edition. Price 2*s.* 6*d*
Elementary Bandaging and Surgical Dressing; with Directions Concerning the Immediate Treatment of Cases of Emergency. For the Use of Dressers and Nurses. By the late Walter Pye, F R.C.S.; revised by Thomas Carwardine, M.S., F.R.C.S. Ninth edition. Price 2*s.*

## Appointments.

*Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to* THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

ARMSTRONG, W G, M.B., Ch.M. Syd., D.P.H. Camb., has been appointed Examiner in Medical Jurisprudence and Public Health at Sydney

BARRINGTON, FOURNESS, F.R.C.S., M.B. Edin., has been appointed Examiner in Gynæcology in the Sydney University, New South Wales.

BEDDARD, A. P, M D, M R C.P., has been appointed Physician to the West London Hospital, vice Dr. F. G. D. Drewitt, resigned.

BROWNE, T. W. STANLEY, M R C.S., L R.C.P. Lond., has been appointed District Poor law Medical Officer for Chatham.

BROWNLOW, HARRY LURGAN, F.R C.S. Eng., L R.C P. Lond, has been appointed Honorary Assistant Surgeon to the Royal United Hospital, Bath.

BRYAN, H J M R C S, L.R.C.P. Lond., has been appointed District Poor-law Medical Officer for Chatham.

CANT, A, M B, B Ch Birm., M.R.C.S., L.R.C P. Lond., has been appointed Certifying Surgeon under the Factory Acts for the Coleshill District of the County of Warwick

CARRE SMITH, HERBERT, L.R.C P. Lond, M.R C S., has been appointed to the Morley Convalescent Home, St. Margaret's Bay, Dover, and to the Alfred Bevan Memorial Home for Men, Women, and Children, Sandgate.

CATTO, JOHN, M B Ch B Aberd., has been appointed Medical Officer to the Tanjong Pagar Company, Singapore.

COOKE, WILLIAM H F R C S.E., L.R C P, has been appointed Assistant Surgeon to the Royal United Hospital, Bath.

CROWE, D, M.B., B S Dubl, has been appointed Medical Officer for the Ulceby District of the Brigg Union.

### ILLUSTRIOUS MEDICAL MEN.

WE have previously noticed the excellent series of reproductions of famous pictures comprised in the "Vibrona Art Series" of Messrs. Fletcher, Fletcher and Co. of Holloway, N., and quite recently we referred to a portrait of Edward Jenner, the apostle of vaccination, which was the first of a series devoted to portraits of illustrious Englishmen. We have now received two additional portraits in this series—those of John Hunter and of William Harvey. Both are from the original paintings in the National Portrait Gallery and are reproduced in the best style on fine plate paper, measuring about 20 by 25 inches. Their nominal cost, 2*s.* 6*d.* each, post free, is an additional recommendation.

### THE IDENTIFICATION DEPARTMENT AT PRETORIA.

IN an article on the transactions of the Identification Department of the Red Cross Society of Pretoria during the first phase of the war, which appeared in the third fasciculus of *Militar Geneeskundig Tijdschrift*, 1901, Dr. Romeyn incidentally throws light upon the uncultivated, or, indeed, semi-savage, nature of the Boers. When hostilities broke out, he says, the administrative part of the public health service was in a rudimentary state, the lack of organisation depending, among other things, on the character of the burghers who look upon all regulations as attacks aimed at their independence. Moreover, he continues, their sole knowledge of warfare was derived from fighting Kaffirs and they consequently were absolutely ignorant of the obligations and usages which devolved upon them during a contest with European troops. It was not until after the battle of Elandslaagte that the burghers began to recognise the advantages of order and regularity. Owing to the insufficiency of the telegraph service and also to the confusion caused by the multiplicity of homonyms in the Boer ranks, the returns of killed and wounded in that engagement were full of mistakes and omissions. Professor Molengraaf of Amsterdam, the well-known geologist, thereupon prepared a scheme for the organisation of an identification service, and succeeded in obtaining for it the sanction of the Boer authorities. It was desirable that the members of the new service should be recognised as non-combatants, in order that they might enjoy the prerogatives accorded to the class, and so Professor Molengraaf placed himself in communication with the officer commanding the British forces at Capetown, who immediately signified his approval of the project. An important part of Professor Molengraaf's scheme consisted in the distribution among the fighting burghers of descriptive cards—green for the Transvaalians and orange for natives of the Orange Free State—which should serve the purposes of identification, but here again the prejudice of the burghers proved a stumbling-block. They strenuously objected to carry what they called "death tickets," and much time and trouble were expended in persuading them to do so. The Identification Department ceased to exist on June 6th, 1900, the date on which Pretoria was captured. According to Dr. Romeyn the total mortality on the Boer side up to that date did not exceed 1055, "notwithstanding the fantastic figures given by the English."

### LOCUM-TENENTS AND ASSISTANTS' FEES.

MR. PERCIVAL TURNER, writing on the above subject, points out that in "Via Medica," published by Dr. Langley in 1871, page 85, it is stated that the qualified indoor assistant could obtain from £50 to £60 a year, or even £70 or £80, and that an outdoor qualified assistant's salary, without a house, was from £100 a year. Locum-tenents' fees on the same page are given as from £2 2*s.* a week. "In 1895," says Mr. Turner, "£3 3*s.* was the minimum fee for a locum-tenent, and assistants' salaries were proportionally higher; now in 1902 the recognised minimum is £4 4*s.* a week, which seems a fair remuneration in the majority of cases. Has the general practitioner been able to raise his fees of late years in like proportion, or has he not rather, by medical aid associations, cheap dispensaries, and other questionable associations, been compelled to lower his charges?"

### "THE TUBOR FILTER."

THE Berkefeld Filter Co. (121, Oxford-street, London, W.) has recently introduced an improved germ-proof filter which is to be distinguished by the name "Tubor." According to a series of bacteriological experiments quoted, "these filters may be regarded as perfectly safe and can be depended on to give a sterile filtrate for four or five days," after which it is desirable that they should be cleaned and sterilised.

### X RAYS IN CANCER.

*To the Editors of* THE LANCET.

SIRS,—I would be very grateful if any of your numerous readers could inform me through your columns of the best and latest methods of applying the x rays in the treatment of cancer. I would also be glad to know of any literature on the subject and where the same could be obtained.

I am, Sirs, yours faithfully,

ANXIOUS PRACTITIONER.

Jan. 13th, 1902.

MESSRS. SOUTHALL BROS. AND BARCLAY of Birmingham have forwarded us a copy of their tenth annual laboratory report which contains many matters of interest and importance to pharmacists. The sections dealing with the uniformity of galenicals, standards for concentrated infusions, tinctures, &c., are examples. The report is evidently based on a considerable amount of laboratory work.

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*Dr. F. H. Alderson (Bournemouth).*—We have forwarded the subscription to the honorary secretary of the R. B. Anderson Fund, Mr. Walter Monnington, 7, Fig Tree-court, Temple, E.C.

ERRATA.—In our "Analytical Records" in THE LANCET of Jan. 4th (p. 36) the heading "Zoeco" should have read "*Zoeco*" *Milk Proteids with Cocoa.* The manufacturers point out that the word "Zoeco" is used only as a brand name.—Dr. J. F. Gemmel, whose appointment we noticed last week (THE LANCET, Jan. 11th, page 124, line 17, etc., column 1) as medical superintendent of Whittingham Asylum, is senior assistant medical officer of *Lancaster* (not Prestwich) Asylum.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

## Medical Diary for the ensuing Week.

### OPERATIONS.

#### METROPOLITAN HOSPITALS.

**MONDAY** (20th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.) St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.) West London (2.30 P.M.), London Throat (2 P.M.).

**TUESDAY** (21st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

**WEDNESDAY** (22nd).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.).

**THURSDAY** (23rd).—St. Bartholomew's (1.30 P.M.), St. Thom
(3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.),
George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middle
(1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-W
London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæ
logical, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.
St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Thro
Golden-square (9.30 A.M.).

**FRIDAY** (24th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.),
Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Chari
cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mar
(2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.),
Northern Central (2.30 P.M.). West London (2.30 P.M.), Lond
Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P.
Throat, Golden-square, (9.30 A.M.), City Orthopædic (2.30 P.M.).

**SATURDAY** (25th).—Royal Free (9 A.M. and 2 P.M.), London (2 P.
Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University Coll
(9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mar
(10 P.M.), London Throat (2 P.M.), Throat, Golden-square (9.30 A.

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthaln
(10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and t
Central London Ophthalmic Hospitals operations are performed daily

### SOCIETIES.

**MONDAY** (20th).—SOCIETY OF ARTS.—8 P.M. Dr. S. Rideal: T
Purification and Sterilisation of Water. (Cantor Lecture.)

**TUESDAY** (21st).—PATHOLOGICAL SOCIETY OF LONDON (20, Hanov
square, W.).—8.30 P.M. Dr. W. Cayley: A Case of Phlegmono
Gastritis due to Streptococcic Infection.—Mr. A. G. R. Foulerto
A Case of Pneumococcic Gastritis with General Infection.—Mr.
Spitta: The Bacteriology of a Case of Rapidly Spreading Gangre
—Dr. Bulloch: The Transmission of Hæmolysins from Ascendar
to Descendants.

CHELSEA CLINICAL SOCIETY (Jenner Institute of Preventive Medici
Chelsea-gardens, Grosvenor-road, S.W.).—8.30 P.M. Communi
tions:—Mr. L. A. Bidwell: Cases of Empyema of the Gall Bladd
—Dr. J. B. Ball: Remarks on the Clinical Diagnosis of Diphthe
in Relation to Treatment.

**WEDNESDAY** (22nd).—DERMATOLOGICAL SOCIETY OF GREAT BRITA
AND IRELAND (20, Hanover-square, W.).—5 P.M. Meeting.

SOCIETY OF ARTS.—8 P.M. Rev. J. M. Bacon: Scientific Observatio
at High Altitudes.

HUNTERIAN SOCIETY.—8.30 P.M. Dr. A. Chaplin: The Treatment
Pleuritic Effusion.

**THURSDAY** (23rd).—SOCIETY OF ARTS.—4.30 P.M. Mr. F. H. Skrin
Bengal, the Land and its People.

# Notes, Short Comments, and Answers to Correspondents.

## MEDICAL AID ASSOCIATIONS AND THE GENERAL MEDICAL COUNCIL

*To the Editors of* THE LANCET.

SIRS,—I take it as extremely kind of your correspondent Mr John MacCormac in THE LANCET of Jan 4th, p 65, that he should with a rapidity of perception and lucidity of exposition which are remarkable epitomise my arguments in so few words and at the same time confer upon me the wish to champion the cause of the unqualified assistant and the medical aid associations Apparently he misunderstood the trend of my letter, but I am not responsible for that, and it was not written for the purpose of provoking an argument with him but with the object of drawing attention to the bungling methods of the General Medical Council and to its want of practical acquaintance with the requirements of the general practitioner The treatment of the unqualified assistant, the medical aid associations, and the Midwives Bill were given as instances, but there are others What of the poor fellow with the M D Brux , L S A Lond , who was persecuted and ruined? and what of the latest piece of tyranny in connexion with the medical officer of the Liverpool Victoria Friendly Association and its qualification of his conduct? Did the means in these cases justify the ends and were the ends obtained just? Truly, as Mr MacCormac says, "the duty of the General Medical Council is to protect the public", it is. And unfortunately so for the practitioner As for the unqualified assistants many had to go without notice, no probationary period being allowed, but what of that?—their places have been filled, by a different class of man, I grant—the *bonâ fide* medical student, but still unqualified, and I fail to see the difference between one unqualified man and another. With regard to the medical aid associations it is easy to take the usual stereotyped idealistic view, but that does not explain why the attendance on a working man who pays his 1*d* or 2*d* a week is more dishonourable than a similar attendance at a large hospital which he supports in the same fashion and which he cannot be blamed for taking full advantage of; and it is no nearer and offers no help to the solution of a problem which will have to be solved, and which will require the application of practical common sense and will be in no way affected by idle contempt or high theoretical ideals As for contract works and their not being science, are not all Poor law appointments, most large schools, works, &c —are not these contract works, and on no better scale of pay than medical aid associations? Is not one case as interesting as another, whether it be a contract or a private case? And as for their being ' humbug,' would your correspondent if he were appointed surgeon to some large works and were receiving 1*d* a week per head from 1000 workpeople —would he be pleased if that appointment were cancelled and that money handed over instead to some large charitable institution as a gift but to constitute a lien on its services, as is being agitated for to my knowledge? I pass over references to my youth—age does not always signify wisdom; also the views in general on the *locus standi* of the club medical officer with his patients—they can be taken for what they are worth , but I would point out that there are institutions which should be modified and not crushed, that there are abuses which properly treated may be transformed into usefulness, that the General Medical Council's methods whilst being satisfactory to some are not so to others, and that even a club medical officer has opinions and rights, and if he cares to use it the power to see that those rights and opinions are treated with respect Moreover the General Medical Council is, or should be, the servant and not the despotic master, and it is time it learnt that fact With apologies for space,

I am Sirs, yours faithfully,

Jan 8th, 1902 HARRY CLOUGH.

*To the Editors of* THE LANCET

SIRS,—I was glad to read the letter of Mr Harry Clough in THE LANCET of Dec 28th, 1901 p 1848 I will go further and say that it seems quite time something should be done to put a check to the methods lately adopted by the General Medical Council and the very harsh treatment meted out by that body to the less fortunate members of our profession I, in common I suppose with all qualified medical men, hailed with satisfaction the decision of the General Medical Council to suppress unqualified practice—that is, the practising the professions of physician surgeon, or accoucheur by gentlemen without a diploma on their own account But the Council went further and deprived of their living a deserving class of men—I refer to men of middle age, who through no fault of their own, and owing to circumstances over which they had no control were unable to obtain their diplomas and registration but who as assistants acquired a thorough knowledge of their profession and experience not only in the treatment *of disease but in the management of patients, the latter qualification* being most important, especially in large country practices, and these laws were passed, so the Council say, ' to protect the public," that is our patients, from the unskilled treatment of the unqualified At the same time (and this seems to be the absurd part of the whole matter) we are permitted the Council to employ as *assistants and locums and to place the lives of our patients* (the public) in the hands of young men, boys of 26 or 27 years of age just qualified who can have no practical knowledge, or, at least, very little, and, of course, without any experience in the treatment or management of even ordinary illnesses and complaints , the result, of course, being that on the return home of the principal he finds not only his practice ruined, but many of his patients wrongly and unskilfully treated not through any neglect but simply through want of knowledge in the young locum Then with regard to young club doctors, the action of the Council lately seems unduly severe No practitioner would of choice become a medical officer to a club or a medical aid society , it means hard work, drudgery, and very poor remuneration. But there must be a beginning and it seems hard that because a man applying for such a post should solicit the aid of his friends and neighbours he should be accused of "infamous" conduct and threatened by the Council with expulsion from the profession, which means that he must adopt some other means of living or go to the workhouse Lawyers as well as medical men canvass—they must do so—for public appointments such as coronerships appointments under the Local Government Board such as Poor law, &c , and their conduct is not considered "infamous ' There ought to be an appeal in law from these tyrannical decisions of the General Medical Council, and until there is the only course open to medical men who consider themselves wronged is to consult their M P 's and to have the matter brought before Parliament I am, Sirs, yours faithfully,

Dec 31st, 1901 FAIRPLAY

*To the Editors of* THE LANCET.

SIRS,—The following is a copy of a circular letter being sent to the medical practitioners of the district in which I live

I am, Sirs, yours faithfully,

Jan 10th, 1902 ONE OF THEM

[COPY.]

' "Dear ——,—An attempt having just been unsuccessfully made to induce a medical practitioner of this town to examine and attend people for a canvassing association for medical aid by means of the false assertion that three other medical men—whose names were given—had already consented to act in that capacity, I acquaint you of the fact and can show you the correspondence and disclaimers if you wish It is to be expected this exposure will prevent another insidious attack from being made on our status; the more we present a united front against our foes the easier it is for all of us to support the recent notice about medical aid associations from the General Medical Council

I am, dear ——, yours very faithfully,

December, 1901 ——

## FEES FOR INSURANCE EXAMINATIONS

*To the Editors of* THE LANCET

SIRS,—In THE LANCET of Dec 14th, 1901 p 1710, "Cyclops" comments upon the Century Insurance Company sending him 10*s* 6*d* —half his usual fee—for an "unusually rigorous' medical examination and full report, in which "about 60 questions had to be answered ' In THE LANCET of Dec 21st 1901, p 1776, the manager of the aforesaid company alleges ' grave mis statements From my own experience of medical examinations for the same company I can confirm "Cyclops" as to the questions being "about 60' and not 10 Moreover, "full and specific answers are particularly requested," thereby indicating an examination careful and thorough, as it always should be It seems immaterial as to how many sides of foolscap or of some other sized paper the questions fill up, but as to fees Mr H Brown has sometimes sent me 5*s* for similar examinations, and he must expect protests (useless no doubt) even as to the 10*s* 6*d* "fixed by the medical advisers ' he says It does seem strange that the company which he advertises as specially adapted to the needs of medical men "should be conspicuous in endeavours to underpay them As one who knows, I would strongly urge medical men, before completing an assurance against sickness to examine carefully and note the conditions and restrictions of a sickness policy, as well as the prospective contingent benefits I am, Sirs, yours faithfully,

Dec 30th, 1901 VIGILANS

## MEDICAL SOCIETIES

*To the Editors of* THE LANCET.

SIRS,—I should be glad of your valuable opinion and advice on the following matter. A proposal was set on foot to establish a medical society in our village and a circular was sent round stating that "every registered medical practitioner in the place and district is eligible for admission and the election is by ballot." 17 out of the 19 resident practitioners have been elected or have elected themselves, members The two who have been excluded are on the Medical Register It is stated that on no account will they be admitted as members The objects of the society are said to be to promote unity of action and the interests of the profession Perhaps you will be so kind as to inform me whether this is the usual procedure in the formation of similar societies and whether in your opinion it is likely to attain the ends aimed at Yours faithfully,

Jan 13th, 1902. ENQUIRER.

⁂ We cannot give any opinion, but we may remind our correspondent that although a man may be eligible for election to a club or society it does not necessarily follow that he will be elected —ED. L.

## Communications, Letters, &c., have been received from—

**A.**—Monsieur J. Astier, Asnières; Ariel Motor Co., Birmingham; Abbey Effervescent Co., Lond.; Dr. T. B. Adam, Brechin; Messrs. Allen and Hanburys, Lond.; Messrs. Armour and Co., Lond.; A. E. T.; A. B.; A. M.; Dr. F. H. Alderson, Bournemouth; Mr. T. Allen, Malvern Link; Army Medical Service, Director General of; A. G.; Apollinaris Co., Lond.

**B.**—Dr. G. F. Buzzard, Lond.; Dr. F. T. Bond, Gloucester; T. B. Browne, Ltd., Lond.; Monsieur O. Berthier, Paris; Messrs. J. H. Booty and Son, Lond.; Messrs. Bayliss, Thomas, and Co., Coventry; Bristol Royal Infirmary, Secretary of; Bolton Infirmary, Secretary of; Messrs. Brady and Martin, Newcastle-on-Tyne; Birmingham General Hospital, House Governor of; Mr. F. Barraclough, Leeds; Colonel A. W. Bell, Witney; Mr. W. Bothamley, Lond.; Dr. J. Broadbent, Lond.; Mr. K. V. Baghot de la Bere; *British Medical Journal*, Editor of; Berkfeld Filter Co., Lond.; Birmingham Children's Hospital, Secretary of; Dr. D. Bower, Bedford; Dr. Robert Barnes, Eastbourne; Messrs. Burroughs, Wellcome, and Co., Lond.

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**F.**—Dr. A. Flack, Rome; Messrs. Fletcher, Fletcher, and Co., Lond.; Herr G. Foch, Leipzig.

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**H.**—Dr. G. Hirsch, St. Petersburg; Dr. J. Hinshelwood, Glasgow; Messrs. Heath and Co., Lond.; Mr. F. Hall, Beverley; Dr. H. Hilliard, Lond.; Humphreys, Ltd., Lond.; Mrs. Howell, Derby; *Hairdressers' Weekly Journal*, Editor of; $H_2O$; Messrs. C. J. Howlett and Son, Lond.

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**N.**—Dr. G. Newman, Glasgow; Mr. G. T. W. Newsholme, Sheffield; Northumberland County Asylum, Morpeth, Secretary of; Messrs. Noble, Pinney, and Welland, Cleveland, Ohio; Mr. C. Newark, Lond.; Mr. J. C. Needes, Lond.; Mr. H. Needes, Lond.

**O.**—Dr. Bernard O'Connor, Lond.

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**Y.**—Dr. H. W. Young, Lond.

## Letters, each with enclosure, are also acknowledged from—

**A.**—Dr. D. A. Alexander, Leek; Dr. E. Allen, Hawes; A. S. M.; Dr. D. Angus, Stevenston; Dr. F. R. B. Atkinson, Radcliffe; A. W.; A. W. W. D.; Mr. F. Algar, Lond.: A. T.; A. G. E., Lond.; A. M.

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**T.**—Mr. N. Taylor, Sheffield; T. J. F.

**V.**—Vinolia Co., Lond.

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**FRIDAY** (24th).—CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Exhibition of Clinical Cases followed by Discussion. Patients will be in attendance from 8 P.M. to 9 P.M.

## LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

**MONDAY** (20th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.).—4 P.M. Dr. J. J. Pringle: Clinique (Skin.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Baldwin: Surgical Emergencies.

**TUESDAY** (21st).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Sir W. H. Broadbent: Clinique. (Medical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Bidwell: Plaster of Paris Splints.

ROYAL BRITISH NURSES' ASSOCIATION (10, Orchard-street, W.).—5.30 P.M. Sir Thomas Lauder Brunton: Spiritualism and Hallucinations. (Second Sessional Lecture.)

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Dr. Risien Russell: Intracranial Tumours.

**WEDNESDAY** (22nd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.).—4 P.M. Mr. R. Harrison: Clinique. (Surgical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. McAdam Eccles: Lantern Demonstrations on Hernia.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL (Gray's Inn-road, W.C.).—8 P.M. Dr. W. Wingrave: Nasal Diseases with Discharge.

**THURSDAY** (23rd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. J. Hutchinson, jun.. Clinique. (Surgical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road, W.).—5 P.M. Mr. Baldwin Surgical Emergencies.

CHARING-CROSS HOSPITAL.—4 P.M. Dr. Galloway: Dermatological Demonstration. (Post-Graduate Course.)

**FRIDAY** (24th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.).—4 P.M. Dr. StClair Thomson: Clinique. (Throat.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Taylor: Diagnosis of Disease of Spinal Cord, illustrated by Cases.

## EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

*It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.*

*Lectures, original articles, and reports should be written on one side of the paper only,* AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

*Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.*

*We cannot prescribe or recommend practitioners.*

*Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."*

*Letters relating to the publication, sale, and advertising departments of* THE LANCET *should be addressed "To the Manager."*

*We cannot undertake to return MSS. not used.*

## MANAGER'S NOTICES.

### THE INDEX TO THE LANCET.

THE Index to Vol. II. of 1901, which was completed with the issue of Dec. 28th, and the Title-page to the Volume, were given in THE LANCET of Jan 4th.

### VOLUMES AND CASES.

VOLUMES for the second half of the year 1901 are now ready. Bound in cloth, gilt lettered, price 18s., carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2s., by post 2s. 3d.

To be obtained on application to the Manager, accompanied by remittance.

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WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid and *not* to THE LANCET Offices.

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SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE. It has come to the knowledge of the Manager that in some cases higher rates are being charged, on the plea that the heavy weight of THE LANCET necessitates additional postage above the ordinary rate allowed for in the terms of subscriptions. Any demand for increased rates, on this or on any other ground, should be resisted. The Proprietors of THE LANCET have for many years paid, and continue to pay, the whole of the heavy cost of postage on overweight foreign issues; and Agents are authorised to collect, and do so collect, from the Proprietors the cost of such extra postage.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied. Address—THE MANAGER, THE LANCET OFFICES, 423, STRAND, LONDON, ENGLAND.

## METEOROLOGICAL READINGS.

*(Taken daily at 8.30 a.m. by Steward's Instruments.)*

THE LANCET Office, Jan. 16th, 1902.

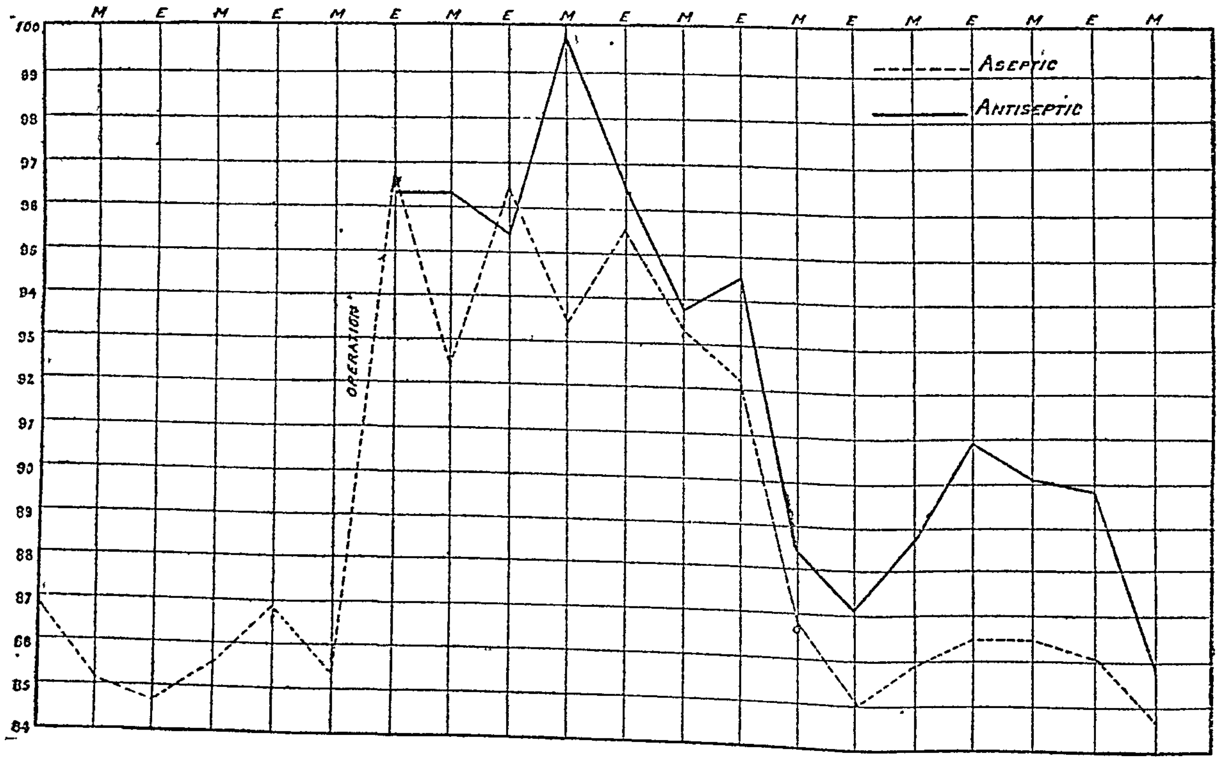
| Date. | Barometer reduced to Sea Level and 32° F | Direction of Wind | Rainfall | Solar Radia in Vacuo | Maximum Temp Shade. | Min. Temp | Wet Bulb | Dry Bulb | Remarks at 8.30 A.M. |
|---|---|---|---|---|---|---|---|---|---|
| Jan. 10 | 30·07 | S W | 0·02 | 57 | 54 | 45 | 50 | 51 | Cloudy |
| " 11 | 30·09 | S.W. | | 62 | 52 | 50 | 51 | 52 | Raining |
| " 12 | 30·21 | S W. | 0·02 | 54 | 50 | 43 | 45 | 46 | Cloudy |
| " 13 | 30·26 | N.E | ... | 48 | 41 | 37 | 37 | 38 | Cloudy |
| " 14 | 30·57 | N E | ... | 43 | 38 | 33 | 32 | 34 | Overcast |
| " 15 | 30·83 | S W. | ... | 51 | 42 | 28 | Fzn. | 29 | Foggy |
| " 16 | 30·66 | W | ... | 49 | 45 | 29 | 41 | 42 | Cloudy |

**During the week marked copies of the following newspapers have been received:**—*Nottingham Guardian, Hertfordshire Mercury, Pharmaceutical Journal, Manchester Guardian, Dublin Evening Telegraph, Southampton Echo, Stafford Advertiser, Glasgow Evening Times, Leeds Mercury, Birmingham Gazette, Coventry Herald, Whitehall Review, Belfast News, Birmingham Daily Mail, Municipal Reformer, Allgemeine Medicinische Central-Zeitung, Revista Medica de San Paulo, Echo, Daily Mail, Daily Express, Yorkshire Post, Standard, Bristol Mercury, Liverpool Daily Post, La Caducée, Hong-Kong Weekly Press, Herts Advertiser, Times of India, Reading Mercury, Aberdeen Free Press, Mining Journal, Local Government Chronicle, Windsor and Eton Express, Thrapston and Raunds Journal, Review of the River Plate, Revista Ibero-Americana de Ciencias Médicas, Glasgow Evening Times, &c.*

> most costly drugs, nutritious diet, &c.; likewise the house will be crowded with the most miserable objects, to the anxiety of those that attend them, and the exclusion of other patients, who might have been cured in the interim. Many hospital-surgeons are under the necessity of providing lodgings in the country, at their own expense, for their patients who have undergone operations; rather than suffer the pain of a disappointment in completing a good cure or seeing their patient languish under a hectic, incurable in a crowded Infirmary. Therefore it is hoped that these considerations will influence the humane Trustees, to provide these conveniences for the poor sufferers.

I think, gentlemen, that although my quotation has been rather a long one, yet it is a most interesting thing to remember that these remarkable suggestions were made 120 years ago by Edward Alanson, surgeon to the Liverpool Royal Infirmary, and I doubt whether they could be improved upon at the present day; we are not yet able to say that all the improvements indicated by him have been accomplished. He was indeed in advance of his time and was very near the truth as it appears to us to-day. The main point that strikes one is the great importance which he evidently attaches to the part played by the air in the spreading of infection. We think less of the air and more of the hands as infection-spreaders. We think less of infection and more of contagion. This seems a small difference, but it is a fundamental difference in principle, which is responsible for nearly all that divides our present work from that of 100 years ago. Owing to our better hospital construction the want of ventilation, &c., has been removed from our list of enemies and we can confine our attention to the dangers of contact. So much for the first period.

FIG. 1.



Mean pulse chart of 80 cases of abdominal section—40 aseptic and 40 antiseptic.

The second period, or the antiseptic stage, is so recent that it is not necessary to recall what is known to everybody. In the short period of 20 years or little more a complete revolution in surgical methods has taken place, and it would hardly be exaggeration to say that in that time we have passed from night into day. For although there must be much to learn and to simplify in the future, yet when we compare the methods of to-day with the methods of 20 years ago we may almost say that we are now already in the full light of noonday. I well remember an incident which happened when I was a dresser, not such very remote ages ago. It made a great impression on my mind at the time, and I have often pondered over it since. To us to-day it sounds like a story of the Middle Ages. A man was brought into hospital having fractured his patella. At about this time Mr. Lister had been suggesting wiring together the fragments as a method of treatment. My chief said that he thought this case would be a suitable one on which to try the new method of treatment, and it was arranged that the operation should be performed upon the following day. We all forthwith went down into the post-mortem room and practised this new operation. There was one gimlet which pierced the bone in a marvellously easy way, in a way that none of the others would. The surgeon naturally said, "We will use that one to-morrow," and we did. The operation was performed on the following day in a most masterly fashion, under a cloud of carbolic spray and (according to the notes) "with the strictest antiseptic precautions." Things went wrong, however, and the man died from septicæmia. The gimlet had killed him. But the antiseptic system and the new operation were blamed at the time. We have learned much since then, and it seems remarkable to us now that anyone could be so blind; but it is well to remember that the men who appear to us so blind were the leaders of the profession and the most advanced men of the time, and we must expect to appear just as blind to the next generation.

We are now passing from the antiseptic period to the non-antiseptic or aseptic period, and if we do not attain the results that have been attained by some we should not at once blame the system, but carefully criticise our own technique and remember the story of the gimlet.

It is hardly necessary to say that when I use the term "aseptic surgery" I use it in the sense of being without antiseptics. I do not care for the term, but I do not know a better unless we borrow a term from medicine and speak of "prophylactic" or "preventive" surgery. The term "preventive" would indicate the principle which underlies our present practice. There always seems to have been a fascination for the surgeon to put something into his wound to make it heal better. In the pre-antiseptic days at one time it was the fashion to fill the wound with boiling oil, at another the wound was stuffed with dry lint and freely dredged with flour, and many other devices were employed. In the antiseptic period wounds were douched and swilled with antiseptics and sometimes filled up with iodoform. In the aseptic method there is nothing put into the wound to irritate it or to help it to heal; the object is to keep out all that is detrimental to healing.

Aseptic surgery is a stage onwards towards the goal of perfect surgery. We all hailed antisepsis, and now we should all hail asepsis. Antisepsis naturally came first and

# A Presidential Address

ON

# THE PROGRESS OF SURGICAL METHODS.

*Read before the North of England Obstetrical and Gynæcological Society on Dec. 20th, 1901,*

BY T. B. GRIMSDALE, B.A., M.B. CANTAB.,
GYNÆCOLOGICAL SURGEON TO THE LIVERPOOL ROYAL INFIRMARY.

GENTLEMEN,—My first duty is to thank you for the honour which you have done me in electing me to be your president. I need hardly say that it is an honour which I appreciate very highly; and since you have made me your president there is a pleasant duty which devolves upon me, and that is to address you on some subject connected with gynæcology. It is unusual at such a time for the reader of the address to be interfered with or criticised, so that the president can say what he likes without much fear of contradiction. This, of course, is a great distinction and at times it may be felt to be a great advantage; it at least shows the trust and confidence which the society has in its presidents, but as we all have the same object at heart, the advancement of gynæcology, I think that it is rather a pity that criticism, tempered with leniency, is not the rule. On this occasion if any one of my audience feels inclined to criticise my remarks, although it would be contrary to precedent, I shall not rule him out of order but shall take it as a compliment and a sign that I have managed to interest him.

In casting about for a subject on which to address you I have not looked very far afield I have taken the subject which appears to me to be the most important and which looms largest in the mind of the operating surgeon. It is the Progress of Surgical Methods—one might almost say the revolution in surgery. This is a theme upon which much has been written, and although I can hardly hope to add anything to this great subject, yet, however feeble my tribute, I feel that I must lay my homage at the feet of the great master of our art, Lord Lister, and pay reverence to the memory of that great Frenchman, Pasteur, from whom Lister's first inspiration was derived When one considers the anxieties, the nervous strain, the bitter disappointments of the earlier surgeon, the horrible sufferings of the patient, which were sufficient to make the life of the surgeon a terrible ordeal such as few could endure, one cannot help feeling a spirit of devout thankfulness for the privilege of having lived after Lister's epoch-making discoveries

There are three stages in the progress of surgical methods which I propose to touch upon; they are very striking and are significant of the theory of the method of healing of the day. These three stages are. (1) the open method period; (2) the drainage-tube or vent period; and (3) the period of complete closure. These three stages, of course, correspond with the pre-antiseptic, the antiseptic, and the aseptic periods. In the first of these periods suppuration was supposed to be inevitable and was encouraged by the surgeon. It was considered that the wound must be "digested" before it could heal and the wound was left open to accord with this theory. In the second period suppuration was expected and a vent was left for its exit. In the third period the presence of suppuration denoted failure. It was not expected and the wound was completely closed.

As illustrating the results obtained during the first period, when the open method of treatment was in vogue, I will quote the results of amputations performed about 100 years ago, as stated by Alanson, one of the members of the staff of the Liverpool Royal Infirmary at that time. Alanson was a man of great originality, a most careful and successful surgeon, and an observer of great intelligence. He was much in advance of his time and was the inventor of "flaps" in the amputation of limbs. He says:—

> Of 46 amputations at which I was present and had the opportunity of inspecting the after-treatment, 10 died; one of the lockjaw; two of hæmorrhage from the whole surface of the stump; four from the hectic fever and extensive suppurations; and three from a spreading gangrene on the surface of the stump 18 had a hæmorrhage, six from the whole surface of the wound, and 12 from a particular vessel or vessels. In nearly the whole, the symptomatic fever was violent; the startings and spasms frequent; the suppuration large; the surface of the wound extensive; and in all the first dressings were painful In most of them, there was an exfoliation; and in several a sugar-loaf stump; and in some the wound remained incurable.

I will not read any account of the operations, but were I to do so you would not be surprised at the results being poor. If along with this you consider the material upon which the operations were performed and the enormous disadvantages under which the surgeon laboured you would wonder that any patients at all recovered. Of course there was no anæsthetic, and the patient, fearing the pain of operation, would put it off till he could go on no longer. The hospitals also were not all that could be desired. In spite of all this, however, Alanson performed 35 amputations with no mortality. As far as mortality goes these results of Alanson would compare with those of the present time, but the method and ease of recovery would be very different. He himself mentions incidentally a patient's remark "that the first dressing was worse than any part of the operation." Alanson's results were due to individual genius and care and did not at all represent the general results of the surgical community. Unfortunately at that time there was no North of England or other medical society at which Alanson could enunciate principles to enlighten the world; he was merely able to do better work than his contemporaries and he wrote a book. Having no microscope he was not in a position to prove by actual demonstration the soundness of his principles, although his results showed the value of his methods. His teaching was in consequence forgotten. Before passing on I should like to quote some of Alanson's observations on hospital management, which will give you some idea of the genius of the man and the difficulties which surrounded the surgeon of those days. He says:

> Many hospitals are so tainted by unwholesome effluvia, that they are rather a pest, than a relief to the objects they contain. The following regulations are humbly recommended to the consideration of those, who have the care of hospitals in want of such attention. 1. No ward should be inhabited for a space of more than four months together; for it is impossible to keep a room healthy, that is constantly crowded with diseased people, the walls should be scraped, whitewashed and every other necessary means used for the purification of the air, before the re-admission of patients 2 The bed stocks should be made of iron, to prevent the lodgement of vermin and the more easy absorption of putrid matter. 3. The bedding should be more frequently changed, than is usually done; the bed-tick stuffed with chaff, hay, cut straw or materials of such easy expense, as to admit of their being frequently changed. 4. Where the hospital is conveniently situated for the purpose, all the patients that are able, should carry out their bedding and expose it in the open air, for several hours every day, when the weather permits 5. On the days of admission, those patients that have inhabited foul ships, jails, cellars or garrets, workhouses or other infected places; or whose clothes are dirty, or suspected to contain vermin, before they are suffered to appear in the ward, should first be stripped, and washed in the warm bath, and afterwards clothed with proper dresses, provided at the expense of the Charity by which means the evil of importing infection, so detrimental to the salubrity of every hospital, would be greatly remedied.[1] . 7. The infected clothes should be baked in an oven constructed for the purpose; by which all vermin and infection will be destroyed; and the clothes may be returned clean to the patients, when they are discharged the Hospital. 8. The patients, when received on the days of admission, should be placed in the wards that have been last ventilated, and not in those, that have been long inhabited, where it may reasonably be presumed, the air is considerably tainted. 9. All incurable or infectious cases should be refused admittance; and amongst these should be classed old chronic ulcers of the legs, and particularly those in which there is great loss of substance, for these seldom remained long healed; hence most Hospitals are so crowded, that the intention of the Charity is perverted, as the air is rendered unwholesome. 10. All offensive, gangrenous, or other putrid sores, should be placed in distinct rooms provided for that purpose; and not suffered to taint the whole ward. 11. There should be particular rooms provided for those patients who are the subjects of operations; they should be in the most airy situation, never long inhabited and alternately cleaned and ventilated, as before advised. 12. A Hospital should never be crowded on any account; and always of so large a construction, that some part of the building may at all times be uninhabited, for the purpose of whitewashing, ventilation, &c. 13. When any person has been afflicted with a putrid disease or confined to bed for a length of time, let the bed be emptied, and the bed-stocks, the bed, the sheets, and other linen be washed, and the rest of the bedclothes exposed for some time in the open air, and baked in the oven before they are used again. 14. Let the nurses see that every patient's hands and face are washed every morning; and their feet, once a week. 15. Let the nurse of each ward be liable to a fine, to be deducted from her wages, if some of the windows in her ward are not kept open, during a stated number of hours every day. 16. To every Infirmary, particularly where the wards are crowded, a house in the country, well situated, and at a convenient distance, should appertain; without such assistance many of the patients must perish, which would be easily and certainly preserved; and it will be found, (as may without difficulty be demonstrated) the best policy in the Trustees of an Infirmary, to provide such an appendix. By such assistance patients may be speedily cured, at a small expense; but, if suffered to remain in the Infirmary, their recovery will either be prevented, or obtained in a great length of time, at a considerable expense, by the

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[1] The sixth regulation which applies to the dresses need not be given.

the results of other operators. I consider that my antiseptic composite chart is very good, but the aseptic chart is better. You will notice that in both series on the fourth morning after operation the patient is well; the pulse and temperature have returned to the normal. There are other points which I cannot show you graphically but of which I feel fully convinced in my own mind. There have been less pain and less trouble from flatulence after operation, and I think that the scars are less inclined to be keloid. I have no doubt that the general comfort of the patient has been increased. These results have been most gratifying to me, and in presenting them to you I have endeavoured to avoid anything like high colouring. I trust that I have not rendered them colourless, but Pope's lines have all along been in my mind:—

> "To observations which ourselves we make
> We grow more partial for the observer's sake."

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# An Opening Address

ON

# THE ART OF CLINICAL MEDICINE AND ITS TECHNIQUE.

*Delivered before the Students' Medical Society of the Leeds Medical School on Oct. 18th, 1901,*

BY WILLIAM EWART, M.D. CANTAB., F.R.C.P. LOND.,

SENIOR PHYSICIAN TO ST. GEORGE'S HOSPITAL AND TO THE BELGRAVE HOSPITAL FOR CHILDREN.

GENTLEMEN,—My sense of the honour of your invitation to address you to-night, if it can be equalled by anything, could only compare with the pleasure of finding myself among you in the congenial and invigorating atmosphere of a students' debating society, an old student among those of youthful aspirations and promise, for a semi-confidential talk on matters of intimate concern to us all. To this society, among all other students' medical societies, it is now my privilege to wish every success. The secret of their usefulness and attraction is largely the same as that which facilitates the successful study of clinical medicine and which is also fundamental to the position and dignity of the medical confraternity—collaboration and mutual help: every man contributing his share and ever ready to help his fellow in the joint service of suffering humanity. There is another feature in students' medical societies which suits our subject—it is their universality. Clinical medicine itself is all-embracing. It claims not only a relationship with various kindred sciences but also their constant service. All the work of this prosperous and progressive medical school practically tends to one end, which in my experience has been thoroughly fulfilled—the making of good clinical men. Although, therefore, in offering any clinical advice in this place I feel guilty of bringing coals to Newcastle, your liberality will discern that this fault is inherent to my theme rather than to my intention.

On the subject of clinical art I cannot spare you the infliction of a few true aphorisms. It was the art of clinical medicine which drew from the greatest of physicians the pathetic utterance equally descriptive of all human art—"*Ars longa, vita brevis.*" To the present day it remains the longest of arts and therefore its study must claim the largest share of our time.

"The ideal is the soul of art." This aphorism, though it might seem to be hardly opportune, underlies the whole of our practical purpose to-night. It declares our belief that clinical medicine is eminently progressive and that a brief consideration of some of its tendencies and some of the conditions of its future advance is, perhaps, a pardonable digression. Imagination, that humble "occasional helper" of science, is art's principal handmaid; and it may not be altogether idle to dream of those possibilities which are not yet fully within the reach of this generation.

"*Ars imitatio naturæ.*" This is above all others the clinical aphorism. Half the secret of the clinical art is the correct observation of nature, the other half its successful imitation. But I must not dwell upon that important topic, but at once draw your attention to another aphorism most intimately connected with the purpose of this address—"All art consists of the technique and of the production."

The work of art brings into free play man's highest intellectual and physical attributes; but only provided they have been liberated by patient practice from all mechanical struggle with the accidents of technique. These two components of art are not only distinct but are in some respects in glaring contrast. Nothing could be more prosaic, mechanical, and laborious than the study of technique which is to furnish the ideal with its incarnation. All this is strikingly exemplified in the study of clinical medicine, and the distinction between the technique and the performance is one which it will repay you to grasp at the earliest stage.

I have dwelt upon points of resemblance. In one respect clinical medicine differs from all other arts. Perfection such as is achieved by other artists is denied to us. Our task almost passes the wit of man. It is that of remedying damage and disturbance in a machine of unimaginable complexity. A few hard facts are supplied to us by the sciences; and in addition to these, our scientific facts, there are the so-called great principles of medicine, most of which are empirical postulates and cannot take rank with experimental evidence, but nevertheless are of immense practical value. These are our assets; but when the balance is struck the sum of our actual knowledge is vastly inferior to that of the unknown and perhaps of the unknowable. In other words, our art is an amazing combination of strict knowledge and of absolute ignorance, of minute accuracy and of immense vagueness—it is an art of sciences and an art of the unknown.

But there is a greater inconsistence. Though we confess our ignorance we are as practitioners not allowed to plead it as an excuse. Where life is trembling in the balance something must be done, and our patient expects this something to be the right thing. To act for the best in spite of pervading ignorance is indeed an art. Let it, then, be no slur upon clinical medicine that it is eminently versatile, that it looks all around for help, and that, when it is deserted by science, in its distress it should call imagination to its aid and should not shrink from consulting empiricism. Empiricism and science are a powerful combination. Traditional empiricism—the accumulated experience of countless generations of untrained observers—although hardly as trustworthy as the unthinking instinct of animals, still is a mine of treasure which has only begun to be worked with the searchlight of science. Happily in the perplexity of many counsels we fall back upon the great clinical precept, "*Non nocere,*" and though science may fail us there is one ever-trusted guide, "*Imitatio naturæ.*" The methods adopted by nature are our standard and the test of the safety of our tactics. In spite, then, of our ignorance our treatment may still be of the best if we can succeed in reading nature, not only in a general sense, but nature as she presents herself in the individual patient, and in acquiring that insight which the laity so aptly describe as a knowledge of the patient's constitution.

## MEDICAL EDUCATION, PAST, PRESENT, AND FUTURE.

If I may use the privilege of this debating society to discuss debateable questions, the following considerations may be of interest and perhaps of indirect service.

There are two prominent signs of the times. The first is the rapid and irresistible expansion of science in clinical medicine; to this the public mind has been effectually awakened, and patients not only desire but claim to be treated with all the resources of science. This tendency in therapeutics is reflected in medical education; and practical shape is now being given to it by the growth of the idea of the clinical laboratory, probably the most important element in the clinical system of a near future. No less significant is the other contemporary innovation—the post-graduate system, which symbolises the need which is felt for more clinical instruction. The extraordinary sacrifices made for the sake of further clinical opportunities by members of an overworked profession illustrate the urgency of that need. These two tendencies give special prominence to the prevailing dissociation between the science course and the clinical course to which further reference will be made.

History is full of teachings. Looking back 150 years ago, prior to the birth of modern science, we find the simplest expression of medical education on the pattern of the mediæval trades and guilds—a practical training beginning at an early age—and a course of theory as a finish for maturer years.

was the means by which we were able to advance the art of surgery so enormously that satisfaction and gratification beyond the dreams of the most sanguine were gradually realised This satisfaction has been so great that some are even still complacent with surprise at the marvellous results However, after this first surprise at unexpected successes, there has risen gradually a feeling that perhaps there may be something even better still something to criticise even in the best results yet attained by the antiseptic method, marvellous as these are when we compare them with the results of a short time back.

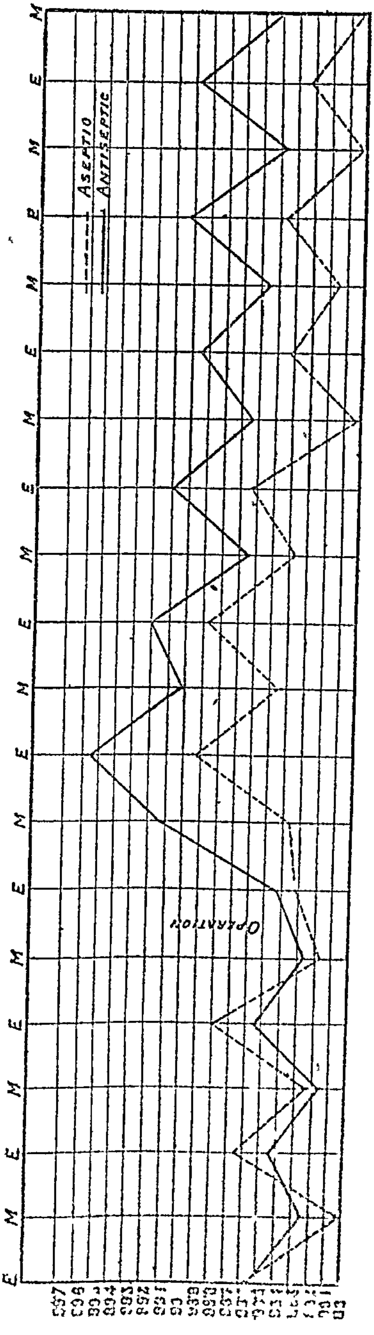
And so we come to the third or aseptic stage and there is no doubt that this is a decided step in advance of the antiseptic stage and the advance is measured by the ease of recovery after operations Of course there has been gradual and decided improvement since the antiseptic stage commenced, and the results at the end of the antiseptic stage became so good that we cannot expect a startling improvement at the commencement of the aseptic stage similar to that at the commencement of the antiseptic stage Further, we must remember that the actual change is only comparatively slight from the end of the antiseptic method to the commencement of the aseptic method The chief difference is a difference in principle indicated by the term "preventive' However, in spite of all this I think that there is a distinct improvement in the results that I have obtained by the aseptic method over anything that I have obtained by the antiseptic method.

I do not propose to enter into minute details of my present method of operating but I will merely say that I now use no antiseptics whatever during operations When the operation commences all antiseptics are laid aside and where formerly I used antiseptic lotions and antiseptic dressings I now use sterile water and sterile dressings I do not allow any antiseptics to get into my wounds The skin of the patient and the hands of the operator and assistants are prepared most carefully with antiseptics but as soon as the operation commences no further use is made of antiseptics The method of hand cleaning which I adopt is the permanganate and oxalic acid method This method is most satisfactory and has stood some very severe tests that I have subjected it to Cleaning hands by this method certainly takes some time—about 20 minutes—but I am sure that it is time well spent and that you are amply repaid for it. In my operations we take every preventive precaution that we can think of to ensure asepsis but as these details would necessarily be tedious I shall not allude to them further in place of detail I will express a sentiment which is I think true and useful The success of the operation depends upon the preparations for its performance—that is upon the completeness and efficiency of the prophylaxis The comparison which I have made between a series of antiseptic operations and a series of aseptic ones certainly has been all in favour of the aseptic series

In order to show the results of the above-mentioned series graphically I have constructed two composite charts and my thanks are due to my house surgeon Mr O I Williams for the help which he has given me in drawing these up

The charts (Figs 1 and 2) represent 80 cases of abdominal section—40 antiseptic operations and 40 aseptic operations The black line marks the antiseptic series and the broken line the aseptic series The charts were made in the following way The pulse and temperature in each case were recorded twice daily, at 10 A M and at 6 P M The record on the composite chart was obtained by adding together the records on the individual charts of each series and dividing by 40 to get the mean The mean pulse and the mean temperature in each series are given on the charts for three days before and a week after operation (In the antiseptic series there is no record of pulse before operation ) You will notice that the broken line representing the aseptic series is always inside the black antiseptic line this denotes an easier recovery after operation in the aseptic series In looking at these charts you may be inclined to say that there is a greater rise in pulse and temperature than you would expect and that your own results would be better than those which I show you but you must remember that these composite charts include all cases bad and good easy or difficult and this is the mean of the whole lot I could show you individual charts in the antiseptic or aseptic series in which there was no rise of pulse or of temperature whatever but this is beside the point, what I want to show is that there is an average improvement in the aseptic series and that it is an improvement on results which will not compare badly with

FIG 2



Mean temperature chart of the same 80 cases as in Fig 1 subjects—viz., of those parts which have an essentially clinical purpose—into the third and fourth years. This would be a step towards associating, instead of dissociating, practical clinical and scientific work, as the higher science training outgrows the narrow compartment of the preliminary curriculum. For instance, the clinical part of physiological chemistry and the study of the blood might be included with other subjects in the course on clinical technique, so that in the future perhaps such terms might be used as "elementary and advanced clinical physiology." Changes as great as this have taken place, and yet greater changes must come. A course of higher applied physiology in the fourth year would tally with the advanced teaching of anatomy in connexion with operative surgery. There is some anomaly in placing before mere tyros the most advanced problems while such simple practical physiology as the auscultation of respiratory and cardiac sounds or the viewing of the fundus oculi or of the trachea is thought too great a departure from the theoretical subjects As regards anatomy, so much laborious knowledge is now quickly lost and unutilised that there would be no detriment in the first instalment being reduced on strictly utilitarian lines and this working minimum gradually added to during subsequent years and developed mainly in the clinical directions of visceral medical anatomy and of operative surgery. On some such plan a portion of the burden of the first two years might be shifted, school bearing part of the responsibility of chemistry and biology and the later years that of advanced anatomy and physiology, and in this way the professional training itself might possibly begin in the second year, whilst from the beginning the faculty of observation would be trained in those fields where it will be engaged in practice. None of you will have the benefit of these changes, but their mention may have provided you with clearer ideas and, perhaps, with some suggestions as to the most profitable way of looking at your studies. It is the study which is preliminary, not the subjects, for anatomy is part of clinical medicine and physiology is its very breath. The distinction between their educational and their utilitarian side is one which no teacher of a special branch would care in fairness to the integrity of his subject to emphasise too strongly but which is essential from your standpoint. Some of the superabundant supply will be retained and will help to educate the clinical man, but the greater part is sure to be lost to conscious memory. Inquire of your fellow-pupils and of your teachers which are those portions of your daily anatomy and physiology which are to form part of your professional outfit and to be kept ready for use. Let your study of visceral anatomy and physiology, and above all of practical urology, hæmology, and glandular physiology be undertaken and carried out with the care and forethought which belong to the safe keeping and to the utilisation of capital. Meanwhile, any premature attempt to take any part in clinical work or to visit the wards is futile and detrimental. But a distant message of advice may harmlessly be sent from them to you whilst you linger in the Eden of science, and it is this: see to it that the precious fruit you are gathering does not run to waste and your scientific weapons do not rust before the time when they will be wanted.

### A NEW SUBJECT: CLINICAL TECHNIQUE.

The ancient and mediæval artists made and mixed their own colours. This was a purely technical operation which might, so far as the successful painting was concerned, have been done at a distance. So it is with many other points in the technique of all arts. Clinical technique, though it is unrecognised in the curriculum, has now grown into a full-sized subject comprising regional anatomy, important parts of practical physiology, of physiological chemistry, of histology, and of bacteriology, in addition to the entire technical detail of physical examination, to medical terminology, and to systematic note-taking. The accessory clinical methods and apparatus are now becoming so numerous that it is difficult in the wards to apply them all even in the service of the patients, much less for the individual teaching of students. This tuition should largely be conducted elsewhere and its proper place is a special laboratory. Nowhere really at home, and everywhere inevitably an intruder, in the dissecting-room, in the chemical, the physical, the physiological and the bacteriological laboratories, and above all in the wards themselves, clinical technique has hitherto led a wandering and parasitic existence. Clinical medicine and its students will not have had their due until all the *disjecta membra* indispensable to their work shall have been consolidated into a working whole and duly housed in a laboratory furnished with all the material, apparatus, and diagrams essential to a thorough and rapid grasp of the entire subject. I believe that the practical study of science and that of clinical medicine have been kept too much separated, and I cannot view without misgiving any prospect such as is now being discussed of rendering that separation absolute in space as well as in time. In my opinion the solution which is sought lies in an opposite direction. The delay which has occurred is but a repetition of previous experiences. Laboratories of research in chemistry and in physiology had existed long before educational laboratories were instituted for the benefit of students of medicine. In the same way the teaching of clinical technique, the only variety of practical science work which is in daily use by the practitioner, will be the last to be duly provided for. My proposal is that the practical subjects which belong to clinical technique be grouped in the curriculum after the preliminary and before the clinical period of training and taught practically in connexion with a clinical laboratory. A fundamental advantage would accrue in respect of the science curriculum. At present much which practically belongs to clinical medicine is taught under the science schedule without any point of contact with its clinical purpose; lost among a mass of less indispensable theoretical knowledge it overloads the memory for a time and is quickly forgotten. This practical matter needs to be taught at the time when it is put into use; or it should be identified with clinical use at the time when it is taught. A practical course on "clinical technique" dealing with "clinical physiology" and "clinical anatomy" would imply neither additions to the schedule nor any change in the educational periods, but only a trifling redistribution in the subjects. The latter, for instance, would still be taught in the second half of the second year; but the students would have passed from the stage of "preliminary" to that of "applied" science, or clinical technique. The indispensable basis of this scheme would be practical tuition and practical work in a clinical laboratory.

In this century, which bids fair to be the century of medicine as the last was the century of surgery, the clinical laboratory is likely to become one of the most important educational levers. A complete clinical laboratory is a combination of the chemical, physical, physiological, bacteriological, and pathological laboratories brought into working relation with the wards. The clinical laboratory of research in the service of pure science and the ward clinical laboratory in the service of practical hospital treatment have already been inaugurated. But there is a third variety still wanting, though not less important—the students' clinical laboratory. Many students still fail to obtain that expert familiarity wi the physical and chemical methods of examination whic to be expected of them. They have been well taught, they have not practised enough for themselves for the wa of systematic opportunities in suitable surroundings. T wards and the out-patient room afford admirable opportunit for the study of morbid physical signs, but these chan are, in my opinion, too casual and precarious for a systema demonstration and rehearsal of the methods themselves. place is needed for the unhampered tuition and practice the methods and apparatus. Whereas anatomy, physiolog chemistry, and pathology all possess their individu sanctum, the most important of all our applied scienc clinical medicine, has no place to call its own. This def may sooner or later be realised, and every school m ultimately possess a students' clinical laboratory, where science student and the clinical worker might meet common ground, the first in the pursuit of his scienti studies, the other because of his clinical reference to scien Without stepping beyond the school precincts or boundaries of his own subjects, the junior student wou learn that his senior from the wards was applying precis those chemical tests and instrumental manipulations whi he himself was learning, and he would take note that th should not be forgotten. A laboratory of this kind, t student's own test-room, under suitable junior tutorshi might with advantage be utilised for the teaching a practice of the professionally useful aspects of physiolo and of physiological chemistry. For instance, the bloo urine, and digestion tests might be taught and practis there, and a practical familiarity with the respiratory a cardiac sounds acquired with the help of a living subject attendance. The theory of the stethoscope itself and percussion might readily be explained, and much oth arly practical training has always been in this country the adition for all careers. The apprenticeship was intended train up the future medical man from the practical side; esides an elementary introduction to medicine and surgery ere was much in it which was to prove of use in the daily utine of the profession—namely, an acquaintance with me of the functions of the apothecary corresponding to ose of our nurses of to-day, and with some of the functions the dispenser which included the handling of drugs and e preparation of remedies as well as their uses. By degrees, lso, the apprentice grew into the ways of practice, developed a sense for those requirements of the patient which re not purely medicinal, and evolved the professional ttributes of tone and manner which are often the most nportant aids to treatment, at any rate for its appreciaion. This was an exclusively clinical training, in itself ational and good, and well suited to the needs and pportunities of the time.

We need not follow the series of changes which have nded in our present system; they corresponded to the eriod of evolution of modern science and to its increasing influence in medicine. Knowledge which could ot be acquired in the country surgeon's practice had o be sought in the medical schools, and gradually he apprenticeship died out, never to be revived in its riginal form, and the loss of its educational functions was ever completely made good. Whilst this blow had been truck at clinical education a powerful stimulus was given to he study of anatomy which contributed to the great levelopment of surgery at the end of the nineteenth century. The second third of the century was witnessing already a urther change: a scientific training had been thought of, nd since then the constant struggle has been to keep nedical education up to scientific date. On the continent he State-aided universities took the lead in practical aboratory training and outstripped us fully for one generaion; but we are now drawing level with them Early ractical training is once more the order of the day, but it is o longer devoted to clinical medicine but to pure science; nd from this change there is no going back. More and nore time had to be claimed for science until at last, before he introduction of the five years' curriculum, clinical medicine and surgery were reduced to starvation allowance. Whilst, then, originally the tendency was simply clinical, now pure science precedes for two years the purely clinical stage. In the future, perhaps, the study of science may go hand in hand with clinical study to the end of the curriculum. More recently other minor revolutions have taken place, such as the sacrifice of the ornament of classical education and of the proud ambition to know *de omni re.* Some useful collateral subjects, such as botany, zoology, and mineralogy, have practically been given up, though they may now be missed by the few in connexion with exploration and by all in connexion with the coming subject of medical climatology.

### THE CURRICULUM.

The present curriculum has been so difficult to arrange and is so perfect in its adjustment that none would dream of touching it so long as it continues to serve. Its provisions, if they entail great labour—sometimes almost to the verge of endurance—at any rate spare the student all loss of time and all perplexity during the hardest struggle, that of the first two years. At the same time it is obvious that there can be no finality in curricula, for whilst the march of science is continuous and gradual, their changes are artificial, spasmodic, and radical, and therefore subject to amendment. Even our present system is not sufficiently elastic to lend itself to future requirements. Modern medical education presents the following features in contrast with previous conditions: (1) the large share awarded to pure science; (2) the increased importance given to practical work in science, (3) the strict exclusion of any clinical subject from the science curriculum; and (4) the practical exclusion of any systematic study of anatomy and of physiology from the later years. There has been an artificial separation between the scientific and the clinical training; and the question is whether this teaching in compartments has been a success in the direction of clinical fitness. It is too often obvious that those fruits of the science course which are essential to clinical efficiency—physiological chemistry and visceral anatomy—are not available when they are wanted, that the burden to the memory has been too great, and that some relief is needed. Both compartments are overcharged—chiefly, perhaps, that of science, owing to its strict limitation to two years. Meanwhile, the claims of clinical medicine are paramount; but whilst this subject has become enormously expanded the time allotted to its study has been relatively reduced. The consequences were to be foreseen. They are the clinical laboratory with its cry for still more science, and the post-graduate system with its cry for still more clinics.

All the remedies proposed are too radical for immediate application. To reduce further the number of subjects is a policy not much in keeping with modern developments, for the more science we get so much the better, so long as it is useful science, whilst clinical training can never be awarded too much time. Again, we cannot contemplate any further extension of the period of study. Five years of professional training is the fourteenth part of a man's life and should be enough for any profession. Therefore, without any prolongation we shall have to provide time for the study of the *new* sciences to come and for their ever-increasing clinical applications. Three indications lie before us: (1) to unload the science curriculum; (2) to make an earlier clinical beginning by introducing a new subject, that of "clinical technique," and a new laboratory—the "clinical laboratory"—as a link between clinical medicine and anatomy and physiology; and (3) to extend higher science training into the later years of the curriculum.

### UNLOADING THE SCIENCE CURRICULUM.

The best means of unloading the curriculum are probably the following: (1) redistribution in the order of the subjects and in the time arrangements; (2) condensation in the teaching; and (3) specialisation in the selection of the subjects; and all three may need to be combined. The most effectual relief would be to transplant some of the subjects either into the period of schooling or into the clinical period.

*Redistribution in the order of the subjects and in the time arrangements.*—Much would be gained if suitable subjects, such as chemistry and biology, could be disposed of prior to the matriculation. The selection of medicine as a career would have to be made at an earlier age with a view to a special course of study during the later years of school education. We have before us the example of the training for the Royal navy Our medical training, also, is sufficiently different from all others to deserve an unusually early beginning, whilst any special preparation received on a mistaken vocation would not in this instance warp the habits or the mind, but would prove to be an admirable foundation for any other career, including even the clerical. Moreover, school specialisation would soon reveal natural aptitudes or their absence, with ample time for any change of line. This "school-science" might prove to be the hitherto unprovided equivalent for a classical education, because of greater value than a course in foreign languages. Any foreign literature likely to be of use to the majority of practitioners is now translated and soon available, and the conversational need practically does not arise in this sea-girt land. Foreign languages are a luxury, but their acquisition should be economical and properly belongs to the dame-school period, or later to the business of a short educational stay abroad. If some such provision could be made for an early science training, largely practical, prior to the matriculation, 18 months might perhaps be sufficient time for a modified and condensed course of anatomy and physiology. And this brings us to the second of the remedies suggested.

*Condensation in the teaching.*—In all the preliminary subjects some of the more theoretical details might be eliminated without serious loss to the general educational purpose. In the case of anatomy and physiology specialisation would be a more correct term, as the modification to which I refer would consist in adapting the teaching more closely to the practical needs of medicine and surgery and in condensing the more theoretical portions. The relief thus obtained might mitigate the prevailing dread lest any clinical impressions should disturb the fine balance of examination fitness in the preliminary subjects. It is, indeed, much to be desired, though hardly possible, that the student might approach the study of his physiology with undergraduate strength and memory but somewhat in the spirit of a post-graduate.

*Specialisation in the selection of the subjects.*—This is also applicable to the later years of study, when increasingly clinical uses are now found for our scientific training; and this rather suggests a shifting of some parts of the science chief pain, discomfort, or disability? Too much value cannot be attached to the diagnostic importance of pain as a safe indication of something wrong, and often of the nature of the disturbance. Your further investigation will be guided by your acquaintance with the disease. Clerking thus becomes a direct incentive to reading, which at once widens your inquiry. You become an observer and you begin to read disease at sight. For this daily visits and examinations are necessary in your acute and rapidly varying cases; but in all cases continuous observations are wanted. In each case there is some clinical incident which works through vicissitudes to a final *dénouement*. *Respice finem.* You must be there at the finish—the point in the clinical record lies in the conclusion.

There are three kinds of clinical notes, each suited to a different purpose. The academical or full report notes are essentially educational. For the purposes of strict clinical study a much shorter style is required; these are the short, practical, clinical notes. Lastly, there is the memorandum note, note-taking reduced to its simplest expression—*multum in parvo.* To report a case fully and in academical style is a lengthy and laborious task, yet indispensable as a training to accuracy and thoroughness. All the facts of the case, including the negative facts, are stated almost as fully as in a legal document. I conceive no more profitable introduction to ward work than a progressive course of clinical histories, one to be taken every day till the necessary facility is acquired. This is one of the most important exercises in clinical technique.

*Advanced clinical notes.*—These are not, like the full reports, almost photographic in their completeness and lack of perspective. There is in them less writing and more point. And yet they tell us more than the other reports, but largely by implication—much of the inquiry being expressed merely in the conclusion arrived at, in direct statements duly tested, and in hard facts. This kind of note can only be expected from those highly trained in clinical and scientific observation who need no longer record each step in the examination, and it is the style of note-taking that can best serve your laborious clinical studies.

*The condensed system of note-taking.*—In carrying this out the official reporting style in two degrees answers best. Rough notes are unwieldy and often unreadable. Abstracted from the pocket-book a condensed note saves much useless writing and big facts are not buried. In short, learn to be searching in the inquiry but selective in the record—observers of many facts but writers of few. For a coming generation shorthand may be one of the conditions of existence. In connexion with clinical medicine it has already been sufficiently advocated. Its inclusion among the subjects for matriculation would be vastly more important than that of any foreign language. Many systems and forms have been suggested for note-taking; intended to save labour they sometimes fail to do so, and on the whole it is better perhaps to have *carte blanche* and to carry out consistently one's own system. The temperature chart, which carries much of the essential information in figures, often serves as a single sheet record in acute cases of short duration when not so complicated as to call for more space. Short methods such as these enable clerks to keep simultaneous reports of several cases, and six months of this kind of work would provide them with experience and records of a good assortment of diseases. Yet further opportunities are given by a denser form of notes, perhaps the only one possible in the hurry of practice—viz., the retrospective or *résumé* note.

*Résumé notes.*—These are not much more than headings descriptive of the striking peculiarities of cases. This form of note will teach you concentration and grasp of a case, and later in practice rapidity of perception and of action irrespective of minute disquisitions which obscure the real issue and often ruin diagnosis. Since one or two copies can be quickly obtained by the perforation method a mutual arrangement would enable each of you to obtain memorandum charts of those cases which have been allotted to your fellow clerks, but which may have been seen and examined by you day by day. This part of your valuable experience would in this way be added to your permanent records and your clerkship would provide you with a considerable series of personally observed cases with their illustrative curves.

### THE STUDENT AND HIS WORK.

*Self-help.*—I should like to be able to offer to you as students a few words of practical advice and encouragement. Pure art, we are all aware, needs special gifts. *Nascitur non fit* is true, not only of the poet, but also true of the physician, who has to be all things to all men and whose knowledge of disease is in vain if he lacks the knowledge of man. Nevertheless, there is probably no profession in which persevering labour so safely brings its reward. Self-denial and hard work are infinitely more essential than great talents. Let us who may be relatively less gifted, then, take comfort in the thought that our privilege is to work, and, working, learn to the end of our days. Success in every line of life belongs to a single-minded attention to the business in hand and to those great economisers of labour, punctuality and a daily settling up of the work of each day.

*Mutual help.*—Much help also comes from combination. Collaboration in study, as, later, consultations over difficult cases, affords a multiplication not only of forces but of their directions. Individual divergences of thought are brought to bear, and even our relative defects may lead to profit if they should elicit greater work from our differently gifted associates. I can picture to myself the draughtsman among you helping the musician with his diagrams and in return receiving his assistance over the mysteries of percussion.

*Self-education.*—The line for special attention is always that of the least aptitude. The easier performances will profit by the effort. But the lame function, if it be neglected, becomes relatively weaker from disuse. Let me name as an instance the most essential of collateral studies—that of drawing. To be unable to draw is to lack the use of a sense which is of primary importance to the medical student. The time, I hope, may soon come when drawing will be regarded as one of the most important subjects in the entrance examination. But it is after all only one of the practical subjects in which the pupil has to practise self-education.

*Technical self-education and the training of the senses.*—Both sets of faculties, the physical and the mental, need to be trained. The examining board looks after your intellects, it is for you to look after your senses. The average student devotes hardly sufficient time to improving his mechanical experience. It is said of Paganini that much of his technique was evolved by his individual efforts; and other great artists have achieved perfection by solitary study. But the study of art is facilitated when, as at the Royal Academy of Music, technique has a local home and habitation, with its teachers and its pupils, its demonstration and its practice, and, above all, the necessary technical appliances, luxuries which the clinical student of the future may likewise enjoy. Meanwhile you are dependent upon your individual industry. Proficiency in auscultation and percussion, as in instrumental music, needs long practice. This is a reason for making an early attempt in this direction. The use of the ophthalmoscope is a physiological recreation which taken early would also be of great advantage, and the same is true of the sphygmograph and of other physiological instruments essential to clinical investigations.

*Taste.*—The exercise of taste is generally restricted to the appreciation of the medicine we order, a practice much to be recommended to prescribers.

*Touch.*—Touch, one of the most helpful of our senses for clinical work, is perpetually under training in early life, but improves by systematic education, as in the cultivation of some of the arts, and by the endeavour to train both hands.

*Hearing.*—The ear has wide scope in the study of auscultation and percussion. Immediate auscultation has its use in some cases. Great importance attaches to the student being taught the use of the simple rigid stethoscope before he is allowed to touch the binaural. This latter is less reliable by reason of its complexity and of its mode of conduction.

*Sight.*—Sight hardly needs specialised cultivation. But it is possible to see and yet fail to perceive. Accuracy in visual judgments and examinations is a matter for constant practice; and I may mention the practical rule essential to diagnosis, that of not standing in your own light but of placing the patient in it.

*Smell.*—Our sense of smell, trained by use rather than by system, is far inferior in critical power to that of the dog, who assiduously practises this sense, although in a different sphere. His speciality is the animal kingdom. Most of us are familiar with the smell of *genus homo* and of most animal tribes; and, as Shakespeare has it, we may even distinguish a nationality:

> "His word was still,—Fie, foh, and fum,
> I smell the blood of a British man."
> —*King Lear*, Act III., sc. iv.

clinical information facilitated by reference to the diagrams and apparatus belonging to the laboratory

With the dissecting room the clinical laboratory would be in close sympathy Medical and surgical anatomy, prominent requirements of the later examinations, would be represented by casts or diagrams, and on doubtful points of visceral anatomy frequent reference would be made to the post-mortem room The existence of a clinical laboratory of this sort would go far to animate with a clinical purpose much of the work of the first two years, and the helplessness of clinical beginnings, imperfectly met by the course of practical medicine, might be more quickly remedied

### The Clinical Curriculum and the Clinical Clerkship

In the clinical curriculum no sweeping change has been made The clerkships which existed 100 years ago have been continued, and beyond the requirement of a minimum period of six months no definite regulations have been imposed from above Meanwhile the spirit of clinical medicine, its needs, and its weapons have altered *toto cælo* But the extent to which the individual student's time has been adapted to the altered requirement has varied much with local traditions and immediate surroundings Some of our schools have wisely relegated the clerkship to the fourth year and enforced a preliminary technical training during the third year At others, less happily, the clerk's attendance sheet may be signed up quite irrespective of his clinical standing Walking the wards whilst always profitable, is, clinically speaking, a passive function Active practical work, of which there is always plenty to be done in collaboration with those in office, is the work which will secure your success at examinations and in practice It should be begun without a day's delay and carried on to the end of your hospital days, but it needs to be systematic

The highest form of practical work is the advanced clinical clerkship—a fact not always recognised by the pupil until he returns to clinical study as a post-graduate The clerkship is the golden time of clinical training which makes the physician Doubtless it furnishes the beginner with material to learn how to use a stethoscope, how to percuss, how to test urine, and how to write out a clinical report But the clinician is not to be made at this rate, unless the clerkship should be continued for double the period Do not throw away your valuable time of clerking upon an elementary mechanical training which should have been acquired previously in the wards and in the laboratory Some confusion seems still to be made between the purposes served by the ancient clerkship and by the modern clerkship respectively

*The ancient clerkship* —The ancient clerkship was analogous to the apprenticeship which it replaced, a school for professional ways and phraseology, for simple observations and theories rather than chemical and instrumental investigations For this no time could be too early and the student was made to plunge *in medias res* without any further preparation

*The modern clerkship* —The modern clerkship is totally different I see in it an official appointment of dignity and importance with valuable prerogatives which come next to those of a junior officer The clerkship is for most students the only direct apprenticeship to actual charge of patients except the brief period of obstetric experience which falls to the lot of all This ought to be if it is not in every case, the practical value of the appointment to the clerk The clerk's official privilege is that of daily examinations and inquiry, which alone teach him to judge at a glance of the patient's progress His professional experience grows at a rapid rate, in proportion as he is capable of independent action Much of all this is lost to the unequipped tyro He ripens for his office just when it is time to retire

*The junior and the senior clerkships* —The essential difference between the elementary and the advanced or finishing period of ward work might be identified with two grades of office, a junior clerkship under the house physician or the medical tutor, and a senior clerkship under the physician The first of these could hardly be held too early, the latter could hardly be taken too late The whole interval between them would then become for the fully equipped student one of clinical profit whether from book work, from lectures, or from walking the wards Much of the junior clerk's time would be spent in the out patient room and in the wards, where he would take systematic daily notes of easy cases offering good opportunities for the physical examination of normal organs and for practising instrumental methods such as the sphygmograph the cardiograph, and others Much time also would be spent in the laboratory, in microscopical examinations, and in chemical testing Lastly, as a finishing touch to his professional training would come the senior clerkship with its wealth of opportunities limited only by the relative fitness of the worker In terms of art these periods correspond to two studies—that of technique and that of production Your work of art is to be the investigation of disease and its treatment, and your studio is the ward during the period of clinical clerkship But success in the performance cannot be attained without a preliminary technical preparation, although, much to your detriment, the regulations admit of your making the attempt

*Examination in clinical technique* —The educational authorities have chiefly laboured at introducing and elaborating the modern scientific curriculum; clinical education, which had always existed, has been left to take care of itself, but it needs to be more thoroughly organised The all important subject of clinical technique has never received any separate official recognition either in schedule or in examination Not a lover of examinations, I regard a technical clinical examination to be held some time in the third year as a necessary and a merciful evil, since, unlike others it would not merely test the ephemeral possession of a limited number of established facts but the lasting command of an unlimited supply of personal observations Its scope would be sufficiently large without implying the slightest addition to that which is already taught, since it would embrace the use of physiological instruments applicable to clinical study, and of purely clinical instruments the elements of physiological chemistry, visceral anatomy, including surface markings, the technicalities of medical terminology, and, last but not least, the systematic note taking to which I shall presently refer The best mode of qualifying for this practical examination would be practical work in a clinical laboratory such as I shall proceed to describe

Gentlemen beginning your third year, the practical point which arises out of this survey is that you should anticipate by your combined efforts some of the advantages which may not be yet offered to you Practise your clinical technique among yourselves by twos and by threes, and for this the best place of meeting is not the ward, but wherever you find the necessary freedom and quiet. Discuss your clinical subjects just as you have met and discussed your anatomy For the present your clinical laboratory work must be peripatetic, and doubtless you will be welcome to use in succession for your private study the various science laboratories of your school

Gentlemen in your second year, help each other with the acquisition of knowledge and test each other as to its clearness and retention Set still greater value upon your practical work in connexion with its clinical purpose Bear in mind the professional uses of trained experimentation, of dexterity in manipulation, and of most of your physiological tests Allow nothing of your knowledge of the functions and of the secretions to slip Then, as to the early familiarity with auscultation and percussion, failing a *corpus vile* to practise upon in a clinical laboratory you have the willing offices of each other to investigate the practical physiology of respiration and of the heart's action with the stethoscope, of the pulse with the sphygmograph, and of the visceral anatomy by rough percussion , and you will always find a willing senior pupil to help you with your first attempts or with any needful explanation In my belief these useful pastimes are not likely to detract from your devotion to your set subjects or to endanger your examinations, but, on the contrary, would add meaning and zest to your studies.

### Clinical Notes and their Varieties.

In note taking there are two departments—the recording of your own observations which are systematic, and that of the patient's statements which are often a mass of confusion To meet this difficulty let your inquiry be so far as possible quantitative—e g , as to dates frequencies, amounts, &c Figures are most convenient if trustworthy, and they show up at once any contradictory statements. The patient as he appears before you often carries his diagnosis written large in his aspect , but if this should not suffice as a guide two simple questions help to identify the condition as acute or chronic (1) How long has the patient been in bed or incapacitated ? , and (2) In what part of the body is the

# CASE OF RECENT TRAUMATIC PERINEAL DISLOCATION OF THE RIGHT HIP WITH A DISSECTION OF THE JOINT.

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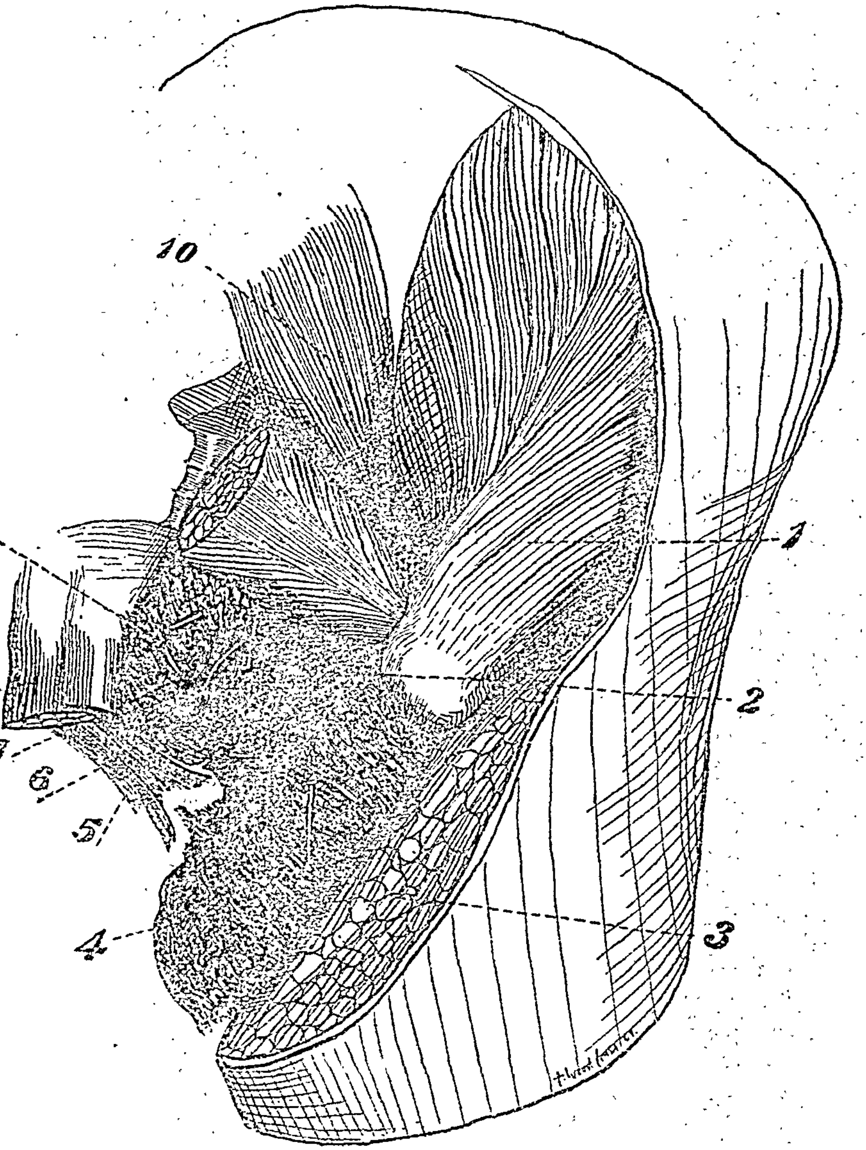
DURING May, 1901, two cases of dislocation of the right hip were admitted to the Poplar Hospital. The first was under the care of my colleague, Mr. A. B. Roxburgh. Both were cases of perineal dislocation of the right hip-joint, both were in young, powerful men, and both presented practically the same physical signs and symptoms. In the first case (Mr. Roxburgh's) reduction of the dislocation was easy and recovery was uneventful; in my case, unfortunately, death suddenly took place a few minutes after an easy reduction under anæsthesia. The following are the notes of my case. The drawings, made by Mr. Wood Jones of the London Hospital, show the condition of the joint 24 hours after death.

FIG. 1.



View of the dissection from behind. 1, Gluteus medius. 2, Obturator externus (torn). 3, Gluteus maximus. 4, Quadratus femoris (torn). 5, Obturator externus (torn). 6, Head of femur. 7, Edge of acetabulum. 8, Origin of hamstrings. 9, Quadratus femoris (torn). 10, Pyriformis.

A man, aged 23 years, was working in the hold of a ship in the docks. He was engaged in hoisting up bales of wool. For some reason the claws which grasp each side of the bale became unhitched. One of them struck the deceased on the left side of the face and simultaneously the bale of wool fell on the right thigh. It was impossible to find out how the deceased was actually standing at the time of the accident, but apparently the bale struck the right femur on its antero-external aspect, somewhere about the middle of the shaft. On admission to hospital there were an abrasion on the left cheek and two small wounds on the left side of the forehead. The right leg was flexed, abducted, and slightly rotated outwards. The amount of flexion was roughly an angle of about 30° with the horizontal and the amount of abduction was about 40° with the sagittal plane. The leg was kept firmly fixed in this position and any attempts at movement, either active or passive, caused much pain. There was lengthening to the extent of one inch on the affected side by spino-malleolar measurement. The great trochanter was buried and there were distinct flattening and broadening of the right buttock. A swelling which proved to be the head of the femur could be made out in the perineum. The adductors were tense and prominent, as was also the lower part of the gluteal mass. The patient was a man of very powerful build, the glutei and all the thigh muscles being exceptionally well developed. A diagnosis of perineal dislocation of the hip was made and reduction was proceeded with. Chloroform was administered. The right leg

But the dog can tell us not only the species but the individual. The almost inconceivable efficiency to which this gift is educated is the result of constant study. The canine mind and memory must be largely aromatic or made up of fragrancies We humans are on a much lower platform, but such as they are our powers should be utilised, for diagnosis sometimes depends upon their exercise. To say nothing of epiphytic and epizoic odours, such as those of favus, phtheiriasis, &c., typhus and small-pox and some other diseases can be identified by the smell of the patient. The smells characteristic of phthisis, rheumatic fever, &c., are probably a mixed product, due less to the micro-organisms than to the excretions. Bad smells are becoming scarce, particularly in hospitals, but greater importance attaches to the examination of (1) the secretions and of (2) the patients, and this duty must be faced where patients' lives are at stake.

*The secretions.*—An inspection of the fæces is not neglected by physicians, but other secretions are more accessible to students. The urine, which may smell of diabetes, of alkaline or acid decomposition and other fermentations and of various ingesta, is usually reserved for our examination. The smell of the vomit, a guide to the detection of volatile poisons and ingesta, such as alcohol, may also be the means of identifying the seat of disease Life and death have often turned upon the question whether the smell of the vomit was stercoraceous. The examination of the sputum is also of daily and practical importance. Here, again, the difficulty is to procure it in its original septic state.

*The patient.*—As regards the patient, the most essential of our olfactory examinations of patients concern the nose, the mouth, and the ears. Most vital conclusions are sometimes based upon the septic smell detected in the ears of infants and young children; and the neglect of this examination may cost the child's life. A heavy, foul breath seldom escapes recognition, but we should in every case localise its origin by examining the patient's breath alternately whilst the mouth or the nose are closed. Often the smell is from the nose, as in ozæna and dry fœtid catarrh; and unless recognised this may escape its proper treatment. The mouth is the most fertile source of distinctive smells, such as the respiratory effluvia in bronchiectasis or gangrene and other conditions, but most of the bad odours are of local production Foremost as frequent causes of disease are dental caries and degeneration, as well as the fœtid conditions of the gum found in hæmorrhagic stomatitis, in pyorrhœa, and in gangrene. Follicular fœtid tonsillitis and various conditions of the retro-nasal fossæ have also to be accounted for. Putting all this aside, the breath is of vital diagnostic importance in diabetes and in uræmia, and patients with chronic disease should always be examined in that direction.

In conclusion, the subject of this address has hardly received full justice at my hands or much literary ornament I came to you less prepared for an academical function than to talk as a student to students, to suggest some of those special hints which veterans often have to offer, and to discuss with you with the advantage of some slight experience your plan of campaign. May I have been *so fortunate as to adapt my remarks to my audience and to* their practical aims and to have in some measure fulfilled my intention to direct their whole-hearted attention to the every-day trivialities of clinical study and their thoughts sometimes also to the higher ideals of the art

# A FURTHER NOTE CONCERNING THE FRONTAL OR SUPRA-ORBITAL REFLEX.

BY WALKER OVEREND, M.A., M.D. OXON.,

LATE SENIOR PHYSICIAN TO THE TOTTENHAM HOSPITAL.

REFERENCE was made in an annotation in THE LANCET last year[1] to the facial or supra-orbital reflex and a summary was given of the recent researches of two observers—McCarthy and Hudsvernig. I cannot refer to the *Neurologisches Centralblatt* for a full account of their work, but I may state that I first described this reflex in 1896[2] under the name of "frontal" and demonstrated it to medical friends as far back as in 1889. In this communication I indicated the reflexogenous area and came to the conclusion that it was a true skin reflex inasmuch as mere stroking of the skin is sufficient to evoke a response when the latter is in a condition of hyperæsthesia McCarthy's statement that division of the supra-orbital nerve abolishes the signal corroborates this view. Further observation, however, has taught me that it is not only the supra-orbital but also the cutaneous and periosteal terminal twigs of the supra-trochlear, infra-trochlear, nasal, and lacrymal, in fact, *all* the end branches of the ophthalmic nerve, which are concerned. In other words, tapping of the nose (nasal) with the eyelids closed, of the inner surface of the nose and the eyebrow near the inner canthus (supra- and infra-trochlear), and of the external angular process of the frontal bone (lacrymal) is able to produce the movement. The terms "supra-orbital" and "frontal" as applied to the reflex are, therefore, inappropriate. Moreover, the term "facial" is still less accurate, since there are *several* reflexes (as the corneal and the lacrymal) which occur in connexion with the facial nerve and the face. There is one reflex in this region which has apparently escaped description—namely, an *aural* reflex which may be induced occasionally by stroking gently and quickly downwards the skin (supplied by the auriculo-temporal nerve) in front of the ear in young infants. After a little patience and perseverance the ear may be suddenly elevated—a result due to contraction of the attollens aurem which is supplied by the small occipital nerve It seems to be a true skin reflex and identical with that which is more easily obtained in some of the lower mammalia. This reflex, moreover, obviously belongs to the area of the face.[3] The term "facial" is consequently unsuitable and I propose that of "ophthalmic" as being more in accordance with its distribution.

In my former paper I expressed the conviction that the sign was not due to the communication of physical vibrations, since the area was most definite. Hudsvernig, however, proposes the cumbersome view that "it is an overflow of the muscular irritability to mechanical irritation into neighbouring muscles innervated by the same nerve," and is led to the theory because he has found that the contraction may be obtained on both sides after the right Gasserian ganglion has been removed I have no opportunity of testing his statement, but before accepting his explanation the exact conditions and relations under which the signal is provoked must be carefully and thoroughly investigated. Moreover, granting the fact, another explanation is feasible. If the cornea near the external canthus of the *right* eye be gently touched or the eye-lashes pulled a twitch in a certain part of the lower *left* eyelid may be observed to accompany the movement in the right eye Furthermore, a contraction of the same strand of fibres in the left eyelid may be subsequently and immediately provoked by tapping the right external angular process It is difficult to conceive how the overflow could leap the bridge of the nose and make itself felt just in the same muscular fibres on the opposite side As ordinarily demonstrated by a tap of the finger with the eyelids gently closed, I believe it is a periosteal reflex induced from the pericranium and periosteum supplied by the terminal twigs of the ophthalmic nerve, with a reflex centre corresponding to that of the corneal reflex in the medulla. I drew attention to the fact that in chorea and supra-orbital neuralgia the movement may be produced by tapping the head as far back as the parietal eminence A similar distribution is often seen in hysteria. The reflex is absent in chloroform narcosis and in facial paralysis I have found it difficult to obtain in paralysis agitans In a patient with hemiplegia and hemianæsthesia it was absent on the paralysed side for several days after the attack, but when the skin of the normal half of the forehead was tapped *both* orbiculares could easily be made to respond.

My object in writing this note is to call attention to the more exact designation "ophthalmic" and to emphasise the view that the signal is a true reflex and obtainable from both the skin and the periosteum supplied by that nerve.

Clacton on Sea

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[1] THE LANCET, Nov 30th, 1901, p 1513.

[2] Preliminary Note on a New Cranial Reflex, THE LANCET, March 7th, 1896, p 619.

[3] The aural reflex is most easily obtained in adults by tickling with a blunt pointed instrument the skin of the external auditory meatus just *opposite* the tragus The *opposite* ear, as a rule, is also elevated.

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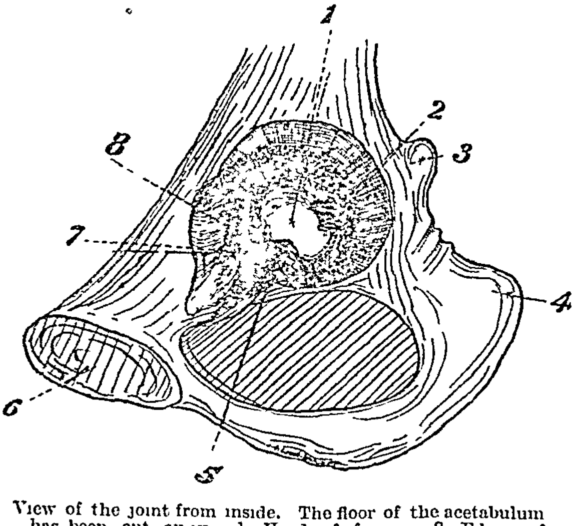
BRISTOL MEDICAL CHARITIES.—During 1901 the employés of Messrs. J. S. Fry and Sons collected £565 for the various Bristol medical charities.

femoris was torn right across as if cut with a knife, except for a few fibres at its lower edge (4 in Fig. 1). On separating the torn fibres of these two muscles a view of the back of the capsule was obtained. The back of the head and neck of the femur and the posterior surface of the acetabulum were exposed through a window torn in the capsule at the bottom of the cavity. The torn edge of the capsule was seen at the upper and outer part, extending from the acetabular margin to the upper end of the digital fossa. Beneath this free margin some fibres of the external obturator muscle had been caught, probably during the reduction of the dislocation; the cotyloid ligament and the edge of the acetabulum were apparently intact. The retinacula of the capsule were seen on the posterior surface of the neck; three or four of these had been stripped off the bone. 2. Dissection from in front (Fig. 2) The sartorius muscle was entire, as was also the rectus femoris; these two muscles were next cut through and turned up. Much extravasation of blood was apparent between the insertion of the rectus, vastus externus, hamstrings, and outer surface of the iliacus muscle. The upper fibres of the vastus externus were seen to be torn through at their attachment to the front of the base of the great trochanter as low down as the level of a line drawn transversely through the small trochanter. The adductor longus was found to be intact. Between the psoas and adductor brevis there was extravasation of blood, probably from small branches of the internal circumflex artery and vein. The fibres of the psoas, pectineus, and adductor brevis muscles were untorn; some bruising was found on the under surface of the pectineus. The psoas and iliacus were reflected upwards to display the ilio-femoral ligament; this was quite entire. The adductor brevis was next divided so as to expose the obturator externus from the front (6 in Fig. 2). Its upper part was found to be intact and the two divisions of the obturator nerve had escaped injury. The lower and inner part of the muscle over the region of the cotyloid notch was torn through and a hole with ragged edges of about the size of a halfpenny became apparent. This was evidently caused by the escape of the head of the femur during dislocation. As before mentioned, the capsule was torn completely through and stripped from the acetabular edge at the lower and inner part, the bare surface extending over the posterior part of the joint. The transverse ligament could be seen intact on the outer aspect, as also could the cotyloid ligament. 3. Dissection from the pelvic side (Fig. 3). This was made to show the ligamentum teres *in situ*. A piece of bone was trephined from the wall of the pelvis corresponding to the centre of the acetabular cup. The pin of the trephine was placed above and to the outer side of the ischial spine, so that the cotyloid notch and ligamentum teres might be displayed. The latter structure was found torn through and hanging freely in the joint A portion of the deep surface of the cotyloid ligament was also found turned into the joint. On turning this back and manipulating the femur the depression on the head was easily seen with some torn fibres of the ligamentum teres attached. The acetabulum itself was apparently uninjured.

FIG. 3.



View of the joint from inside. The floor of the acetabulum has been cut away. 1, Head of femur. 2, Fibres of obturator externus. 3, Spine of ischium. 4, Tuber ischii. 5, Ligamentum teres (torn). 6, Symphysis pubis. 7, Depression for ligamentum teres. 8, Cotyloid ligament.

*Remarks* —There can be little doubt that this case was one of those rarer forms of dislocation of the hip known as "perineal"—i.e., an exaggerated form of the infrapubic variety of forward dislocations. The head of the femur in these cases passes primarily downwards over the cotyloid notch, then downwards, inwards, and backwards on to the ascending ramus of the ischium. The almost unique opportunity afforded for examining the injured structures in this dislocation is my excuse for publishing the case. Only eight cases were found in the literature by Riedinger (quoted in Tillmanns' "Principles of Surgery"). I have been unable to find any published case of dissection of a recent dislocation of this variety, and there is no specimen of its kind in any of the London museums. Several cases of recent dorsal dislocation of the hip have been dissected and recorded from time to time, associated injuries having, as a rule, caused the death of the patient. It is instructive to note the exact condition and position of the damaged structures about the joint and to realise the amount of repair which must take place during the subsequent period of recovery.

The correctness of the diagnosis of perineal dislocation was quite borne out by the subsequent dissection of the joint. A radiograph clearly showed that the head of the femur lay in the infrapubic position. The extreme flexion and abduction and the presence of the head in the perineum all supported this diagnosis. The lengthening—viz., one inch—found by measurement is of doubtful value, as the difficulty of exactly measuring the limb in this position is apparent. As to whether true lengthening or shortening takes place in infrapubic dislocations authorities are found to differ. One would rather have expected to find some shortening in the perineal variety.

The dissections of any recent forms of forward dislocation of the hip have been remarkably few. In the *Medical Times and Gazette*, 1853, Mr. Curling[1] reported a case, as also did Professor T. Annandale in the *British Medical Journal* in 1870.[2] Both of these were thyroid dislocations. It is interesting to compare the injuries found in these two cases with mine.

Mr. Curling's case: "Blood was found extravasated between the muscles on the outer and posterior aspects of the joint and in the cellular tissue about the sheath of the sciatic nerve. The substance of the upper part of the adductor magnus and lower border of the obturator externus were much ecchymosed. There was a large rent in the front part of the capsular ligament, extending from the ilio-pectineal eminence to the upper border of the obturator externus. The ligamentum teres was torn."

Professor Annandale's case: "The obturator internus[3] was torn and portions of the muscle forced into the acetabulum, the capsular ligament was extensively torn on its inner and lower aspects, the anterior and greater part of the posterior portion of the capsule was intact. The Y ligament was also intact"

On comparing my dissection with these two cases one is immediately struck by the difference in the amount of destruction to the structures on the posterior aspect of the joint. Most text-books will be found to agree in their descriptions of thyroid and obturator dislocations with these two recorded cases. All are agreed that the capsule is torn at its lower and inner part and that the ligamentum teres is torn; also, that in all so-called "regular" dislocations the Y ligament of Bigelow remains intact. The obturator externus and in some cases the adductor muscles, are torn to a varying extent. Professor M. Gunn (quoted in Hamilton's "Text book on Fractures and Dislocations") states that in thyroid dislocations the superior and posterior parts of the capsule are intact and relaxed, whilst the anterior and inner parts are usually torn. Mr. Timothy Holmes,[4] in a clinical lecture in 1877, states that the pectineus adductor longus and brevis may be torn and the obturator nerve may be stretched; he however, admitted that the paucity of dissections necessarily weakened these statements.

The mechanism of obturator infrapubic and perineal dislocations is now recognised to be as follows. Usually was then well flexed on the trunk, adducted, and rotated in, very little force being used The head of the femur immediately slipped into the position of a dorsal dislocation The leg was next abducted rotated out, and extended Reduction followed without any difficulty A long Liston splint was being fixed on the limb when the patient suddenly stopped breathing and although every available means of resuscitation were tried they proved ineffectual

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[1] Medical Times and Gazette, 1853, N.S., vol. vii., p. 422.

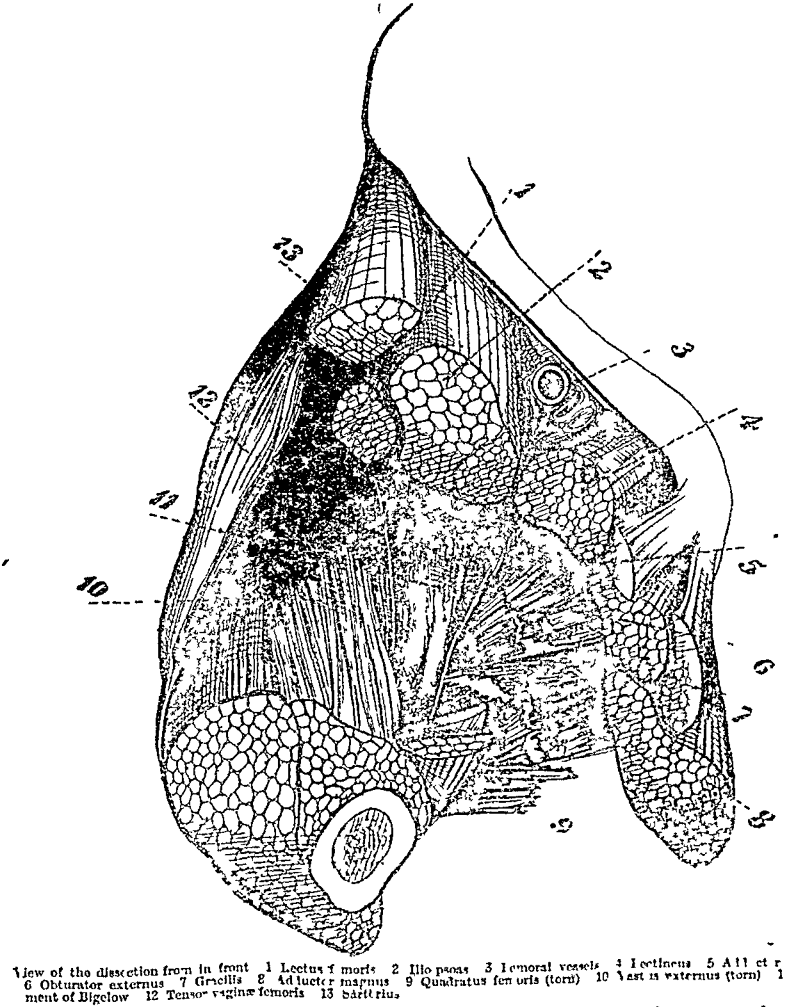
[2] Brit. Med. Jour., Case of Thyroid Dislocation of the Hip Dissection.

[3] ? Externus.

[4] Medical Times and Gazette, 1877, Lecture on Obturator Dislocation.

At the post mortem examination nothing was found to account for death, all the organs were healthy and no signs of embolism were found anywhere On superficial inspection of the right hip there was nothing to indicate that a recent dislocation had occurred—no bruising or undue swelling about the joint The following were the conditions seen on dissecting the joint. 1 From behind (see Fig 1) On reflecting the gluteus maximus which was intact and turning back the fascia on its deep surface a large extravasation of blood was found This extended from one and a half inches above the upper border of the ischial tuberosity to just below the lower border of the gluteus maximus The walls of the bursa situated over the great trochanter were infiltrated with blood The great sciatic nerve was divided high up, the external popliteal passing through the fibres of the pyriformis The nerves lay on the posterior wall of a cavity containing blood and bruised and torn tissue The nerves themselves were not torn although deeply stained with blood The sciatic artery and its main branches were intact but the veins and those accompanying the arteries forming the crucial and digital anastomoses were extensively torn The gluteus medius and pyriformis were intact The gemellus superior and obturator internus showed no injury, but the gemellus inferior, though untorn was stretched and bruised, especially on its anterior surface The obturator externus and quadratus femoris muscles were un- damaged The tendon of the obturator externus was split the lower fibres remaining intact but the upper were torn in two and the fleshy fibres partly turned within the acetabulum and caught between the edge of the torn capsule and the neck of the femur The quadratus

FIG 2



View of the dissection from in front 1 Rectus femoris 2 Ilio psoas 3 Femoral vessels 4 Pectineus 5 Adductor longus 6 Obturator externus 7 Gracilis 8 Adductor magnus 9 Quadratus femoris (torn) 10 Vastus externus (torn) 11 Ligament of Bigelow 12 Tensor vaginæ femoris 13 Sartorius minutes. The temperature was normal or subnormal during the last two weeks of life.

*Necropsy.*—At the post-mortem examination rigor mortis was present. A little blood was exuding from the nose. The trachea contained frothy blood. A little blood-stained fluid was present in the left pleural cavity. The left lung weighed 16½ ounces; a large infarct filled up about one-eighth of the lower lobe and the blood-vessel immediately above this contained an ante-mortem clot. Many smaller infarcts were also present in this lobe. The right lung weighed nine ounces; there were many pleuritic adhesions and many small infarcts were present in the lower lobe. The pericardial cavity contained about an ounce of clear serum. The heart weighed 11 ounces and was very firm and globular; the right side was much hypertrophied. The pulmonary valves were much thickened and puckered. On two of the valves were large warty vegetations with apparent loss of substance. The right ventricle was dilated, its walls being much hypertrophied, and the musculi papillares were much enlarged. All the other valves were normal. The liver weighed 31 ounces and showed commencing "nutmeg" change, the spleen weighed six and a half ounces, and the kidney six ounces. No infarcts were found in any of these organs. The stomach contained nearly two pints of frothy blood. Blood was present in the duodenum. No ulceration of the mucous membrane was found.

*Remarks.*—The case presented all the classical signs of the lesion. The cardiac apex was displaced downwards and outwards. There were marked dilatation and hypertrophy of the right ventricle and epigastric pulsation. In addition, there was a diastolic bruit heard in the third and fourth left intercostal spaces, close so the sternum, a bruit which might easily have been ascribed to aortic regurgitation, but the typical water-hammer pulse of the latter lesion was absent. Further, the murmur was intensified on expiration and in the upright posture. Emboli were carried to the lungs and produced frequent attacks of hæmoptysis. Such hæmoptysis is said to be present in one-third of the cases, chiefly in those due to infective endocarditis. A capillary pulse has been described as occurring in the pulmonary circulation—i.e., a jerky vesicular murmur, waxing and waning with the cardiac contractions. It was not detected in this case.

It is a curious fact that although pulmonary stenosis is a common lesion it is rarely associated with incompetence, whereas the reverse holds good in aortic lesions. This can be accounted for by the low blood-pressure in the pulmonary circulation not creating a regurgitant stream sufficiently powerful to produce a murmur, even if the valves are incompetent.

The case presented many difficulties from a clinical point of view. The physical signs were those of pulmonary regurgitation, associated with a high complexion suggestive of some pulmonary stenosis, and a variable pyrexia which might be due to rheumatism, infective endocarditis, or pulmonary complications. On the other hand, there was no evidence of pulmonary stenosis, such as clubbing of the extremities and a systolic murmur or thrill in the pulmonary area. The rarity of pulmonary regurgitation made one think that a more probable diagnosis was that of aortic regurgitation, but the absence of a characteristic pulse, the absence of signs of hypertrophy and dilatation of the left ventricle, and the presence of signs of dilatation and hypertrophy of the right ventricle were opposed to such a view. In addition, it would have been necessary to assume the presence of some congenital lesion to account for the high colour. Again, the history of past rheumatic fever and the presence of pain in the knee suggested that the aortic lesion was the more probable, for rheumatic endocarditis rarely affects the pulmonary valves. In fact, in cases of pulmonary regurgitation a past history of rheumatism has only been recorded in about 10 per cent.

Another possible diagnosis was that of mitral stenosis associated with adherent pericardium. In favour of this was a note when the child was first admitted in May that the sounds "seemed a little sticky." The murmur was, however, too characteristic of regurgitation through the aortic or pulmonary valves, and the characters of the pulse were opposed to such a diagnosis.

Infective endocarditis was suggested as a cause on account of the pyrexia and the unusual physical signs. Moreover, it is stated in text-books that a diastolic pulmonary murmur is not heard except in the presence of infective endocarditis. On the other hand, it must be pointed out that the murmur was present for many months and while the patient was apparently in good health. The pyrexia was not serious or constant and there was no fever at all during the last fortnight. The purpuric spots were a little in favour of infective endocarditis, but they were few and soon disappeared. There were no albuminuria, no diarrhœa, and no splenic enlargement. The hæmorrhage presented difficulties; it was, no doubt, from the lungs, but it was always accompanied by vomiting and ascribed by the house physician who saw it to hæmatemesis. If it had come from the stomach it could be explained as the result of cardiac failure and secondary passive congestion of the stomach.

Was the case one of infective endocarditis? On the one hand, this is the usual cause of the condition. On the other hand, the diastolic bruit was present for at least five months before the fatal issue, and the infarcts in the lungs showed no signs of breaking down. Possibly the endocarditis was rheumatic in origin.

Upper Brook-street, W.

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# COMBINED FŒTAL AND MATERNAL DROPSY.

By H. VALDEMAR MUNSTER, M.D. Edin.

An example of the above rare condition having occurred in my private practice I have thought the case to be deserving of a place in medical records.

The patient, a married woman, 31 years of age, was due to be confined on Nov. 26th, 1901. I was called to her on Oct. 8th on account of her size being remarkable and her feet being very swollen. I found enormous anasarca of the lower limbs and the abdomen, and my first thought was that the case was one of hydramnios with secondary pressure symptoms, for the abdomen was really enormous, measuring 40 inches in circumference. Indeed, the patient had great difficulty in getting about at all, although she was a strong woman otherwise. On being questioned she said that she had not observed fœtal movements for some time. The urine was very scanty, was loaded with urates, and contained a quantity of albumin. I advised rest in bed. On the 9th I examined the patient more carefully, and found both lumbar regions resonant. The fœtal heart sounds were audible in the usual area and they numbered about 132 per minute. Diarrhœa had occurred several times in the night. My partner, Dr. T. E. Purdom, saw the patient with me on the 10th, and agreed with me in treatment—namely, in advising to await developments. He also thought that the case was one of hydramnios. I was sent for at 5.30 A.M. on the 12th, labour having set in. I found the os dilated, so at 6.30 I burst the membranes when to my surprise only about half a pint of liquor amnii was discharged. I was still more puzzled to feel high up a boggy mass presenting, giving exactly the sensation of pressing an œdematous area. The bowels had been moved at 2 A.M., and urine had been voided subsequently. At 9.15 A.M. I put on forceps and after great difficulty delivered the head of the child, which at first sight looked like an anencephalic fœtus without any bridge to its nose. Subsequent examination, however, proved that the altered shape was entirely due to anasarca. Soon after this the uterine contractions came on with redoubled vigour, but no further progress towards delivery was made although I applied vigorous traction. At 10.30 A.M. I concluded that there was some enormous abdominal tumour in the fœtus rendering delivery by natural efforts impossible. I therefore sent an urgent message to Dr. Purdom, fearing that even abdominal section might be needed to save the life of the mother. Dr. Purdom arrived almost immediately and we at once proceeded to put the patient deeply under chloroform. When she was fully under Dr. Purdom introduced his hand into the uterus and made vigorous traction, the internal hand being hooked between the child's legs and the external hand applied to the child's head and arms, the child being by this time dead. After about 40 minutes' hard work, during which I aided Dr. Purdom by grasping the uterus externally, he succeeded in extracting the body of an enormously dropsical fœtus. The uterus was still quite as big as an ordinary full-term uterus, and the reason of this was found to be that the placenta was œdematous and about as large as four or five ordinary placentæ put together. There was free but not excessive bleeding during the third stage and the liquor amnii was quite of an ordinary quantity.

the thigh is abducted and extended, a force is then applied to the femur directly from the antero-external aspect or to the back whilst the leg is in this position—e.g., in stooping with the legs abducted. The force will tend to hyper-abduct the limb on the pelvis and so to drive the head of the femur downwards and inwards, through or over the margin of the acetabulum into the cotyloid notch. Some authorities believe that this is brought about by direct thrust, others that the *outer* edge of the acetabulum becomes opposed to the great trochanter and so forms a fulcrum of a lever, the long arm being the shaft of the femur and the short the neck and head. In my case probably the question of lever and fulcrum came chiefly into play, as the transverse ligament and edge of the acetabulum showed no signs of injury. The subsequent position of the femoral head will depend on the line of the continuing force. In this case, as we have seen, a heavy bale fell on the abducted thigh on its antero-external aspect; the head of the femur was thus forced out through the lower and inner part of the capsule and eventually came to the fore part of the perineum. With regard to the muscles torn, the obturator externus will naturally suffer most damage as it lies in close contact with the inferior and posterior surface of the neck of the femur. The quadratus femoris is generally torn in pure dorsal dislocations; in this case the complete division of this muscle is interesting

The cause of the untoward death of my patient was obscure and the post-mortem examination threw no light on the matter; the question of anæsthesia may be discounted, as the effects had nearly passed off, the reflexes had returned, and all manipulations likely to cause shock were finished with. A similar calamity occurred under Professor Stokes of Dublin (Stimson's "Text-book of Fractures and Dislocations"). In this patient death was supposed to be due to fat embolism. It is of interest to note that the patient in the similar case preceding mine (Mr. Roxburgh's) made an uneventful recovery; he can walk with very little stiffness and flexion of the hip is nearly normal. He was also a man of powerful build, showed exactly the same physical signs of luxation, and the injuries surrounding the joint were probably similar to those found in my case.

I have to thank Dr. Clement White, my house surgeon, for notes of the case, also Mr. Jones for the drawings, and Mr. Harnack for the radiograph.

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# A CASE OF PULMONARY REGURGITATION.[1]

BY EDMUND CAUTLEY, M.D. CANTAB, &C.,
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INCOMPETENCE of the pulmonary valves, leading to regurgitation, is rightly regarded as one of the rarest forms of valvular lesions. It is usually associated with endocarditis of the infective variety or with pulmonary stenosis. In an article on the subject by Hale White in Allbutt's "System of Medicine" the writer refers to 99 cases, verified post mortem. More than half of these were due to infective endocarditis. The chief other causes enumerated are pulmonary stenosis, abnormalities of the pulmonary valves, dilatation of the pulmonary artery, and pressure of an aortic aneurysm on the pulmonary valves. Of the 57 cases associated with infective endocarditis no obvious cause was found in 19, but in eight instances there was congenital pulmonary stenosis. As regards age, only two of these 57 cases were in children under 10 years of age, and 12 in patients between 10 and 20 years of age. The present case is an illustration of pulmonary regurgitation in a girl, aged 15 years, secondary to pulmonary stenosis, and associated with acute endocarditis of the valves.

A girl, aged 15 years, was admitted into the Metropolitan Hospital under my colleague, Dr Oswald Browne, on May 7th, 1901, and was discharged on May 23rd. She subsequently attended my out-patient clinic and was re-admitted to the hospital under my care on August 13th, and died on Oct. 10th, 1901. As regards family history it was stated that her parents and two brothers were alive and healthy. She had lost several brothers and sisters, but none had died from rheumatic fever. Two years previously she was in the London Hospital for rheumatic fever. After this she had diphtheria and was in the fever hospital at Homerton. She had been subject to joint pains and she had worked as a feather curler. On May 7th she was admitted for headache, vomiting, and general debility, with a temperature of 103·4°F. The patient had a high colour and was well nourished; there was no clubbing of the extremities or œdema. The apex of the heart could not be localised and there was no thrill. Dulness extended to the middle of the sternum, to the third left intercostal space, to the left anterior axillary line, and down to the seventh rib. The sounds at the aortic base were clear and ringing. At the pulmonary base the first sound was clear, while following the second was a diastolic murmur conducted downwards and heard in the third and fourth left intercostal spaces close to the sternum, being loudest lower down A systolic murmur was also heard at the apex, in the axilla and faintly behind. The pulse was 96, regular, not sudden, of fair volume, and good tension. A few moist sounds were heard at the base of the left lung. No enlargement of the liver was detected. The urine was normal. The temperature fell steadily to normal in two days. In a week she was allowed up, and on May 23rd she was sent to a convalescent home.

The patient remained in her usual health until August 13th when she complained of pain in the right knee and minute bright red spots on the legs. On coming to the hospital in the afternoon she seemed to be very ill and was admitted. Her colour was high, with a slight tendency to duskiness of the cheeks The temperature was 101·6° and the pulse was 108, regular, and of good volume. The lungs were normal except for a few crepitations at the bases. The apex of the heart was in the sixth space in the nipple line; the impulse was not heaving. Diffused pulsation extended for from two to three inches to the right of the sternum. There was marked epigastric pulsation. There was no thrill anywhere The first sound at the apex was rather rumbling in character. Both sounds at the base in the second right and left intercostal spaces were clear and ringing. In the third and fourth left intercostal spaces near the sternum was a diastolic murmur, increased in intensity on expiration and in the upright posture. After being a few hours in bed the pulse-rate fell to 84; in character the pulse was small, soft, and not sudden. There was no evidence of enlargement of the liver and spleen. No clubbing of the extremities was present. On light diet and small doses of salicylate of soda the pain in the knee disappeared in two days and the pyrexia subsided in four days. On August 16th moist sounds were abundant at both bases behind. There was no cough. On the 20th the diastolic murmur was louder and was heard at the base and down both sides of the sternum. The pulse was small and rather sudden. On the 24th there was pain in the right side on breathing which was probably pleuritic, though no definite friction was heard. For the next week she had a moderate amount of fever in the evenings. On the 26th the temperature rose to 103·4°. Nothing was found to account for the fever except the crepitations at the bases. In other respects she felt well. Up to Sept. 5th for a week she had been practically free from fever That morning she brought up three or four pints of blood, becoming collapsed, restless, and covered with sweat; the pulse was almost imperceptible. On the 6th she vomited some altered blood during the night. The pulse was 96 On the 21st the temperature had remained down and there had been no more hæmorrhage. She had been on full diet for two days and allowed to sit up in bed. On the 24th she was up in a chair. On the 26th more hæmorrhage occurred. Although she had been on liquid or semi-solid food and seemed to progress favourably, being bright and cheerful and free from fever, she had another attack of hæmorrhage on the night of Oct. 5th and on the night of the 6th she brought up about three ounces of blood On the 7th she brought up a few clots on vomiting in the morning. The heart was more dilated, the apex being felt an inch outside the nipple line in the sixth space At the apex there was a systolic and diastolic murmur, *the former not* being conducted into the axilla. A marked diastolic thrill was now felt over the left border of the sternum and the diastolic murmur was very much louder. On the 10th she brought up over a pint of blood with vomiting, became very pale and collapsed, and died quietly in a few soon relapsed into a drowsy or indifferent state; she had frontal headache and pain in the back; her cheeks were flushed, her tongue was coated, white, and tremulous. The bowels, which had been constipated all through the illness, were opened freely on the previous day after calomel, but the stools were not characteristic. There were no "spots" nor had there been any. The abdomen was rather retracted than distended. The menses were said to be regular. The urine was acid, of specific gravity 1024, and deposited phosphates; it contained no albumin. There were no abnormal chest signs or symptoms and no enlarged glands; the spleen was palpable, but seemed to be elongated rather than full.] On Oct. 31st, at 10 A.M., the temperature was 101·6° and the pulse was 84; at 10 P.M. the temperature was 100·6° and the pulse was 68. On Nov. 1st, at 10 A.M., the temperature was 100·4° and the pulse was 60; at 10 P.M. the temperature was 100·2° and the pulse was 72. On the 2nd the patient lay in a condition similar to that at the time of admission. No definite relief was obtained from a mixture of antipyrin and caffein; there was no action of the bowels; there were some vomiting and difficulty in feeding. Mr. W. Griffin reported that there was no appearance of optic neuritis or other eye symptoms. An enema of olive oil was given. At 10 A.M. the temperature was 99·0° and the pulse was 72; at 10 P.M. the temperature was 102·0° and the pulse was 65. On the 3rd the stupor had deepened and the patient resented interference; the evacuations, passed unconsciously, were semi-solid, light-coloured, and small. At 10 A.M. the temperature was 100·4° and the pulse was 72; at 10 P.M. the temperature was 100° and the pulse was 112 On the 4th it was recorded that she had been in a profound stupor all night, but that this morning she answered questions, opened her eyes, showed her tongue, and seemed to be conscious for a short time; she said at first that she had no pain, but later she complained of her head; the knee-jerks were brisk; she took food better. At 10 A.M. the temperature was 100·6° and the pulse was 80; at 10 P.M. the temperature was 100·2° and the pulse was 78. On the 5th it was recorded that she was unconscious all night; her limbs were rigid at times and her breathing was stertorous; she had to be fed by a nasal tube; urine was passed unconsciously; and there was some spasmodic contraction of the left side of face. At 10 A.M. the temperature was 101·4° and the pulse was 96; at 10 P.M. the temperature was 101·2° and the pulse was 120. On the 6th, early in the morning, she seemed to be choking and convulsions set in, affecting mostly the head and right arm; she was much cyanosed and there was double internal strabismus; frothy vomiting of a coffee-ground character occurred and continued at intervals till death, which took place at noon. At 10 A.M. the temperature was 100·2° and the pulse was 160. From Oct. 30th to Nov. 4th the respirations varied from 16 to 24 per minute; on Nov. 5th the highest rate was 30 per minute.

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[1] A paper read before the Society for the Study of Disease in Children on Nov. 15th, 1901.

At the necropsy made on Nov. 7th the brain was found to be rather soft; there was some hyperæmia of the meninges; there was no tumour, lymph, pus, or hæmorrhage, but there were many small, very recent, tubercles along the vessels in both Sylvian fissures, which were not glued together; there was no ventricular effusion. There were old pleuritic adhesions over the lower half of the right lung; there was marked puckering at the apex, and on section a hard calcareous nodule was found of the size of a large pea. There was marked emphysema above the level of the adhesions. Both bases were congested but not solid. In the heart the right ventricle was somewhat dilated; the left was contracted and hypertrophied; there were numerous small transparent, bead-like vegetations along the edges of the mitral valve. There was a slight excess of pericardial fluid. The small intestine showed no sign of ulceration, but there were congestion and scattered miliary tubercles in the lower part of the ileum. There were several enlarged, hard, and injected mesenteric glands. The spleen weighed 12 ounces; it was thin and enlarged lengthwise, but was otherwise normal. (For most of the above notes I am indebted to Mr. P. Foster and Mr. P. M. Perkins, resident officers.)

*Remarks.*—Although the clinical picture soon after admission was one of meningitis there was much room for doubt in the earlier stages and this doubt was presumed to be cleared up by the Widal test. The present case, together with some few other cases recorded, must tend to qualify the confidence at present reposed in it. The Ehrlich diazo test I have found very much less trustworthy and did not use it. The tuberculosis serum test as propounded by Arloing, Romberg, and others is not yet sufficiently proved to work by, and lumbar puncture did not seem to be justified. I regret that the blood was not examined for the leucocytosis, &c., described by Dr. Bastian. In the absence of lung-signs a further difficulty lay in the mode of onset, since, as Sir Thomas Barlow writes, "this is usually *insidious* in those in whom some latent local tubercle has been consistent with moderately good health—*abrupt* in those whom advanced disease has brought to an emaciated condition" (which was not so here). Another remark of his, however, was well illustrated by the appearances found at the necropsy—namely, in tuberculous meningitis "tubercle in various stages co-exists in many organs of the body ...... in some parts contemporaneous with that in the membranes of the brain ...... in other parts of older date."

Hove, Sussex.

# A Mirror
OF
# HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—Morgagni *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

## LONDON TEMPERANCE HOSPITAL.

### A CASE OF TRAUMATIC LACERATION OF THE RIGHT KIDNEY; LUMBAR EXTRAVASATION; PARTIAL NEPHRECTOMY; COMPLETE RECOVERY.

(Under the care of Dr. W. J. Collins.)

Rupture of a kidney inevitably leads to the effusion of blood and urine into the perinephric tissues, and the abscess which follows requires an incision for the release of the pus. The treatment of the damaged kidney will depend on the extent of the injury. If the laceration is severe early complete nephrectomy is strongly indicated; on the other hand, if the kidney substance is only partly lacerated, so that the fragments are still connected by the pelvis, the several fragments should be sutured together. There are, however, intermediate cases in which the injury to the kidney is such as to justify an attempt to retain the organ, but one or more detached or almost separated fragments of kidney substance may be present. In these cases an endeavour should be made to save part of the kidney while removing that portion which is incapable of recovery. This operation of "partial nephrectomy" is comparatively modern, one of the earliest recorded cases, if not the earliest, having been performed by Mr. C. R. B. Keetley[1] in 1890. Several other cases are mentioned by Mr. H. Morris,[2] and it is probable that the operation has been performed many times without having been recorded.

A woman, aged 31 years, was knocked down by a horse and van on Oct. 13th, 1900, one of the wheels of the van passing over her abdomen. She was taken home and was attended by her medical adviser, but alarming symptoms of abdominal pain and collapse supervening she was admitted into the London Temperance Hospital under the care of Dr. W. J. Collins at half-past eight the same evening. The abdomen was full, resistant, and tender (especially in the right lumbar and inguinal regions). The catheter drew blood mixed with the urine. The patient was frequently sick before and after admission and there was some hiccough. For the next two or three days she continued to be in much the same state; but the collapse passed off, and though some sickness continued, the tenderness and resistance in the right lumbar region became less, the urine ceased to be sanious, and the bowels acted naturally.

On Oct. 22nd aspiration of the right loin drew off four and a half ounces of rather offensive blood-stained urine of a specific gravity of 1020, and on the 23rd under chloroform Dr. Collins made an incision five inches long in the right loin in the ilio-costal space, and cutting down to

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[1] The Lancet, Jan. 18th, 1890, p. 134.

[2] Surgery of the Kidney and Ureter, vol. i., p. 191.

At 4 P.M. I returned to see how the patient was and found her to be doing well. I then proceeded to examine the body of the fœtus. An incision into the boggy tissues of the scalp showed that the skull was intact, but that the scalp was very œdematous over it. Indeed, the whole skin surface of the child's body was distended to the utmost with anasarca and the face was quite distorted. On opening the abdomen, which measured 15 inches in circumference, a large quantity of ascitic fluid burst out, and the thorax was also full of dropsical fluid I removed one kidney and found it lobulated, but on section it did not show any morbid appearance. The mother made an uneventful recovery, the dropsy passing off in a few days and the albumin disappeared from the urine. This was the sixth pregnancy and the patient had given birth to several healthy children, though the fourth and fifth pregnancies had been abnormal.

The case is instructive in showing what great difficulties may be overcome by persistent traction and counter-pressure over the uterus. A real advantage might be gained in such cases by carefully introducing an instrument with the object of puncturing the child's abdomen when it was discovered to be enlarged by the operator's internal hand, but this would be a delicate and not very easy procedure and would almost require a special trocar and cannula for the purpose. In cases of fœtal dropsy the child invariably dies soon after, if not before, delivery, so that saving the infant's life is not a question to be much thought of.

I regard the case as one of primary dropsy of the ovum and secondary dropsy of the mother, caused in her case by pressure of the enlarged uterus upon her kidneys and abdominal blood-vessels. I am quite at a loss to account for the fœtal condition, and as the literature of the subject appears to be very scanty I should be glad to have a little light from someone of wider experience and knowledge on the etiology of such cases

Croydon.

# Clinical Notes:

## MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

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### A CASE OF ACUTE SUFFOCATIVE PULMONARY ŒDEMA.

By FREDERICK W. ROWLAND, M.D. DURH.

DR. JOHN LINDSAY STEVEN'S clinical lecture on Acute Suffocative Pulmonary Œdema reported in THE LANCET of Jan 11th, p. 73, brings to my mind a case I saw recently which I think must be an example of this disease. If so, it shows again how it may suddenly attack a previously healthy person. It also shows that it may rapidly prove fatal.

Arriving at a house at 3 A.M. one day I found the old man whom I had been called to see lying in the semi-recumbent position, dead. The history was that he had been in perfect health till the previous day, when he had complained of feeling unwell and had said that he thought he had a cold; but he went to bed and fell asleep as usual. About midnight, however, he awoke and complained of difficulty in breathing. This became rapidly worse He was now expectorating copiously. His wife put on a mustard poultice to ease his breathing, but he died about 2 A.M. almost before his relatives realised how ill he was He was a thin, slightly-built man, 65 years of age. The spittoon contained about six ounces of frothy, yellowish, serum-like fluid.

I made a post-mortem examination later in the day. On the right side of the chest there was a small quantity of fluid in the pleural cavity The left lung was fixed by old adhesions to the chest wall. Both lungs were markedly œdematous, but the left was much more so than the right There were no phthisical scars at either apex. The trachea and bronchial tubes were full of white froth and yellowish serum. The kidneys were healthy The capsules stripped off easily without taking any kidney substance with them. The surfaces beneath were not quite smooth and there were one or two cysts on one of them but the amount of cortex was good and there were no signs of granular degeneration. Neither was there any visible hyperæmia. The other organs were healthy.

May not this have been a case where the fatal result was brought about through the feebleness of advancing age before the expectoration had time to become blood-stained? The patient was said to have had good health for many years, and his wife did not know that he had suffered from pleurisy.

I must confess to considering it a case of acute inflammatory œdema at the time, after looking it up in the text-books, but it certainly does not come under that heading as defined in Wilks and Moxon's "Pathological Anatomy," third edition, p. 339.

Brighton.

### A CASE OF VAGINA DUPLEX.

By EDGAR W. SHARP, M.B. GLASG.,

SENIOR HOUSE SURGEON, BURY INFIRMARY, LANCS.

WHILST operating on a woman, aged 41 years, for a fissure of the anus and also hæmorrhoids an unusual fleshy projection was observed situated between the labia This led to an examination which revealed a condition of vagina duplex. The vagina was divided by a fleshy partition running from before backwards and from the cervix uteri, where it was somewhat thin and membranous, to the vaginal orifice, where it was almost half an inch in thickness. The greater part of the septum on both sides was covered with the corrugated mucous membrane of its respective half of the vagina. There was a small communication near the cervix between these two halves. The cervix uteri was somewhat small. There were no distinct fornices and the os uteri was situated on the left side. On examination bimanually and per rectum the uterus was found to be small, but otherwise apparently normal. The patient had had no difficulty with menstruation; she was married, but had never been pregnant.

Bury.

### THE WIDAL REACTION IN TUBERCULOUS MENINGITIS.

By EDWARD MACKEY, M.D. LOND.,

PHYSICIAN TO THE SUSSEX COUNTY HOSPITAL AND CONSULTING PHYSICIAN TO THE ROYAL ALEXANDRA CHILDREN'S HOSPITAL, BRIGHTON.

THE following case seems of sufficient importance to be recorded, since it is customary to consider the Widal reaction as a reliable help in what is often a difficult matter—namely, the diagnosis between enteric fever and meningitis. It is not always that a history so complete can be secured as in the present case.

The patient, a single woman, 28 years of age, was sent into the Sussex County Hospital as a case of enteric fever by her medical attendant, mainly on the strength of a positive Widal reaction obtained in the Brighton Corporation laboratory. I am informed that the dilutions employed there are 1 in 10 and 1 in 30, with a half-hour limit, and a record is usually kept, but in the present instance the counterfoil of the certificate was, through an oversight, not properly filled up, so that an exact statement on this point is not now possible; the Sussex County Hospital notes show, however, that on Nov. 2nd a positive reaction was obtained with a 1 in 10 dilution in 10 minutes and with a 1 in 20 dilution in 20 minutes by Mr P M Perkins, the resident pathologist

The patient was admitted on Oct. 30th, 1901, and was said to have been ill for 14 days chiefly with headache and vomiting, which still continued more or less She had had no illness requiring attention during the past two years, and she gave no history of chest trouble but of "hip-disease" at the age of nine years, the result of which might be traced in an old backward dislocation at the knee. Her father had died from cancer; her brother and sister were healthy. There was no other illness in the establishment where she lived and no cause was known for her present attack; her only previous complaint was of rather frequent headache for some time past On admission her temperature was 101·2° F., her pulse-rate was 76, and her respirations were 24 She lay in bed on her side, with her head, which was rather retracted, turned away from the light, pressing against the pillow. She opened her eyes when asked a question and answered "Yes" or "No," but to penetrate. With regard to the second point it was remarkable in how large a proportion of cases the patients were of intemperate habits or the attack had followed some excess or error of diet. It had also supervened on cancer, ulceration of the lower end of the œsophagus, and injury. The source of the virulent organisms did not appear to have been ascertained in any of the cases; dental suppuration connected with the teeth and jaw might be a possible cause in some cases. He was not aware that any fatal case had been diagnosed during life. Dr. Dörbeck claimed to have diagnosed a case which recovered, mainly from the presence of pus in the vomit. The symptoms to be expected would be epigastric pain and tenderness, dilatation of the stomach, vomiting, with possibly the presence of pus in the vomit, high temperature, and the supervention of acute general peritonitis, but these symptoms were by no means always present and in some cases the disease had run a latent course and the implication of the stomach was only discovered on post-mortem examination.

Mr. ALEXANDER G. R. FOULERTON read a paper on a case of Pneumococcic Gastritis, with some remarks on the Infection of Mucous Membranes by Diplococcus Pneumoniæ. The symptoms were those of septicæmia with petechial hæmorrhages in the skin. At the necropsy there were found numerous petechial hæmorrhages into the subcutaneous tissue, "mulberry spots" on the face and neck, petechial hæmorrhages on the epicardium and into the substance of the liver and kidneys, and an acute fibrinous exudation extending over the surface of the stomach. Cultures of diplococcus pneumoniæ were obtained (1) from the exudation on the lining of the stomach; (2) from one of the mulberry spots on the face; and (3) from an interstitial hæmorrhage into the right lung. Microscopic section of the wall of the stomach showed the formation of an exudation membrane, with an extensive necrosis of the glandular layer. The only similar case previously recorded was that by Dieulafoy who had described a case of pneumococcic ulceration of the stomach.

Mr. FOULERTON said that the submucous coat of the specimen shown by Dr. Cayley was infiltrated with pus and was at least three times thicker than normal.

Mr. S. G. SHATTOCK said that a similar case had been recorded by Mr. A. Q. Silcock as occurring after gastrostomy; the submucous membrane was in that case very much swollen.

Dr. A. G. AULD suggested that the condition of the stomach might have been due to a mixed infection.

Dr. F. W. ANDREWES said that there were many fibrinous exudations in which the pneumococcus could be demonstrated and he thought that Mr. Foulerton had correctly attributed the formation of this membrane to the presence of the diplococcus pneumoniæ.

Dr. H. D. ROLLESTON referred to the work of Dr. William Hunter on Phlegmonous Gastritis who held that the source of the infection was carious teeth. He asked Dr. Cayley what was the condition of the teeth in his case. He mentioned also the occurrence of duodenal ulcers in association with pneumonia; in these, however, the pneumococcus had not been demonstrated, and they were usually regarded as of toxic origin. He suggested also that the ulcers found in the colon were of the same nature.

Dr. HAROLD SPITTA read a short paper, illustrated by a series of lantern slides, on the Bacteriology of a case of Rapidly Spreading Gangrene without Emphysema which recently occurred in St. George's Hospital as the result of a lift accident. The wound was very much contaminated with dirt and was of an extensive nature, and involved a fracture of the four outer metacarpal bones and the lower third of the radius. From the pus he isolated in a pure state a square-ended, non-sporing, gas-producing, capsulated, anaerobic bacillus, which on inoculation proved highly virulent to guinea-pigs, death resulting in 15 hours. He was able to recover this organism from the subcutaneous, pleural, and peritoneal glands, and also in pure culture from the heart blood of the animals inoculated. It was a strict anaerobe, grew well at 37° C., and more slowly at 21° C. Most of the ordinary laboratory media proved suitable for its cultivation, especially those containing glucose and traces of sodium formate. Both sugars and carbohydrates were fermented, and in the former tubes gas production was always very excessive. In glucose formate bouillon growth was always very rapid, a dense turbidity with a thick ropy sediment being found in addition to much gas formation. On potato the organism formed a transparent, almost invisible, film, but in milk and on gelatin at 21° C. no growth was ever obtained. On solidified serum the bacillus grew well, forming, as on agar, small, discrete, circular, non-liquefying colonies of a greyish colour about three-quarters of a millimetre or so in diameter. The organism never stained well by the method of Gram and seemed always very prone to decolourise in small dots. Considering its pathogenicity and certain of its cultural characteristics Dr. Spitta suggested its resemblance to Welch's bacillus aerogenes capsulatus, though clinically the marked absence of emphysema was not in accordance with typical cases of infection with Welch's organism. In conclusion, he commented on the extreme difficulty he had experienced in preserving the vitality of the organism for more than a few generations outside the body, and remarked that he believed that this had been the experience of others. —Dr. W. BULLOCH said that he had examined several such cases as that recorded and had isolated a similar bacillus. He had experienced great difficulty in obtaining the organism in pure culture and it died out very rapidly. The organism he had isolated stained well by Gram, and although these slight differences were present he considered that in all probability it was the bacillus described by Welch.

Dr. W. BULLOCH made a communication on the Transmission of Hæmolysins from Parents to Offspring. The hæmolysins were prepared by injecting the blood of the ox into rabbits, the serum of the latter acquiring a hæmolytic power towards the corpuscles of the ox. The hæmolysin was compound and depended for its action on two bodies—viz., the amboceptor and the complement. Immune males did not propagate their immunity to their offspring by normal females. Hæmolytic females immunised anterior to the conception gave birth to young the blood-serum of which was also hæmolytic. The milk was not hæmolytic in the native state, but in complementing it with normal serum Dr. Bulloch had found that it contained relatively large quantities of immune body.—Dr. AULD asked if the immune body introduced into the stomach with the milk passed directly as such into the blood without alteration.—Dr. BULLOCH said that in young animals the immune body passed into the blood from the stomach without undergoing any alteration. As an instance of this he said that young animals sucking milk from a mother immunised against tetanus acquired a very considerable immunity against tetanus.

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## LARYNGOLOGICAL SOCIETY OF LONDON.

### *Exhibition of Cases and Specimens.*

A MEETING of this society was held on Jan. 10th, Dr. E. CRESSWELL BABER, the President, being in the chair.

Dr. A. BRONNER showed a specimen of a Pedunculated Angeioma of the Larynx in a man, aged 63 years. Excessive hoarseness was the only symptom. The growth was raspberry-like in appearance and size and was removed by forceps. Microscopical examination showed it to be a nævoid growth in the mucous membrane.

Dr. SCANES SPICER showed a case of Saddle-nose treated by subcutaneous injections of vaseline. The technique of this treatment was explained thoroughly and the danger of the vaseline passing upwards into the eyelids was pointed out. This accident had occurred in the present case, but otherwise the treatment had been most successful, the patient having a well-shaped nose.—Mr. P. R. W. DE SANTI suggested that a piece of lead sheeting should be applied over the parts adjacent to the root of the nose and that firm pressure should be exerted on it during the injection of the paraffin, in order to overcome the likelihood of the paraffin passing into the eyelids.—Dr. H. LAMBERT LACK thought that it might be possible to raise the skin and to make a small cavity into which to inject the paraffin.

Dr. SCANES SPICER also showed (1) a case of Multiple Suppurative Sinusitis and Polypoid Disease of the Nose, for the relief of which radical operations had been undertaken with success; and (2) a case of Bony Thickening over, and Polypi within, the Right Frontal Sinus in a man, aged 46 years, for which a radical operation had been performed. This was followed by a recurrence of the bony growth and the commencement of similar symptoms on the opposite side of the face.

Dr. W. MILLIGAN showed: 1. A specimen of Lipoma of the Pharynx which extended upwards behind the level of the soft palate and downwards behind the larynx. The tumour was removed successfully by lateral incision in the kidney turned out a large quantity of blood-clot and some urine escaped. A portion of the kidney as large as a walnut, together with some smaller fragments, were found torn off from the rest and were removed. A careful examination of the remainder showed that though contused it was not hopelessly damaged and the ureter appeared to be intact; it was accordingly left. The wound was thoroughly irrigated and a large drainage-tube was inserted and lightly packed around with iodoform gauze. The wound was dressed two or three times a day and at first was urine-soaked; incontinence of the vesical urine had been present from the first and persisted, but the amount passed rarely exceeded two pints in the day. On Nov 11th the urine collected from the wound was acid, that from the bladder being alkaline, and there was some cystitis; the general condition was rapidly improving. At first some seven ounces of urine were collected daily from the wound; this diminished progressively and by Dec. 4th urine had ceased to come from the wound and on the 11th the wound was healed. The patient was discharged on Jan. 1st, 1901; on the three days previously she had passed 63, 58, and 53 ounces of urine.

## NORTH WIMBLEDON COTTAGE HOSPITAL.

### A CASE OF TETANUS SUCCESSFULLY TREATED WITH ANTITOXIN.

(Under the care of Dr. J. E. BATES.)

THE intra-cerebral injection of tetanus antitoxin cannot be said to have passed the experimental stage, and there is no indication of the spread of this method of administering anti-tetanic serum. Certainly some of the cases in which it has been employed are very striking,[1] but the increased risk is commonly felt not to be compensated by any increased efficiency. Into the question of the value of the serum itself we need hardly enter, it is recognised that when administered early and freely benefit results, but that in many cases its employment does not prevent a fatal result. We appreciate the importance of Dr. Bates's case recorded below, but we must not too hastily attribute the favourable issue to the serum or its mode of administration.

A youth, aged 16 years, first came under the care of Dr. J. E. Bates in the North Wimbledon Cottage Hospital on June 11th, 1901, for a compound Colles's fracture of the right arm. The fracture had occurred on the afternoon of that day, about one hour before Dr. Bates saw him. He was a lad occupied on some buildings which were being erected on the site of an old nursery garden. He met with the accident through falling off a scaffold, and when seen the lower end of the ulna had pierced and was protruding through the skin, shirt, and coat-sleeve, both the end of the bone and the coat-sleeve being covered with mud. A temporary dressing, consisting of a very dirty piece of rag, had been placed over the broken end of the bone. After a very careful cleansing of the wound, a nail-brush being used and an anæsthetic being given, the fracture was reduced after some difficulty and put up in splints. Three days later (on the 14th) there arose much swelling, œdema, and general redness of the forearm and hand with an evening rise of temperature to 102° F. All these symptoms soon subsided under hot boric fomentations although the wound still continued to discharge freely.

Eleven days after the injury (on June 22nd) the patient noticed that the muscles of his jaw were a little stiff; but the stiffness was so slight that he omitted to mention it to Dr. Bates when he saw him on that day. The next day (the 23rd) the symptoms had materially increased. He could only get his mouth half open, and this caused him pain. Both sterno-mastoid muscles were tense and he also had difficulty and pain when trying to swallow fluids. On the 24th there was an alarming increase of all the symptoms. The jaw was closed tightly, swallowing of fluids caused choking and dyspnœa and was very painful, the muscles connecting the head and trunk anteriorly and posteriorly were all absolutely rigid, and he complained of painful jerky spasms in his right arm. Dr. Bates saw him in consultation with Mr. E. Pocklington and Mr. R. T. P. Collyns of Wimbledon, and it was decided to give him the benefit of antitoxin without delay.

On June 24th, at 5 P.M., assisted by Mr. Pocklington and Mr. Collyns, Dr. Bates trephined the patient over the right parietal bone anteriorly and injected five cubic centimetres of antitoxin (obtained from the Jenner Institute of Preventive Medicine) into the right lateral ventricle of the brain, and at the same time 35 cubic centimetres of the antitoxin were injected into the loins. The patient stood the operation well and a marked quickening of the pulse was noticed during the intra-cerebral injection. During the night after the operation the pulse-rate rose to 116; but it had dropped to 98 on the next morning and never rose above 100 subsequently. The temperature once after the operation rose to 99·6°, but never higher. For 48 hours after the operation the symptoms showed no signs of amelioration, but, on the other hand, they became no worse. On the 27th (three days after the operation) improvement set in in all the symptoms and was steadily maintained so that by July 6th (12 days after the operation) the patient was allowed to eat solid food and to sit up out of bed. On July 1st (seven days after the operation) the wound in the head was dressed for the first time and found to be completely healed by first intention.

*Remarks by* Dr. BATES —The points of interest in this case I think are these: (1) the dates of the exciting cause and onset are quite clear and distinct; (2) the patient at the time of the accident was living an outdoor life and was in robust health; (3) the patient all through the illness never failed to take his nourishment well, although part of the time he had great difficulty and pain in doing so; and (4) the rapid onset of the symptoms, their speedy and alarming progress, the manner in which the injection checked their progress and also the patient's comparatively swift and entire recovery. Finally, I must tender my sincere thanks to Mr. Pocklington and Mr. Collyns, without whose advice and assistance I feel sure the patient would not have made such a rapid and complete recovery from such an awful disease

# Medical Societies.

## PATHOLOGICAL SOCIETY OF LONDON.

*A Case of Phlegmonous Gastritis due to Streptococcus Infection.—A Case of Pneumococcus Gastritis with General Infection.—The Bacteriology of a Case of Rapidly-spreading Gangrene.—The Transmission of Hæmolysins from Parents to Offspring.*

A MEETING of this society was held on Jan. 21st, Mr. W. WATSON CHEYNE, the President, being in the chair.

Dr. W. CAYLEY related a case of Phlegmonous Gastritis due to Streptococcus Infection. The patient, a woman, aged 26 years, was admitted into the Middlesex Hospital on Nov. 19th and died on Nov. 21st. She had been taken ill without any assignable cause on Nov. 13th with rigors, sore-throat, headache, and pain in the abdomen and limbs. On the 17th she began to vomit and continued to do so on the 18th; the vomiting was accompanied by severe abdominal pain. On admission she presented all the symptoms of acute general peritonitis with dilatation of the stomach. Her temperature was 104 6° F. She gradually sank and died on the 21st. She had no vomiting or action of the bowels after her admission. At the necropsy there was general suppurative peritonitis; the stomach was dilated and its coats were thickened. On section there was purulent infiltration of all the coats of the stomach between the mucous membrane, which appeared intact, and the peritoneum; this change was most marked over the pyloric third of the organ. Bacteriological examination of the purulent exudation from the submucous coat showed a number of bacilli which did not stain by Gram's method and which resembled morphologically bacillus coli communis; there were also present a few short chains of streptococci which stained by Gram's method. The other organs presented nothing abnormal. It was probable that the streptococcus infection was primary and the bacillus coli a secondary effect. Dr Cayley referred to the cases of phlegmonous gastritis collected by Dr. R. F. C. Leith in Vol. IV. of the Edinburgh Hospital Reports and to some which had been published since. Two conditions were necessary, the presence of virulent organisms and a condition of the mucous membrane which would allow them different medical men: one was apparently cured by turpentine gauze intra-uterine packs. Dr. Briggs maintained that collective investigation after the operation of curettage was required to remove doubts as to its present position in minor gynæcological, and especially in obstetrical, surgery.—Dr. W. MACFIE CAMPBELL generally used the loop curette or Donald's flushing instrument. Preferably he curetted first and then washed out; débris was removed with antiseptic gauze and the uterus was packed with the same. His best results were in removal of placental remains in abortion cases; in cases of metrorrhagia he had often been disappointed.—Dr. JOHN E. GEMMELL regarded the finger as the best curette for diagnostic and obstetric purposes, preceded by dilatation of the cervix. He considered, however, that the curette had its place when used intelligently; it was important to weigh carefully the evidence for the true causation of the local condition. Microscopical examination of the tissue removed was most important, especially when considered in conjunction with the feeling imparted through the curette during the operation. —Mr. G. A. HAWKINS-AMBLER said that endometritis was a sufficiently defined condition, and the obstacles in the way of cure after curettage lay in the tendency of medical men and patients to look upon the operation as the end, rather than the beginning, of treatment. He felt that the finger, although the best curette in post-abortion cases, was not always effectual, except in very early cases. The differential diagnosis between adenoma and adeno-carcinoma was not possible in many cases from the examination of mere curettings.—Dr. DAVIES, Dr. A. C. WILSON, and Dr. A. STOOKES also spoke and Dr. BRIGGS replied.

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[1] Medical News, Oct. 22nd, 1898.

## LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

*Partial Nephrectomy.—Injury to Head.—New Gynæcological Instruments.—Exhibition of Cases and Specimens.*

A MEETING of this society was held on Jan. 10th, Dr. A. G. BARRS, the President, being in the chair.

Mr. B. G. A MOYNIHAN read a paper on Three Cases of Partial Nephrectomy. In the first case a solitary cyst of the lower pole of the right kidney was excised; in the second an inflammatory myxo-sarcoma of the lower half of the right kidney was removed; and in the third a solitary cyst in the transverse band of a horse-shoe kidney was excised. All three cases recovered. In the second case the naked-eye appearance suggested tubercle. A portion of the pelvis of the kidney was also removed, the wound which was left being closed by a continuous catgut suture. In all the cases a wedge of kidney substance was removed and the wound which was left was closed by interrupted catgut sutures. Reference was made to the records of similar cases.—Dr. MAULE SMITH. Mr. W. H BROWN, Mr. H. LITTLEWOOD, Dr. JASON WOOD, and the PRESIDENT took part in the discussion.

Mr. BROWN read notes of two interesting cases of severe Head Injury in which complete recovery ensued.—Dr. F. W. EURICH, Dr. STEWART, Dr. STEVEN, Dr. A. L. WHITEHEAD, Dr. E. F. TREVELYAN, and the PRESIDENT took part in the discussion.

Mr. C. J. WRIGHT showed the following New Gynæcological Instruments—1. A new form of Urethral Speculum which he had found useful in examination and removal of caruncle of the female urethra. It was made on the principle of the duck-bill speculum and was more convenient and less painful than the bivalve or ordinary vulcanite form. 2 A pair of Locking Angular Forceps useful in the examination of, and application of mops and tampons to, the cervix uteri through the speculum. 3. A Metal Box opening with a spring, which could be opened and shut with one hand, for the administration of chloroform by the practitioner in attendance on labour. It provided a ready means of giving chloroform, economising the anæsthetic and preventing its diffusion into the room when shut; it also preserved the chloroform ready for immediate and intermittent use, and the anæsthetic could be discontinued at a moment's notice.

The PRESIDENT showed a Gall-bladder from a case of Perforative Cholecystitis. There were ulcerations and a small perforation on the under surface of the gall-bladder which set up a general peritonitis. The common duct and gall-bladder were both packed with stones.

The PRESIDENT also showed specimens, with drawings, from a case of Henoch's Purpura. There was a large retro-peritoneal hæmorrhage probably originating in the suprarenal capsule and involving the tissues round the right kidney. There were also extensive hæmorrhages into the renal parenchyma as well as small hæmorrhages in the heart and lungs and particularly beneath the mucous membrane of the intestines. The symptoms during life were vomiting, abdominal pain, slight joint symptoms, and extensive purpura.

Dr. TREVELYAN showed a case of Early Locomotor Ataxia with Aortic Disease in a man, aged 50 years. Seven years ago this patient had a hæmoptysis and there was at the present time evidence of some old quiescent disease at the left apex.

Dr. TREVELYAN also showed a case of Locomotor Ataxia in a man, aged 39 years, in which the symptoms were improving under Frenkel's exercise treatment. The ataxia was only of a few months' duration.

Other cases and specimens were shown by Mr. CONSTABLE HAYES, Mr. LITTLEWOOD, Mr. BROWN (with Mr. J. PICKLES), Mr. A. J. POLLARD, and Dr. J. ALLAN.

## EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

*Exhibition of Cases and Specimens.—Removal of a Cerebral Tumour.*

THE fourth ordinary meeting of this society was held on Jan. 15th, Dr. JAMES ANDREW being in the chair.

Dr. BYROM BRAMWELL demonstrated two cases of Syringomyelia. He noted that they were examples of a rare disease, although lately he had had a run of such cases. 1. The first case was that of a youth, aged 17 years, who showed atrophy of the small muscles of the hand; the bird-claw appearance which was so suggestive of the disease was present. The palpebral fissure on the left side was much smaller than was that on the right side, the left pupil was narrower, and the left eye was less prominent as a whole than was the right. The fact of the affection of the sympathetic nerves and the condition of the hand being present at the same time suggested to Dr. Bramwell that this was a case of syringomyelia. All the characteristic features were present: the loss of power in the left hand which had lasted for about a year together with the muscular atrophy. The patient had suffered from incontinence of urine since childhood, and four years ago he had been treated for tuberculous disease of the hip-joint. Disturbances of æsthesia were characteristic of this disease. In this case there was no disturbance of tactile or of painful sensation. Over the left arm, the neck, the front of the chest, and the back, as well as in some other localities, the appreciation of heat and cold was lost. There was a great exaggeration of the deep reflexes in the lower extremities, ankle clonus being present. The lad presented a stumpy and broad appearance, and this had been noted as a characteristic in many cases of syringomyelia. The lesion was situated in the cervical and upper dorsal regions of the cord. 2. The second case was that of a woman, aged 30 years, who had been transferred from Professor T. Annandale's ward in the Edinburgh Royal Infirmary to Dr. Bramwell. She had suffered for a considerable time from sores on the hands and feet—one under the ball of the big toe had persisted for a year. These sores recurred on the palms and fingers of both hands and were not painful. Several of these had developed spontaneously; one recent one resulted from her putting the hand into hot water. This patient presented the same alterations as were observed in the previous case but they were more extensive. Over the upper half of the body as well as in other regions the heat-sensation was lost entirely. The biceps and other muscles of the left shoulder girdle were markedly wasted. The pupils were unequal and the deep reflexes were greatly exaggerated, the jaw-jerk being present Briefly, the symptoms were in this case disassociated anæsthesia, muscular atrophy, trophic changes, alteration of pupils, and great exaggeration of the deep reflexes.

Mr. HAROLD J. STILES exhibited: 1. A boy after operation for a Punctured Wound of the Brachial Artery opposite to the origin of the superior profunda artery. The wound, which was half an inch in length and which lay over the course of the brachial artery, was enlarged. The basilic vein and the

the neck. 2. A microscopical section of a Fibro-sarcoma of the Right Vocal Cord in a male, 61 years of age. After a preliminary tracheotomy, thyrotomy was performed and the growth was removed successfully, and there was no recurrence 12 months later. It was reported to be a fibro-sarcoma by the Clinical Research Association. Some doubt as regards the diagnosis in both these cases was raised, and Dr. Milligan consented to place the specimens in the hands of the Morbid Growths Committee. 3. x-ray photographs of a Plate of Teeth lodged in the Larynx, a Rubber Tube in the Maxillary Antrum, and a Eustachian Catheter in the Frontal Sinus.

Dr. **HENRY SHARMAN** showed specimens of Papilloma of the Tonsil and of the Posterior Pillar of the Fauces. Under the microscope it was clearly seen that the papilloma of the tonsil grew from the surface of the tonsil proper and not from the interior of a lacuna.

Dr. **ATWOOD THORNE** showed a Self-looping Nasal Polypus Snare made at his suggestion by Messrs. Mayer and Meltzer.

Dr. **W. JOBSON HORNE** showed a case of Nasal Obstruction in a woman, 24 years of age. Inferior turbinectomy had been performed six years previously, giving roomy inferior passages, but there was narrowing of the upper passages due to enlargement of the middle turbinate. Dr. Horne thought the case interesting in relation to the observations of Mr. C. A. Parker on the direction of the air-currents in the nose, and he also raised the question as to whether the hypertrophied middle turbinate could be secondary to the removal of the inferior turbinate.—Dr H **TILLEY** and Dr. **SCANES SPICER** were of opinion that the difficulty of inspiration was due to collapse of the alæ nasi, and a discussion ensued upon the best method of treating this deformity.

Dr. **S. H. SNELL** showed a case of Herpes of the Palate.

Dr. **J. DONELAN** showed a case of Syphilitic Laryngitis in a man, aged 52 years. In spite of energetic anti-syphilitic treatment the local condition had become worse and Dr. Donelan raised the question as to whether it had become malignant.

Mr. **DE SANTI** showed a case of very extensive Destruction of the Interior of the Nose due to Tuberculous Ulceration in a woman, 51 years of age The patient was suffering from pulmonary phthisis, but at the same time she showed evidence of syphilis in the pharynx. He suggested that this was a case of mixed infection.—The **PRESIDENT** suggested the advisability of examining the sphenoidal sinus, as he did not think that tuberculosis alone would produce the condition seen.—Dr. **H. W. FITZGERALD POWELL** had no doubt that the case was one of tertiary syphilis.

Dr. **F. W. BENNETT** showed a case of Ulceration of the Nasal Septum. The case was of long standing and had been under observation since 1898. There was marked pain in the nose, especially on the right side, where the tissues were considerably swollen. The septum was perforated and the nostril was filled with muco-purulent secretion. The patient had been treated by means of local application, tonics and iodides, but without benefit. The question raised was the nature of the ulceration. Opinion was divided as to whether it was simple, tuberculous, or syphilitic.

Dr. **J. DUNDAS GRANT** showed a case of New Growth on the Tonsil in a woman, aged 32 years.

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# LIVERPOOL MEDICAL INSTITUTION.

*Exhibition of Cases and Specimens.—Graves's Disease.—Malaria.—Uterine Curettage.*

A MEETING of this society was held on Jan. 16th, Mr. **RUSHTON PARKER**, the President, being in the chair.

Dr. **EDGAR STEVENSON** showed a girl, aged 15 years, with almost complete Palsy of the External Ocular Muscles. There was marked convergence of the eyes on any attempt to raise the head or to move them. Considerable improvement had resulted from four applications of a high frequency current, the patient now having binocular distant vision.

Dr. **STEVENSON** also showed a woman, aged 25 years, from whom the right lobe of the thyroid gland had been removed four years ago The general symptoms had improved greatly, but the exophthalmos had steadily increased to quite an unusual degree. The corneæ were unaffected and her vision was normal.—Mr. **C. H. B. SHEARS** said that excision of part of the thyroid gland had produced no improvement in the exophthalmos and asked what was the present position of thyroidectomy in these cases. It was remarkable that vision and the mobility of the eyeballs were normal, for the stretching of the optic nerve and external muscles must be extreme.—Mr. **R. J. HAMILTON** noted the perfect closure of the lids in this case and drew attention to the unsatisfactory results of operative treatment for goitre when marked exophthalmos was present.

Dr. **W. CARTER** narrated a case of Graves's Disease in a young man, in which cure resulted, he believed, from the exhibition of diluted hydrofluoric and hydriodic acids. Dr. Carter also mentioned two cases in which partial thyroidectomy was performed; in one death followed in a few days, in the other four years after the operation the symptoms were apparently unchanged.—Dr. **J. R. LOGAN** had seen a case of Graves's disease practically cured by a prolonged course of bromide of potassium and arsenic. He had seen two marked cases in one family.—Dr. **J. HILL ABRAM** said that he had seen marked improvement follow partial thyroidectomy, and in Dr. Stevenson's case the general symptoms were notably less than at the time the patient was under observation at the infirmary. Certainly in no other way did they get such speedy relief from the most dangerous symptoms.

Dr. **R. J. M BUCHANAN** described a case with recurrent attacks of fever in which there was no leucocytosis and in which one or two of the red cells contained a non-pigmented hæmatozoon. The patient had never been out of England but had been bitten freely by mosquitoes in Kent.—Major **ROSS** thought that the diagnosis of malaria was correct.—Dr. **CARTER** said that a former house physician, the late Dr. Henry Welch, had typical ague in 1880 after a few weeks' residence near Lancaster in early autumn, just after the valley of the Lune had been flooded.—Dr. **BUCHANAN** replied.

Dr. **H. BRIGGS** read a paper on the Uterine Curette and Curettage in Gynæcological and Obstetrical Surgery. He said that his paper was mainly founded on a consideration of the question, Was the modern estimate of the value of the curette as shown by its frequent use amply justified by known results? The results thereof were classified as (1) curative, (2) modifying, and (3) exploratory. After reviewing the tests applied to these results, Dr. Briggs said that the most satisfactory effects of curettage were obtained in the treatment of the uterus, sometime after abortion, by the removal of small pieces of chorion; subsequent microscopical investigation for detection of villi should be systematically carried out, otherwise many such cases were described as cures of endometritis. The best use of the curette was indicated by its inventor, Récamier, in 1850. The dull-curette of Gaillard Thomas was advocated by its inventor in the treatment of uterine "fungosities," an "omnibus" title for most affections of the endometrium known about the mid-period in the history of the curette. Since Nélaton, in 1853, followed by Savage, Routh, Olshausen, Bischoff, Matthews Duncan, and Herman (1880) had described cases of chronic hyperplasia, diffuse or polypoid, of the endometrium, many attempts had been made to differentiate glandular, interstitial, and mixed types of endometritis (Hunter Robb, 1896). Who could, even to-day, separate clinically endometritis, adenoma, and adenocarcinoma at a period when treatment or diagnosis by the curette was most important? The results of curettage in this particular were discouraging. Dr. Briggs thought that the estimate of the results of curettage, modifying or exploratory, depended, on the whole, more upon dilatation of the cervix to digital size and the use of the finger than upon the mere and otherwise imperfect scraping of the uterus by the curette. A description of the metal dilators used at the Hospital for Women, Liverpool, since 1888, was given; each dilator was made over four sizes of the English catheter scale in the first one and a half inches from the point. Dr. Briggs then discussed the results obtained in the treatment of metrorrhagia and showed sections of the endometrium from cases in which a classification might be attempted, but only on incomplete pathological evidence. He alluded to the thickening of the endometrium associated with uterine fibroids and showed that removal of the fibroids, when justifiable, was the only trustworthy means of arresting the endometrial thickening. Hence such thickening was probably inflammatory in origin. Dr. Briggs then mentioned several obstinate cases of metrorrhagia. In one Dr. Murray Cairns, the medical attendant, and the patient, aged 40 years, both pleaded for removal of the uterus, and the operation was eventually carried out. In some of the other cases the patients had had the uterus curetted three times by the indications for the abdominal over the vaginal route in the operation for myoma. Among recent methods for hysterectomy those *adopted by Zweifel, with his forci-pressure clamp*, and Bumm, with Kocher's forceps, were demonstrated. A differentiation of the advantages of the Alexander-Adams, Olshausen's, ventro-suspension and ventro-fixation modes of dealing with retro-deviations was entered into, as affecting the child-bearing period of life. The advantage of performing vaginal ovariotomy for cystoma was questioned, and the choice of abdominal and vaginal cœliotomy in diseases of the adnexa, as influenced by bi-section of the uterus, was considered, with the conditions of complications which gave to colpotomy the preference over vaginal cœliotomy. The justification for an occasional danger in the performance of conservative operations on the adnexa was discussed, and then the four vital points in relation to hysterectomy for carcinoma were touched upon—namely, early pan-hysterectomy, the demarcation between operable and inoperable cases, the best operation when disease had extended outside the uterus (Wertheim's operation was here described), and lastly, the alternatives to operation. The lecture closed with a retrospect of the position of gynæcology at present as compared with that of 22 years ago. All the matters touched upon in the lecture were illustrated by specimens bearing on the questions raised.

South-West London Medical Society.—A meeting of this society was held on Jan. 8th, Mr. John Gay, the President, being in the chair.—Dr. G. Herschell read a paper upon the Examination of the Stomach Contents as applicable to General Practice. After pointing out the small number of tests which were actually required and the facility with which they could be applied he demonstrated the following: the Congo-red test for free acid; Gunzberg's phloroglucin-vanillin test for free hydrochloric acid; the Topfer method of quantitative analysis of the gastric acids by titration with decinormal solution of sodium hydrate, using phenophthallein, alizarin, and dimethyl-amido-azo-benzol as indicators; the method of ascertaining the presence of rennin and rennin zymogen; and the estimation of the digestive power of the gastric juice by artificial digestion of white of egg; and he showed the successive changes of starch mucilage into erythro-dextrin-achroödextrin, maltose, and dextrin under the influence of ptyalin, and the reactions which were given at different stages with Lugol's and Fehling's solutions respectively. He concluded by exhibiting Turck's aspirator for obtaining gastric contents for analysis, Einhorn's intragastric spray and stomach bucket, Boardman Reed's intragastric electrode, Van Valsah's *stomach*-tube, and his own three-way-tap apparatus for washing out the stomach.—The paper was discussed by Dr. G. Richardson, Mr. C. R. C. Lyster, Dr. L. S. MacManus, and the President.—A hearty vote of thanks was awarded to Dr. Herschell for his paper.

Ipswich Clinical Society.—The annual meeting of this society was held on Jan. 9th.—The retiring President, Mr. J. F. C. Hossack, read a most interesting paper on Quakery and Charlatanism in their Relation to Modern Medicine.—The following officers were then elected by ballot:—President: Dr. G. Vincent. Vice-President: Mr. J. F. C. Hossack, Honorary secretary: Dr. W. A. Gibb. Council: Dr. H. H. Brown, Mr. Branford Edwards, Mr. C. K. Moseley, Mr. J. Staddon, Dr. Fowler Ward, and Dr. A. Paterson.—Dr. J. Purves Stewart was proposed, seconded, and unanimously elected an honorary member of the society.

Folkestone Medical Society.—The annual meeting of this society was held on Jan. 10th at the Burlington Hotel by invitation of the President, Dr. W. J. Tyson. After the annual report had been adopted Dr. C. E. Perry thanked Dr. Tyson for his services to the society as its President during the past three years.—Dr. T. Eastes was then unanimously elected President, Dr. J. Hackney and Dr. Tyson Vice-presidents, and Dr. E. G. Sworder honorary secretary and treasurer.—A musical programme concluded the meeting.

Pathological Society of Manchester.—A meeting of this society was held on Jan. 15th, Mr. J. Collier, the President, being in the chair.—Dr. A. Donald mentioned a case of *Unruptured* Tubal Pregnancy, and showed the specimen.—Dr. Donald and Dr. W. E. Fothergill showed Microscopical Sections from a case of Folliculoma Ovarii Malignum, and made a short communication.—Dr. F. C. Moore described Changes in the Pancreas observed in Diabetes Mellitus, and showed specimens.—Dr. P. Prebble exhibited Salivary and other Calculi.—Mr. Wolstenholme exhibited Sections of a large Aneurysm and Thrombus of a Branch of the Anterior Mesenteric Artery from a young horse, the condition having been produced by the irritation set up by wandering nematodes—immature sclerostomata equina (strongylus armatus). A number of specimens of the parasite taken from the lesion were shown.

## Reviews and Notices of Books.

*Impressions of a Doctor in Khaki.* By Francis E. Fremantle, M.A., M.B., *B.Ch. Oxon.*, M.R.C.P. *Lond.*, late Civil Surgeon to H.M. Forces in South Africa. London: John Murray. 1901. Pp. 549. Price 10*s.* 6*d.* net.

We have read this book with much interest, for its author saw a great deal in South Africa and has consequently a good deal to tell and he tells it well—that is, in a fresh and natural way. It falls to the lot of very few to have had such a field of observation and to have encountered such a varied experience within the same limits of time and opportunity. Under such circumstances it was well worth while to preserve and to publish a record of the author's impressions which are always more or less interesting and suggestive and sometimes valuable and instructive. With much of what is said we quite agree, but we confess, nevertheless, to have laid down the book with a somewhat mixed feeling regarding what he has to say about the army medical department and its officers. Notwithstanding the remarks of the author in his preface and those which he has here and there interspersed in the pages of his book in their defence against the criticisms to which they have been subjected the tone adopted by him is, on the whole, one of disparagement of the medical service and its officers. Every community, it is needless to say, has its good, bad, and indifferent members, and we can only suppose that the author had the bad luck at the outset of his army experience to have come across some undesirable or uncongenial individuals who either fell below his professional standard or ran counter to his views. It may be, after all, that combatant officers at the front in referring to "the medical department in terms of unstinted praise" (page 390) knew something of what they were talking about; and that the medical "system," despite all its real and alleged drawbacks and shortcomings, could not have been as bad as has been represented if the two "German army-doctors" who had "done four weeks' work at De Aar and the front, where they helped personally in the work of the field hospitals" could have been so "very favourably impressed with it" (page 130). These German medical *attachés* were, it may be assumed, well qualified to speak on the point. The system, by the way, is, in principle, much the same as their own which they saw put to the test in the Franco-Prussian war, but which had never before been applied under such conditions and circumstances as obtained in South Africa, because these were unique, and that being so made all the difference in the world. There are many medical officers of experience who think that it is in an increased development of our present medical and hospital system (with some modifications to adapt it better to the diverse and varying conditions of war) rather than in any radical change of that system that the best results are to be hoped for. As regards the maintenance of professional efficiency we have always advocated that increased opportunities and facilities should be given to medical officers in this respect and that greater chances of reward and distinction should be held out to such of them as showed any high professional or scientific merits. The Army nerves were uninjured, but a hole was present in the brachial artery plugged up by clot. Ligatures were placed over the torn ends as well as over the superior profunda branch and the ends were cut off. There was never any interference with the circulation in the arm. 2. A girl after second operation (excision) for Plexiform Angioma of the Scalp. At the preliminary operation the feeding arteries of the cirsoid aneurysm were ligatured. Electrolysis subsequently applied had little or no effect in reducing the pulsation—in fact, on her return to the hospital the pulsation was greater than it was before. A horseshoe-shaped incision with its base in front was made round the tumour. Mr. Stiles had great difficulty in dissecting out the vessels and the hæmorrhage was very great. The application of peroxide of hydrogen stopped the bleeding from the small vessels, while sutures around the edge controlled the larger ones. The wound healed well and now there was merely the scar of the operation present.

Dr. **WILLIAM ELDER** showed a man the whole of whose Thoracic and Abdominal Viscera were Transposed; the sigmoid flexure was digitally proved to be on the right side The man was perfectly healthy.

Dr. **C. W. MACGILLIVRAY** exhibited a girl, aged four and a half years, on whom he had operated for Obstruction of the Bowels with Suppurating Tuberculous Retro-peritoneal Glands Since the age of one year she had been subject to attacks of abdominal pain. Complete obstruction of the bowels commenced on Nov. 27th last with fæcal vomiting. When admitted to the Edinburgh Royal Infirmary on Dec. 3rd she was very collapsed and the abdomen was greatly distended in the middle line. On opening the abdomen the small intestine was found to be bound down by fibrous bands one and a half inches from the ileo-cæcal valve. These bands were divided and ligatured, when the intestinal contents immediately passed into the large intestine. Behind the constriction was an irregular lump, of the size of a Tangerine orange, composed of suppurating tuberculous glands which was removed.

Dr. **W. LESLIE MACKENZIE** demonstrated a simple form of Spray Pump for Disinfection. He had designed it to meet the case of small towns and hospitals for which the regulation spray was too expensive and too large. It was merely a gardening syringe with a properly adapted nozzle on a long arm and connected by bicycle indiarubber tubing to a force pump. The whole apparatus weighed only eight pounds, was easily disjointed, and so could be carried on a bicycle by the sanitary inspector. A three-nozzle piece could also be attached. To reach very high ceilings the tubing could be lengthened and the nozzle could be attached to the top of a Japanese fishing-rod.

Dr. **D. CHALMERS WATSON** exhibited photographs from a case of Cerebral Thrombosis in a Horse (unconscious for 24 hours) followed by complete recovery.

Mr. **STILES** showed as card specimens: (1) A portion of the Brachial Artery from the boy whom he had shown; and (2) a large Congenital Strangulated Cyst, weighing one and three-quarter pounds, which he had removed, together with six inches of small intestine, from a child, aged one year and eight months, who was suffering from acute intestinal obstruction.

Dr. **ALEXANDER BRUCE** showed a Transverse Section of Aortic Aneurysm

Mr. **J. M. COTTERILL** exhibited: (1) A Fœtus and Sac successfully removed in a case of Intra-peritoneal Rupture of a Tubal Gestation; (2) an Aneurysm of the Posterior Ulnar Recurrent Artery; (3) Semilunar Cartilages taken from a series of cases of Internal Derangement of the Knee-joint; (4) Parts removed in a case of Fracture of the Sternum with Dislocation of the Spine; and (5) a Kidney removed from a patient suffering from Profuse Hæmaturia.

Dr. **MACGILLIVRAY** showed a large Papilloma of the Rectum.

Dr. **GEORGE A. GIBSON** and Dr. **STEWART MCDONALD** showed: (1) A Spinal Cord showing Pseudo-Tabes Syphilitica, with a microscopical demonstration; and (2) Hæmorrhage into the Cusps of the Pulmonary Valve, with microscopical sections.

Mr. **C. W. CATHCART** gave a demonstration on an Adaptation by Dr. Ramsay Smith of the Freezing Microtome for Tropical Climates and of his rapid method of mounting permanent microscopical sections of fresh tumours. The three features which Mr. Cathcart thought specially to deserve attention were: 1. The adaptation of the freezing method of cutting microscopical sections to tropical climates. This was attained by embedding the tissues in cork and spraying ethyl chloride directly on to the tissue. Mr. Cathcart found that his ether spray used in this way did as well as ethyl chloride in a room with a temperature of 60° F. and was much cheaper. 2. The method of cutting, which consisted of a continuous raising of the screw with the left hand simultaneously with a rapid to-and-fro movement of the knife with the right, no attempt being made to adapt the screw at each cut. This was not only rapid but it gave exceedingly good sections, although the exact measurement of them was not attempted. 3 The method of mounting permanently sections of fresh tissues. This consisted in floating out the sections in from 2 to 4 per cent. of formalin after being cut, then floating on to a slide and staining with hæmatoxylin or eosin, dehydrating with absolute alcohol, and mounting in Canada balsam. Dr. Ramsay Smith found that he could cut sections at the rate of from 300 to 400 per minute and prepare and complete a stained permanent preparation within six or seven minutes after receiving the fresh tissue from the body or from the operating theatre. Mr. Cathcart referred the members for complete details of the method to Dr. Ramsay Smith's paper in the January issue of the *Scottish Medical and Surgical Journal.*

Dr. **ELDER** and Mr. **ALEXANDER MILES** contributed a paper on a successful case of Removal of a Tumour from the Left Prefrontal Lobe of the Brain.—In the discussion which followed Dr. **BYROM BRAMWELL**, after congratulating Dr. Elder and Mr. Miles on the successful issue of the case, said that his experience confirmed that of Dr. Elder that very few cerebral tumours were benefited by operation. He himself remembered only one successful case in many which had been operated upon. The chief interest of the paper lay in the points of symptomatology and diagnosis Three years ago he had recorded 11 cases of frontal tumour in which there was no doubt of the diagnosis. In seven of these there were well-marked mental symptoms, while in four there were none. Amongst other symptoms which he had noted in these cases were mental enfeeblement, loss of the power of attention, irritability, incoherence, delusions of suspicion, &c. It was difficult to say how far the symptoms were due to the tumour in the prefrontal lobe or to the pressure and other causes affecting other parts of the brain. Lesions diffused over the cortex might produce absolutely similar symptoms to those caused by a prefrontal tumour. He thought that it was not possible to draw a distinction between some cases of general paralysis and frontal tumour and he described a case to illustrate these difficulties in diagnosis. They had to depend more on the physical signs than on the mental symptoms in order to arrive at a trustworthy diagnosis of prefrontal tumour.—Dr. **EDWIN BRAMWELL** said that pain in the back was a very frequent concomitant of cerebral tumour, so much so that he invariably inquired into this symptom in investigating cases of cerebral tumour.—Dr. **ALEXANDER BRUCE** referred to the distinct degeneration of the posterior nerve-roots seen in many cases of cerebral tumour. The question was whether the nerve-endings were irritated by the accumulation of cerebro-spinal fluid. The pressure on the nerve-roots might give this appearance and might also account for the apparently meaningless sensory disturbances. He referred also to the difficulty in diagnosis between prefrontal tumour and general paralysis.—Mr. **COTTERILL**, Dr. **LOGAN TURNER**, and Dr. **H. M. CHURCH** also spoke.—Dr. **ELDER**, in reply, said that they were very apt to have a blurring of the symptoms on account of the pressure. He had noted that some symptoms were more marked than might have been expected and that some cases of general paralysis had symptoms specially referable to the frontal lobes, and in such cases it was found that the disease had affected these lobes to a special degree.

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**CORK MEDICAL AND SURGICAL SOCIETY.**—A meeting of this society was held on Jan. 13th, Dr. T. G. Atkins, the President, being in the chair.—Dr. McNaughton Jones (London) delivered an address on the Critical Analysis of Some Recent Gynæcological Methods. Having discussed the conditions essential for an ideal asepsis the most recent methods of preparing the patient, especially those adopted by Professor Sanger and Professor Bumm at Prague and Halle respectively, were described. The advantage of colletin as a dressing and of bronze aluminium wire or celloidinzwirn as non-absorbable materials for skin-closure was shown. The conditions under which preference should be given to myomectomy over pan-hysterectomy and the question of removal of the ovaries were discussed, as well as ases, but it fails if the pylorus itself is ulcerated. It acts y providing free drainage.

The complications of gastric ulcer are very numerous; n this work we find a table containing 23 complications. One of the most important of these is hæmorrhage. Formerly it was often stated that "bleeding from the stomach the result of ulceration rarely proves fatal," but this opinion can hardly be held now. Surgical aid is required in most of the more severe forms and definitely after two severe hæmorrhages, for "experience tells us that further hæmorrhages are almost certain to occur unless preventive measures be adopted." The authors give a very good account of the technique of the operation for gastric hæmorrhage. In this connexion we may mention a very rare condition—namely, post-operative hæmatemesis. The authors point out that it occurs after operations for intestinal obstruction, tuberculous peritonitis, herniotomy, ovariotomy, and operations on the gall-bladder. Yet it is difficult to say to what it is due. Sepsis appears unlikely and the anæsthetic cannot be the cause as it has occurred when cocaine has been used. General treatment seems best for this condition, while the only two cases treated surgically by Reichard terminated fatally. The other important complication of gastric ulcer is perforation The differential diagnosis in such cases here is often easy, as a history of previous gastric ulcer can be obtained in 92 per cent; a case, however, is quoted in which there was a history of pain after food, but the symptoms which simulated perforation of a gastric ulcer were due to rupture of an ectopic gestation.

Perforation of a gastric ulcer demands immediate surgical treatment After the ulcer has been sutured the peritoneal cavity has to be cleansed. The authors prefer flushing with sterile salt solution at 105° F, and they say that it should be continued until the fluid returns clear. The several peritoneal pouches need especial care If, however, general septic peritonitis has developed, one or more free incisions may be ade, and the intestinal coils are then withdrawn sufficiently allow the operator to cleanse all recesses and folds with um salt solution and gauze pledgets. In 20 per cent. two cers are present; therefore, after one ulcer has been found others should be looked for.

We are glad to see that attention is drawn to the importance of the bacteriology of the extravasated material. Only by differences in the organisms present can we account for many of the great differences in course which are met with.

The authors consider that the prognosis after perforation depends on four factors: (1) the condition of the stomach, whether full or empty; (2) the time elapsing between perforation and operation; (3) the size and number of the perforations; and (4) the presence or absence and the severity of the vomiting. As to the results, without doubt successful cases are much more likely to be recorded than those which end fatally, and therefore too much stress must not be laid on the statistics.

Probably the oldest operation on the stomach is gastrostomy, which the writers tell us was first suggested by Egeberg, a Norwegian military surgeon, in 1837, but it was really first performed by Becher as long ago as 1635. The method specially preferred is Frank's, as modified by Mr. Mayo Robson. When the patient is much reduced in strength cocaine anæsthesia is quite sufficient. In all, the authors have performed 26 cases of gastrostomy with only five deaths.

Dilatation of the stomach from atony was until recently practically beyond treatment, either medical or surgical. Bircher, in 1890, reported three cases treated by gastroplication, and many others have since been performed. One of the authors, Mr. Moynihan, in 1898 described an ingenious method of gastroplication, and the results in the three cases in which the writers have employed it have been satisfactory.

There are many other matters dealt with in this volume which are of both interest and importance, but we think we have said enough to show the character of the work. It is eminently practical and should prove of value to all those, both physicians and surgeons, who are interested in the modern treatment of diseases of the stomach.

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*Annual and Analytical Cyclopædia of Practical Medicine.* By CHARLES E. DE M. SAJOUS, M.D., and 100 Associate Editors. Illustrated with chromo-lithographs, engravings, and maps. Philadelphia, New York, and Chicago: F. A. Davis. 1901. Pp. 1043.

THIS volume forms the last of the first series of the present work. It contains subjects coming under the heading of titles commencing with the letters R to Z, or, to be more exact, from "Diseases of the Rectum" to "Zinc." The promises enumerated in the preface to the first volume of the series have been well fulfilled, as is proved by reference to the voluminous index given at the end of the present volume. The whole publication forms a mass of literature probably never before brought together within the limits of six books.

The work presents "all the general diseases usually described in text-books," in addition to the main progressive features which have been furnished by the past decade. Surgical subjects have been given space corresponding with their practical importance. As regards "therapeutics," the subjects considered represent the remedies still more or less used, our text-books being replete with agents which may be said to be obsolete from the fact that they have been replaced by others of far greater efficacy.

The present volume contains a large number of valuable articles, though we have not space to comment at length on any of them. Particularly valuable contributions are those on Diseases of the Stomach, by Professor D. D. Stewart of Philadelphia; on Diseases of the Spinal Cord, by Dr. W. B Pritchard of New York; on Syphilis, by Professor G. F. Lydston of Chicago; on Wounds and Injuries of the Chest, by Professor L. A. Stimson and Dr. E. L. Keyes, jun., of New York; and on Yellow Fever, by Surgeon-General Wyman of Washington. By the way, we cannot agree with Dr. Leveson of Copenhagen, who contributes a paper on Rheumatism, when he adopts "chronic articular rheumatism" and "rheumatoid arthritis" as synonymous terms.

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## LIBRARY TABLE.

*A Manual of Minor Surgery and Bandaging for the Use of House Surgeons, Dressers, and Junior Practitioners.* By CHRISTOPHER HEATH, F.R C.S. Eng., LL.D. Montreal, Consulting Surgeon to University College Hospital, and Emeritus Professor of Clinical Surgery in University College, London. Twelfth edition. Revised by BILTON POLLARD, F.R C.S. Eng., Surgeon to University College Hospital and Teacher of Operative Surgery in University College, London. London: J. & A. Churchill. 1901. Pp. 426. Price 6*s.* 6*d.*—The many medical men who have learnt their bandaging and minor surgery from this little volume will feel no surprise at hearing that the work has reached a twelfth edition, for it thoroughly deserves such long-enduring success. Its clearness and accuracy are known to many generations of students. The old cause for fear when a book passes through many editions is that sufficient care may not have been taken to keep it up to date. In this case such fear is groundless, for Mr. Heath has entrusted to Mr. Bilton Pollard the task of preparing this edition and the work has been done well. The account of the methods of asepsis and antisepsis especially is good. We know of no book which is likely to prove more useful to a recently appointed house surgeon than this; it will be of assistance in many difficulties and may save him from many mistakes. The

Medical Service as at present constituted has little or nothing to offer in these directions. That this is so is no fault, however, of the medical officers.

Towards the conclusion of the volume the author, after putting forward a plan which would be nearly tantamount to doing away with an army medical department altogether, very strongly advocates the new scheme outlined by Mr. Brodrick's Committee, to which he acted as assistant secretary. We have no desire or intention to enter now upon controversial matters about which there exists, to say the least, much difference of opinion.

Dr. Fremantle went out to South Africa from Guy's Hospital and, as our readers probably know, some strictures of his which appeared in print attracted notice and gave rise to some temporary misunderstanding with the authorities. The subject is very fairly stated and referred to in this volume. After describing the voyage on his first going out in the *Roslin Castle* and his landing at Cape Town, he gives an account of his service at Wynberg, where he saw some of the wounded from Belmont, Graspan, and Magersfontein, followed by his being ordered home on the *Avoca* and of his subsequent return to South Africa. What happened to him there, together with his war experiences, professional and otherwise, at Bloemfontein, in the advance to Pretoria, and elsewhere, during his service at the front, is very well described and well worth reading. We may add that the volume has several excellent illustrations and maps, is printed in good type, and is easy and pleasant to read.

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*A Treatise on Orthopædic Surgery.* By ROYAL WHITMAN, M.D., M.R.C.S. Eng., Instructor in Orthopædic Surgery and Chief of the Orthopædic Department of the Vanderbilt Clinic in the College of Physicians and Surgeons of Columbia University, &c. Illustrated with 447 Engravings. London: Henry Kimpton. 1901. Pp. 650. Price 25*s.* net.

ORTHOPÆDIC surgery has been for many years peculiarly indebted to the work of American surgeons, and it is due probably to that fact that so many books on orthopædics have issued recently from the press of the United States. The present volume is one of the most satisfactory works of the kind that have come before us; in it the subject is treated very systematically, numerous illustrations are provided to elucidate the text, and the treatment, which is discussed very fully, is reasonable and trustworthy.

The first chapter deals with tuberculous caries of the spine. This is probably the most important portion of orthopædic surgery. The consequences when the disease goes untreated cannot be surpassed in severity, while nowhere are the results more satisfactory when suitable and timely treatment is applied. An accurate knowledge of the very earliest signs is therefore of the first importance, and Dr. Whitman gives them exceedingly clearly. We may mention a useful method (new, at least, to us) of demonstrating unilateral contraction of the psoas in spinal caries. The child is placed on the back and the legs are allowed to hang over the edge of the table, when the unaffected thigh will drop below its fellow.

With regard to lateral curvature of the spine the author gives a very full account of the exercises which may be employed. We thoroughly agree with him as to the desirability of employing only exceptionally fixed supports for this condition.

Dr. Whitman thinks that in the treatment of congenital dislocation of the hip Lorenz's method will suffice for 25 per cent. of the patients; and should this method fail he considers that the "open" method may usefully follow and is rendered much simpler by the preceding attempts at forcible correction.

The author discusses the etiology of coxa vara; he does not believe it to be rachitic in origin; he considers that it is "one of the group of static deformities of the lower extremity caused by a disproportion between the strength of the supporting structure and the burden that is put upon it." This is, no doubt, true of many of the cases occurring in adolescence, but it will not serve to explain the cases which develop at an earlier age.

Some very valuable remarks on the correct shape of boots are given in connexion with acquired deformities of the foot.

Much more might be said, but it is unnecessary. We may, however, mention a useful feature. After many of the longer sections a summary is given of the chief points; these additions should prove of great value to readers.

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*Diseases of the Stomach and their Surgical Treatment.* By A. W. MAYO ROBSON, F.R.C.S. Eng., Member of Council and Hunterian Professor (1897 and 1900), Royal College of Surgeons of England, Senior Surgeon to the General Infirmary at Leeds, Emeritus Professor of Surgery in the Yorkshire College of the Victoria University, &c.; and B. G. A. MOYNIHAN, M.S. Lond., F.R.C.S. Eng., Assistant Surgeon, Leeds General Infirmary, Arris and Gale Lecturer (1899 and 1900), and Member of the Board of Examiners in Anatomy for the Fellowship, Royal College of Surgeons of England, &c. London: Baillière, Tindall, and Cox. 1901. Pp. 308. Price 15*s.* net.

IN 1900 Mr. Mayo Robson delivered the Hunterian Lectures at the Royal College of Surgeons of England on the Surgery of the Stomach, and this has formed the foundation on which this book has been built, though the two authors hold themselves "jointly responsible" for every statement in the book. As to the general results of gastric surgery we may quote from a statement in the preface that one of the writers has in his private clinic had only one death in the last 75 consecutive operations, and that death was from accidental perforation on the twelfth day, and the other has had a series of 47 hospital and private cases with only three deaths.

The conditions for which operations may be performed on the stomach are numerous, but some of them are of much greater importance than others. Perhaps gastric ulcer and its complications may be looked upon as the chief morbid state which demands surgical aid, and we find in this volume 120 pages devoted to this subject. The etiology of gastric ulcer has always formed a favourite subject for the formation of theories, but it cannot be said that any theory hitherto suggested explains satisfactorily the occurrence of this ulcer The prognosis of gastric ulcer is grave; according to Lebert death occurs in 10 per cent. of all ulcers—6½ per cent. from perforation and 3½ from hæmorrhage Habershon says that perforation occurs in 18 per cent. of all gastric ulcers, and Müller considers that the mortality from hæmorrhage is 11 per cent., but others give it as less. Even if we adopt the lowest figures of the death-rate from gastric ulcer we find it large, and if we agree with Brinton in putting the mortality at 50 per cent. the result is appalling. There is here evidently a large scope for the work of the surgeon, though of course the medicinal and dietetic treatment is of great importance.

The best operative treatment for a gastric ulcer which has not yet perforated can hardly be said to be settled. Excision is, as a rule, unnecessary, but in some cases of bleeding ulcers it cannot be avoided, and also where there is so much induration that a suspicion of malignant disease arises. Gastro-enterostomy is, the authors tell us, the operation to be relied on in the treatment of ulcer of the stomach; it gives physiological rest to the organ by drainage. They prefer the posterior operation, the hinder wall of the stomach being united to the first part of the jejunum. The posterior operation is preferred as it is less frequently followed by vomiting. Pyloroplasty is useful in certain familiar with the practical sides of the subject, including photography and electricity, recording their experience as to the best manner of operating and as to the most suitable and effective apparatus for the purpose. The book will be found very useful by medical men.

## JOURNALS AND MAGAZINES.

*The Practitioner.*—An adequate series of articles upon Hypertrophy and Dilatation of the Heart forms the bulk of the *Practitioner* for January. The subject is fairly conclusively discussed by the various articles taken *en masse*, but, as must inevitably happen when several writers are engaged upon the same subject in the same journal without an opportunity presumably of seeing each other's contributions beforehand, there is a tiresome amount of repetition. Professor T. C. Allbutt's article is admirable both in matter and, as is always the case with this writer, in the manner of putting it forward. Such discourses repay perusal for their style even if they give no novel information. In this case the writer speaks, as does Dr. William Collier of Oxford, from a position of peculiar advantage upon the question of heart strain and athletics. Professor Allbutt's opinion leans strongly to the view that exercise, pure and simple, rarely damages the heart, and that toxic influences, such as those from tobacco and alcohol, are the enemies to be avoided with the greatest diligence. In contrast to Professor Allbutt's view is that of Dr. I. Burney Yeo who states that "it is now quite common to meet conditions of grave cardiac strain from excess of muscular efforts in athletic contests." Professor Allbutt, however, is himself severely critical of excessive athletics for young boys, and gives an interesting instance of the evil effects that may arise. Readers will expect to find in these articles a careful consideration of the Nauheim treatment and they will not be disappointed. The class of case in which exercises and baths are to be recommended or withheld is discussed particularly by Dr. Burney Yeo and Dr. Richard Caton. Dr. A. E. Sansom contributes an interesting but diffuse article on Recent Study and Treatment as regards Hypertrophy and Dilatation. The medico-literary causerie consists of a comprehensive historical review of quackery.

# Analytical Records
FROM
# THE LANCET LABORATORY.

### (1) "TABLOID" HYDRARG. PERCHLOR., GR. $\frac{1}{16}$TH, ET POTASS. IODID., GR. 5; AND (2) "ENULE" MORPHINE AND BELLADONNA.

(BURROUGHS, WELLCOME, AND CO., SNOW HILL BUILDINGS, LONDON, E.C.)

IN those cases in which the continued administration of mercury with iodide of potassium is required the "tabloid" containing exact quantities of these salts is useful. We find that this tabloid dissolves readily in water and we are able to state that the salts are present in the precise amounts indicated. The tabloids are serviceable when regularity of treatment is important. A new formula has recently been added to the list of "enule" rectal suppositories of this firm: morphine hydrochloride, $\frac{1}{4}$ gr., and extract of belladonna, $\frac{1}{2}$ gr. The enule consists of a hermetically-sealed sheath of pure tinfoil which effectually protects the contents from deterioration or from outside contamination. The combination is, of course, sedative and anodyne, on which account it is useful in irritable conditions of the rectum.

### PLASMON BUTTER.

(INTERNATIONAL PLASMON, LIMITED, 66A, FARRINGDON-STREET, LONDON, E.C.)

The admixture of plasmon with butter must be regarded as a sound physiological procedure, since both are important nourishing constituents of normal milk. The mixture so obtained has also the advantage of possessing a very attractive taste. When plasmon—that is to say, the unaltered proteid of milk—is added to butter in a special way it endows it with a rich creamy flavour not unlike the flavour of Devonshire clotted cream. In appearance also plasmon butter resembles clotted cream. We have examined both plasmon butter and the ordinary butter used for making the mixture. The following are the results of the analysis: plasmon butter moisture, 41·20 per cent.; butter fat, 51·50 per cent.; dry plasmon, 6 58 per cent.; salt 0·72 per cent.; ordinary butter mixed with plasmon—moisture. 9 92 per cent.; fat, 87·71 per cent.; curd, 1·76 per cent.; and salt, 0 61 per cent. The addition of a proteid (identically in the same condition chemically and physiologically as in milk) to butter affords undoubtedly a valuable dietetic combination, and more especially for invalid purposes in which powerful nutritives are indicated. The Plasmon is introduced in the form of jelly. About 15 per cent. of Plasmon jelly is added to the butter. Plasmon butter is pleasant to take and should prove an excellent substitute for cod-liver oil. It contains both a proteid and a fat of a highly assimilable character, each of which, moreover, favours the nutritive processes. We have received also a copy of the Plasmon Cookery-book, containing a great number of recipes in which Plasmon is employed with undoubted dietetic advantages. Directions for preparing a great variety of dishes are given.

### CARICA COCOA.

(PUCKA COFFEE CO., 30, GALLOWAY-STREET, MAXWELLTOWN, DUMFRIES.)

The distinguishing feature of this cocoa is that it contains a vegetable enzyme and on this account the preparation is regarded as being of an easily digestible character. It is difficult to see how the cocoa can be favourably modified by the addition of a digestive ferment the activity of which is destroyed by boiling water. If an infusion of this cocoa were first maintained at blood temperature for some time before cooking some digestive action would probably take place. The cocoa used is of excellent quality and flavour and has evidently undergone some special preparation, as the amount of mineral matter is excessive and the alkalinity is decidedly high. Our analysis gave the following results: moisture, 4·63 per cent.; mineral matter, 8·66 per cent.; fat, 31·95 per cent.; and non-nitrogenous proteid and fibre, 54·76 per cent. The alkalinity of the mineral matter was equivalent to 2·8 per cent. of potash (calculated as $K_2O$).

### AQUARIUS WATER SOFTENER.

(THE LONDON AND GENERAL WATER PURIFYING CO., 157, STRAND, LONDON, W.C.)

We find by analysis that the ingredient of this powder is well adapted for the purpose of rendering hard water soft. The addition of the powder, however, only removes the hardness due to carbonate of lime dissolved in carbonic acid gas and not that which may be due to sulphate of magnesium or of calcium. In short, the addition of the powder removes temporary hardness to the same degree as would continual boiling. The powder, however, is very convenient for the purpose. Used in the proportions indicated it would do no harm, adding nothing to the soluble constituents of the water and eliminating the chief source of hardness.

### "BISPEP."

(MUNDY, MAHONY, AND CO., 36, PARADISE-STREET, BIRMINGHAM.)

The formula of this preparation is very well known. It contains aromatics, bismuth, and ammonia carbonate, pepsin, present edition is fully worthy of those which have preceded it.

*A Practical Treatise on Genito-Urinary and Venereal Diseases and Syphilis.* By ROBERT W. TAYLOR, A.M., M.D., Clinical Professor of Venereal Diseases at the College of Physicians and Surgeons (Columbia University), New York; Surgeon to Bellevue Hospital, &c. Second edition, thoroughly revised, with 138 Illustrations and 27 Plates in Colours and Monotone. London: Henry Kimpton. 1901. Pp. 722. Price 25s.—It is a little difficult to see why the title of this work apparently excludes syphilis from being a venereal disease; probably the intention is merely to draw attention to the fact that syphilis is included in the volume. The work has, the author tells us, been written to occupy a position midway between an encyclopædia and an epitome, and we think that Dr. Taylor has been successful. The book is quite abreast of the present-day knowledge of these important subjects, and the treatment is sufficiently full to enable a medical man to carry it out satisfactorily, while no space has been wasted on the description of obsolete methods. This is a decided gain, for the number of methods now employed is so large that no time can be devoted to processes which have been rejected as useless or unsatisfactory. The account of gonorrhœa and its complications is especially good, and we thoroughly agree with the author's description of many of the methods of treating gonorrhœa as "fads." He points out that most of these methods which are supposed to "abort" gonorrhœa in five or 10 days leave an infectious mucous discharge. The illustrations are good, especially those which are coloured. We consider that this new edition can be confidently recommended as complete and trustworthy.

*Photographic Atlas of the Diseases of the Skin: a Series of 80 Plates, comprising more than 100 Illustrations, with Descriptive Text, and a Treatise on Cutaneous Therapeutics.* By GEORGE HENRY FOX, A.M., M.D., Clinical Professor of Diseases of the Skin, College of Physicians and Surgeons, New York, &c. In 12 parts. Parts V. to XII. Philadelphia and London: J. B. Lippincott Company. 1901. Price 6s. each part.—We have already expressed a very favourable opinion on the first four parts of this work, and the succeeding eight parts are equally satisfactory. They will form, when the issue is complete, an excellent atlas of cutaneous disease. The chief objection to the photographic representation of skin diseases is the tendency for the reds to come out black on account of the small actinic power of red light. In these plates this difficulty has been in great measure obviated and the results are very good indeed. The text and the remarks on treatment are all that could be desired.

*Études de Clinique Chirurgicale.* Par le Dr. ANTOINE PACHECO MENDES, Professeur de Clinique Chirurgicale à la Faculté de Médecine de Bahia. Avec 26 figures dans le texte dont 4 en couleur. Paris: Librarie Médicale O. Berthier. 1901. Pp 200.—There is a fairly well-known school of medicine at Bahia—in fact, it may be said to be one of the chief medical schools of South America; but in this country comparatively little is heard of the work done there, and this must be attributed chiefly to the fact that Portuguese is very little known here. The volume before us is written in French and therefore appeals to a larger circle of readers. Dr. Mendes has put together a number of interesting observations which he has made in his clinic, and he tells us that he hopes to publish another volume when he has accumulated a sufficiency of new material. There are 22 sections in the book and each deals with a single subject. We may mention a few of the more important. The first is on the Employment of Sulphur in Local Tuberculosis. The author expresses himself as very well pleased with this substance when used after scraping, and he draws especial attention to the little likelihood of return of the disease when sulphur is employed. He cites many cases in which the use of sulphur was followed by recovery, but he utters a warning that the application of sulphur is by no means painless. A valuable article is concerned with Aneurysm of the Gluteal Artery. It contains a table of 50 cases which the author has collected. In some of the cases, however, the aneurysm appears to have been connected with the sciatic artery. Dr. Mendes is in favour of extirpation of aneurysms, not merely in the gluteal region, but wherever situated. The author also describes a method of removing hæmorrhoids which is not absolutely new, but has been very little used. It consists in dissecting up the mucous membrane from the pedicle of the hæmorrhoid, tying the pedicle with catgut, then fashioning two small flaps from the mucous membrane, removing the pile and suturing the flaps together. Every one of the subjects discussed is treated in a novel manner and we may look upon this little book as a distinct contribution to surgical literature.

*Essentials of Gynæcology* (Arranged in the Form of Questions and Answers). By E. B. CRAGIN, M.D., and FRANK S. MATHEWS, M.D. Fifth edition, thoroughly revised. With 57 Illustrations. London: Henry Kimpton. 1901. Pp. 207. Price 4s. net.—This volume, of the series known as "Kimpton's Student's Essentials," should be of some value to the students of gynæcology. The book is in no sense to be considered as complete, but is intended to assist the student in a review and summary of work done. It has reached a fifth edition and we may conclude is bought and used. For such men as are unable to attend the excellent tutorial classes now held in all large hospitals the book will, no doubt, prove valuable, and, indeed, it may prove suggestive even to the teacher of such classes in providing him with a number of suggestive elementary questions.

*A Manual of Obstetrics.* By A. F. KING, M.D. Eighth edition, revised and enlarged. With 264 Illustrations. London: Henry Kimpton. 1901. Demy 8vo. Pp. 612. Price 12s. 6d net.—We need say but little about a book which has reached its eighth edition, since this fact alone is sufficient to demonstrate its excellence. As only two years have elapsed since the appearance of the last edition of Dr. King's "Manual of Obstetrics" very slight alteration has been required. The chief addition consists of 41 new illustrations which have been selected from the works of American authors. Although, as the author points out, the book remains elementary, no attempt having been made to develop it into a systematic text-book, yet it is steadily growing in size The present edition contains 612 pages, as compared with 574 pages in the last edition. The book is, on the whole, well up to date, and we can recommend it as a good example of an elementary manual of obstetric medicine.

*Practical Radiography.* By A. W. ISENTHAL, F.R.P.S., and H. SNOWDEN WARD, F.R.P.S. Third Edition. Published for the Photogram, Limited, by Dawbarn and Ward, Limited, 6, Farringdon-avenue, London, E.C. 1901. Pp 198. Price 6s —This is a well-printed and well-illustrated book which may be placed in the hands of the beginner in x-ray work with confidence. The authors have dealt with their subject in a very methodical way, beginning with a historical review of the subject and finishing with a short and authoritative account of the new fields of research which have been opened up by Roentgen's remarkable discovery. The wonderful phenomena of radio-activity, manifested by certain elements and amongst them some entirely new ones, is described. In general, however, the book will serve best as a practical guide, the apparatus and accessories being clearly described. It is evident that the writers are perfectly

THE LANCET.

*LONDON: SATURDAY, JANUARY 25, 1902.*

## First Aid and Hæmorrhage.

A LETTER which appeared in THE LANCET of Jan. 4th (p. 54), written by Mr. W. G. SPENCER, raises a very important point. Mr. SPENCER states that the teaching at ambulance classes with regard to the arrest of hæmorrhage appears to result in impressing upon the minds of the pupils that in any case of hæmorrhage some sort of improvised tourniquet must be applied above the bleeding-point and that the value of direct pressure is not recognised. He quotes sundry instances to show that owing to this method of procedure even death has occurred in circumstances where life ought to have been preserved.

First-aid classes have undoubtedly done much valuable work and probably many a simple fracture has been kept from conversion into a compound fracture by the application of first-aid measures for procuring temporary immobility. But although the lectures may be sound, yet many of the hearers are, after having been taught, afraid to exercise their common-sense. In many books which have been published upon first-aid and ambulance work the directions for the arrest of hæmorrhage are classified under those appropriate for arterial, venous, and capillary hæmorrhage. For the last class pressure over the wound is always advised; but for the first two pressure above or below the wound is insisted upon as the main treatment, while pressure over the wound is relegated to a secondary position. In books classification is presumably necessary, yet in practice a wound sufficient to cause alarming hæmorrhage is rarely to be included in only one of the above categories. The commonest example of a wound producing only one kind of hæmorrhage is a wound of a varicose vein in the leg. In this class direct pressure is assuredly indicated, because when a varicose vein gives way the hæmorrhage comes both from the proximal and the distal portion of the vessel—in fact, much more from the proximal than from the distal. The common forms of severe cuts, which as a rule affect the fingers, hands, or arms, produce capillary and venous hæmorrhage, although in the fingers a digital artery may be divided, or in the wrist the ulnar or radial artery, but in both cases the superficial veins and the venæ comites are divided also. Severe punctured wounds, if they divide a deep-seated artery, almost invariably sever or puncture the vein as well, a condition of things which again demands the application of direct pressure

To solve the problem of the correct treatment of hæmorrhage we must go back to general surgical principles. In the first place we must distinguish the hæmorrhage after wounds of vessels in their continuity from that due to the complete removal of a part of a limb. In the latter case there is no room for doubt that a firmly applied tourniquet is the only method of rapidly controlling the extensive hæmorrhage which is generally present. But far otherwise is it with a wound of a vessel, whether artery or vein, in its continuity. In all surgery the simplest means that are efficient should have the preference. The pressure of a finger can control the hæmorrhage from any vessel in the body if the pressure be applied at the wounded spot. That the pressure should be applied at the wound in the vessel has been a fixed principle of surgery for very many years. And not the temporary means only for arresting the hæmorrhage, but the permanent means also act with most certainty when applied at the wound in the vessel. Neglect of this rule has led to many errors. That it is possible to control the blood-flow from a wounded artery by the application of a tourniquet higher up is undoubtedly true, and when carefully applied the tourniquet is of great value during any operative procedures which may be undertaken. But if a tourniquet is carelessly or ignorantly applied it is certainly capable of leading to loss of far more blood than it saves. As a tourniquet is being applied (and we are speaking of improvised tourniquets and not of some special instrument) its first effect is to arrest the flow of blood in the veins at the point of application, because the blood-pressure in the veins is very much less than is the blood-pressure in the arteries As the blood-flow in the arteries is not yet arrested, the normal quantity of blood will enter the limb, but hardly any can leave it by the veins, therefore the hæmorrhage will be much more profuse than if no tourniquet had been applied. As the pressure exerted by the tourniquet increases it is able to compress the arteries somewhat so that the quantity of blood entering the limb is diminished, but still no blood can leave the limb by the natural channels, and therefore still the amount of blood lost is greater than it would otherwise be. It is only when the instrument compresses the arteries that hæmorrhage from the wound ceases. Now, the pressure required to compress an artery if applied directly to the vessel is by no means great, but when the pressure is exerted by constricting the whole limb it needs to be very much greater, and it is probable that the requisite degree of pressure is very seldom attained by amateur efforts, even though the operator is well instructed in ambulance work. As to the instruction which should be given to an ambulance class there can be no doubt. For all ordinary wounds hæmorrhage is best controlled by direct pressure on the wounded spot; the finger is the simplest and handiest means of applying pressure and should be used until a pad can be prepared and applied. If the pad controls the hæmorrhage well and good, if not the pressure of the finger on the spot should be resumed.

We have little fault to find with the instructions for the arrest of hæmorrhage laid down in the manual issued by the St. John Ambulance Association. The only suggestion that we would make is that it would be well to simplify the directions. As they stand they are too numerous and too elaborate to be called readily to mind in the excitement of an accident. It is impossible to train the average students of an ambulance class to act as skilled surgeons in a moment of emergency; the most we can expect is to instruct them so that they may, by the application of a few simple rules, avert immediate death or unnecessary increase of the danger of the accident.

&c. Its action, therefore, combines that of an antacid, carminative, and anti-fermentative. We recognise no particular merit about this preparation. It would undoubtedly be of service in some cases while in others it might easily be contra-indicated. Its indiscriminate use, therefore, is to be condemned, and the words on the label describing the list of ailments it is said to remove are highly exaggerated and misleading.

### LOMBARDY BUTTER.

(F. CORTI AND CO., 45, GERRARD STREET, LONDON, W.)

A feature of this butter is the small percentage of water which it contains, the question of the amount of water in butter being very much in evidence just now. It is proposed to fix a limit, and we believe that the consensus of opinion is in favour of 16 per cent. of water as a maximum amount. As our analysis shows, this specimen of Lombardy butter contains not more than three-fourths of this proportion. On the large scale there is no difficulty in producing butter containing less than 15 per cent. of water, but in isolated instances (as in the case of a small farmer) the reduction of water to this limit is not so simple We found the Lombardy butter of good quality and flavour. It yielded results characteristic of butters of known purity. Thus it yielded a maximum proportion of volatile fatty acids, a high Reichert figure being obtained, The Valenta test also gave a satisfactory result. Further analytical results were as follows: water, 12 86 per cent.; butter fat, 85 83 per cent ; curd, 1 21 per cent, ; and salt, 0 01 per cent. A small addition of borax has been made.

### VYTALLE OIL.

(THE VYTALLE OIL CO., LIMITED, 465, BATTERSEA PARK ROAD, LONDON, S W )

Vytalle. Oil is a clear yellow oil, limpid at ordinary temperatures. It possesses a bland flavour suggesting a very mild butter. It is described as a mixture of pure vegetable oils. From our examination and the physical constants which we obtained olive oil would appear to be the predominating constituent. Thus the Valenta test gave 79° C. as the point of interfusion, while the Maumêne test gave a temperature of 49° C The specific gravity of the oil at normal temperature was 0 917 From the fact, as we found, that the oil is very readily saponified it may be concluded that it is easily assimilated and there is, therefore, some ground for urging its claims as a substitute for cod-liver oil. It is not unpleasant to take and it does not give rise to disagreeable eructations.

### "ANTIFIÈVRES" (ROBERT).

(AGENCY. GILBERT KIMPTON AND CO., 19, ST. DUNSTAN'S HILL, LONDON, E C )

This preparation is described as a radical cure for fever. It is a strongly acid brown fluid with a disagreeable smell resembling in part sour beer and in part chicory infusion. No definite chemical principles could be identified. It contained neither quinine nor arsenic. There was some alcohol present. The fluid yielded 5 63 per cent. of syrupy extract and 0 74 per cent. of mineral salts, consisting principally of alkaline salts corresponding in nature with those commonly yielded by vegetable extracts We have not been able to find any satisfactory clinical evidence respecting this "radical cure."

### (1) BANANA MALTED FOOD (BOYD); (2) PINE HOP-BITTERS (BOYD); AND (3) ANTISEPTIC EAU-DE-COLOGNE (BOYD).

(MEDICAL AND GENERAL SPECIALITIES CO., 300, CLAPHAM ROAD, LONDON, S W.)

Odd as it may appear, the banana malted food consists chiefly of cooked wheat-flour according to our microscopic examinations. The food is rich in phosphates, a fact which would account for the total mineral matter reaching as high a figure as 2 per cent. The preparation contains a good proportion of proteids, carbohydrates, and phosphatic constituents in well-planned ratio, and the method of manufacture is calculated to render these elements easily assimilable. Pine hop-bitters is a somewhat curious compound, containing, amongst other things, the fresh juice of the pineapple, cinchonidine, and sodium persulphate. This sodium salt is said to be a powerful stimulant to the appetite, and on this account might be given to tuberculous patients. Sodium persulphate certainly acts as an anti-fermentative and has been employed in the treatment of hyper-acidity. Antiseptic eau-de-cologne contains a well-known but somewhat irritating germicide. It is stated also to contain peroxide of hydrogen but we could find none. We are not surprised at this result since peroxide of hydrogen is not compatible with a powerful reducing agent.

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# Looking Back.

FROM

## THE LANCET, *SUNDAY, JAN.* 25, 1824.

What I would do if I had strangulated hernia would be this, I would have the taxis employed steadily for ten or fifteen minutes, if this did not succeed, I would be bled to syncope, and then have the reduction by the hand attempted again; if this also proved unsuccessful, I would have the tobacco injection, and wait a short time; and then, if necessary, have the operation performed; it is the most egregious ignorance possible, to delay the operation so long as is often done, thereby wasting those precious moments which, if properly used, might have been spent in saving the life of the patient; ask those about our hospitals who are the persons who die from strangulated hernia! and they will tell you those who have the operation delayed three or four days, and are not brought to the hospital till three days after the hernia has been strangulated, and then if operated on, they often die: the delay is the cause of the danger, and not the operation. I have had a little personal experience of this complaint, and have devoted no small share of my attention to it, and I would not wait more than twelve hours, if the tobacco enema and other means had been employed. Now let me allude to the case of a late illustrious Nobleman, (I am almost afraid now to mention names—*laugh*), who died of this disease; he was in the country, and during his stay there, had strangulated hernia, he was attended by a person of strong mind, and who had studied his profession with industry; he offered to perform the operation, but it was delayed, on the ground that London skill and advice should be obtained; but before this could be had, the Nobleman died: I do not mean to under-value London skill, but it certainly is great folly to delay in this complaint. I would propose the operation, and perform it readily if it was agreed to; but if not, I would wash my hands of the affair, and be freed from the consequences.[*]

### ST. THOMAS'S HOSPITAL.

Jan. 23d. No operations have been performed here this week.

The accidents that have been admitted are a fracture of the patella, of the tibia and fibula, an injury to the hand, fracture of the ribs, and a burn.

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[*] Excerpt from report of a lecture on hernia delivered by Sir Astley Cooper in the Theatre of St. Thomas's Hospital on Wednesday evening, Jan. 21st, 1824.

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CONGRESS OF THE SANITARY INSTITUTE, MANCHESTER, SEPT. 9TH-13TH, 1902.—*President:* the Right Hon. the Earl Egerton of Tatton. Section I.—Sanitary Science and Preventive Medicine—will be presided over by Sir J. Crichton Browne, LL.D., F.R.S. Section II.—Engineering and Architecture—will be presided over by Sir Alexander Binnie, M. Inst. C E. Section III.—Physics, Chemistry, and Biology—will be presided over by Professor A. Sheridan Delépine, M.B , C.M., B Sc. Eight technical conferences will also be held in connexion with the congress.

men, and while possessing the necessary knowledge would be likely not to have quite the qualities that would make it easy for them to impart their knowledge effectively. In our opinion the proper channel for such instruction to the people is the popular press. The editors who will arrange regularly to instruct their less educated readers in the principles and practice of sanitary legislation will be engaged in a really beneficent work.

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# A Magistrate and Scientific Witnesses.

THE *Daily Telegraph*, in its report of a case heard before Mr. SHEIL at the Westminster Police-court, records certain observations of the learned magistrate to which we venture to take exception. The prosecution was for adulteration under the Sale of Food and Drugs Act, and Mr. SHEIL had been informed that some technical objection was to be taken to the analyst's certificate. Presumably this objection was not upon a point of law, for it seems to have provoked the following remarkable outburst, which is apparently given verbatim :—"Mr. SHEIL: Of course, you can get as many experts on either side as you like by paying their fees. (Laughter.) Any number of learned scientific gentlemen will swear one thing, and an equal number of learned scientific gentlemen retained on the other side will swear to the contrary. (Laughter.)" These observations had, as will be seen, the effect much desired by so many of those who sit on the judgment-seat in this country of raising a laugh among the audience that loves to hang about law courts, and to the full approval of his "gallery" Mr. SHEIL is no doubt entitled. He is not, however, entitled to approval from those who do not desire to see the proceedings in a court of law interrupted by cheap sneers at members of learned professions—at gentlemen, that is, whose aid is invoked by lawyers in order that truth may be arrived at in difficult inquiries. That scientific witnesses frequently differ from one another everyone knows. Let us take a simple instance more or less of everyday occurrence The surgeon who is called in to attend upon a man who has been injured by the negligence of another, and who afterwards supports his patient's claim for damages, expects to find that a surgeon representing the negligent defendant may take a less gloomy view than himself of the duration of the victim's symptoms. One surgeon is in court to inform the jury of the term during which the defendant may be incapacitated, the other is there to point out his chances of early recovery; and after both have been cross-examined the jury is expected to decide the question—to whose evidence should most weight be attached? In cases that are heard at police-courts witnesses on different sides may differ in opinion as to the amount, for example, of boric preservative that may be added to an article of diet without injury to the consumer. Each witness will be genuinely convinced of the accuracy of his own view and may from his own point of view be entitled to have weight attached to his opinion, but the questions upon which he has given his testimony are questions to a large extent of opinion, and his answers are given as opinions and nothing more upon a topic with regard to which no one can speak with certainty. And if these questions of opinion are regarded as questions of fact it must be remembered that upon simple questions of fact, such as the identity of a person or the time at which an event happened, mistakes are frequently made by witnesses who are neither learned nor scientific and of whose good faith there can be no question. We recommend Mr. SHEIL on the next occasion upon which he is inclined to level discourteous taunts at the head of members of learned professions and callings to recall the days when he was a practising member of a learned profession himself. He will remember that lawyers belong to the profession which of all others permits its members to take a side for hire. We do not sneer at the legal profession—we recognise that advocacy is the *raison d'être* of many of its members; but we remind Mr. SHEIL that when he talks glibly of the experts of science we are entitled to ask—What about the experts of the law? We take it that in some cases at all events that come to the law courts for decision the litigant who is destined to meet defeat has been strongly advised by eminent and perfectly honest counsel before he embarked in litigation that his claim or his defence was a sound one. Or should we say in turn that "any number of learned legal gentlemen will advise one thing and an equal number of learned legal gentlemen retained on the other side will advise to the contrary"? We have no desire or intention to make any statement that would be both discourteous and untrue. It will be remembered also that we do not assert that scientific witnesses never differ in their evidence and never allow themselves to be influenced by prejudice. It is against the sweeping charge of wholesale flagrant venality and perjury that we protest.

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# The Isolation of Small-pox Patients.

THE spread of small-pox or any other infectious disease which demands the isolation of patients for the benefit of the community necessitates a careful study of the Acts under which local authorities are entitled to order the removal of sufferers from their homes. A proper appreciation of the rights and duties of the local authority is necessary both from the point of view of the medical officer of health and the medical practitioner and from the standpoint of the public. Forcible removal of a suspected patient to a hospital ship unless carried out by sanction of law might give rise to an action for false imprisonment; it will be well therefore to remind our readers of the law upon the subject in so far as the interests of medical officers of health and private practitioners are affected, indicating the scope of their duties, and in what way they are protected from liability in their private capacities.

The text of Section 124 of the Public Health Act, 1875, which may be regarded as the leading statutory enactment dealing with this important matter, reads as follows :—

"Where any suitable hospital or place for the reception of the sick is provided within the district of a local authority, or within a convenient distance of such district, any person who is suffering from any dangerous infectious disorder, and is without proper lodging or accommodation, or lodged in a room occupied by more than one family, or is on board any ship or vessel, may, on a certificate signed by a legally qualified medical *practitioner, and with the consent of the* superintending body of such hospital or place, be removed by order of any justice to such hospital or place, at the cost of

No one could have a higher opinion of the value of first-aid than we have, for we are sure that it may be the means of saving many limbs and even many lives, but the instruction must be given with a due appreciation of the intelligence and knowledge of the learners. This, as some of the correspondence called forth by Mr. SPENCER's letter—notably Mr. HAMILTON WHITEFORD's communication—shows, the Manual of the St. John Ambulance Association does not always allow for.

# The Public Health Act and the Spread of Disease.

It would seem that the number of persons who while suffering from an infectious disease do not scruple to mingle with the general public or who allow persons under their charge to commit the same serious offence, is increasing. Within the last three months many offences of this kind have come prominently under our notice, only a few of which we have been able to record. At any time such a state of things would be alarming, but while an epidemic of small-pox is raging alarm must be necessarily increased. It is true that such offences have been provided for in the Public Health Act, but some of our magistrates do not seem to comprehend the gravity of the offences. For example, a fine of 2*s* 6*d*. only was exacted recently from a woman who exposed her child while suffering from scarlet fever, and 10*s*. in each case was the penalty that another woman had to pay for exposing her infectious child on two occasions, though the magistrate remarked that the exposure had probably been the means of infecting other persons. On Oct. 15th, 1901, in the East-end of London, it was mentioned at an inquest[1] that seven persons in one family in one house were suffering from small-pox without being medically treated, and that one of the family, a lad, on being told to remain in the house until the medical officer of health had been sent for to confirm the diagnosis of small-pox, had left the house and gone to work in a coal-yard The coroner incidentally remarked at the same inquest[2] that a woman had that day been found drunk in the streets while suffering from small-pox. Many striking instances of persons engaging in every-day occupations while suffering from infectious diseases, and especially from small-pox, have since been brought to our notice. The offender is sometimes ignorant of the fact that he is infectious, but that is another question. This is not at all usual and accounts for a very small percentage of the cases where the public health is endangered by the exposure of infectious persons. That the greatest watchfulness on the part of sanitary authorities is necessary is well illustrated by the outbreak of small-pox at Ystalyfera in South Wales. The patient who conveyed the infection from London is believed to have travelled from London to Swansea by train and from that place, again by train, to Ystalyfera. She must necessarily have come under the observation of many officials, none of whom seem to have detected that there was anything suspicious in her plight.

We cannot therefore wonder at the spread of disease in spite of the most strenuous efforts of medical officers of health and sanitary reformers. Nor do the ridiculously small fines imposed by magistrates on offenders against the law tend to improve matters. Ignorance of the law is no excuse in the eye of the law, though ignorance and poverty may sometimes account for the smallness of the fines imposed. The sections of the Public Health Act of 1891 in dealing with the matter state that: "If any person while suffering from any dangerous infectious disease wilfully exposes himself without proper precautions against spreading the said disease in any street, public place, shop, or inn; or, being in charge of any person so suffering, so exposes such sufferer; or gives, lends, sells, transmits, removes, or exposes without previous disinfection any bedding, clothing, or other articles which have been exposed to infection from any such disease, he shall be liable to a fine not exceeding £5." In the case of a person knowing himself to be suffering from a dangerous infectious disease engaged in any occupation in a manner likely to spread the disease the maximum penalty is £10, and the same maximum penalty applies to the driver of a public conveyance who knowingly conveys a passenger suffering from an infectious disease and also to the person being so conveyed if he himself is aware of the fact that he is so suffering Where poverty and ignorance are factors in the case magistrates may perhaps be forgiven for erring on the side of leniency, but where, as in a recent case, a man can afford to travel the whole length of England, while suffering from scarlet fever, to escape from the jurisdiction of the sanitary authorities, a fine of 40*s*. is hardly adequate. Nothing but the severest punishment will ever prevent such selfish people from defying the law. With regard to offenders who belong to the poorer classes something, we think, might be done if more publicity were given not only to the Act but to the consequences of violation of the law in regard to health

A common motive which prompts the poor to conceal disease is a pecuniary one, for sickness in their homes may mean nothing less than loss of employ for the bread-winners, be they wives, husbands or children. But the poorer classes are more susceptible to reason than we often give them credit for, and if in some way the position could be made clear to them much benefit both to them and to the general public might follow. Force is, perhaps, necessary to carry out the law for the general good in certain cases, but blind obedience without a reason is not a trait in the Englishman's character whatever place on the social ladder he may occupy, and the experiment of educating the poor in matters which affect the public health by teaching them the reason of sanitary orders and laws might well be given a trial. How this could best be effected other than by the publication of handbills and public notices is a matter for consideration. A suggestion has been made to us that senior medical students should visit the poor and in temporal matters impart to them a certain amount of instruction akin to that which it is the province of the minister to give in a spiritual capacity? There is point in the suggestion, but we fear that the number of senior medical students willing to give the time and dowered with the proper amount of tact and sympathy is not very large. Medical students are young quickly complied with, while some of those who most objected to removal to hospital have, on the termination of their illness, expressed their gratitude for the benefits that they had received in hospital.

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[1] THE LANCET, Oct. 19th, 1901, p. 1058.
[2] THE LANCET, Oct. 26th, 1901, p. 1169.

# Annotations.

"Ne quid nimis."

## THE FAILURE OF INSULATION AND ITS PERILS.

It is idle to dispute the advantages and convenience of electricity for lighting purposes and as a source of motive power when it can be shown that the actuating current can be kept well under control. Electricity, however, is evidently not an easy force to harness, judging from the extraordinary and alarming crop of accidents which have occurred quite recently in connexion with several electric railways. Accidents of this kind in closely fitting tubes suggest such awful possibilities that, naturally enough, public confidence in this mode of travelling has been considerably disturbed. Nor is the alarm thus created calculated to be allayed by the invariable explanation that the occurrence is due to "short-circuiting." It would be more satisfactory if the public could be assured that short-circuiting can be prevented. If it can be prevented, why is it not done? or is it a contingency against which it is not possible to provide with certainty? In that case cannot steps be taken to safeguard the travelling public against the serious effects of short-circuiting? Short-circuiting, it must be admitted, arises from a defect in the insulation which may or may not have originally existed, but in the great number of instances doubtless it is the result of, perhaps unforeseen, rapid wear and tear. Until, however, some better guarantee is forthcoming than has hitherto been the case that the most effective measures are taken to prevent short-circuiting or to obviate any serious consequences when it is established, travelling on an electric railway, and especially in the "tubes" in which there is practi[illegible]y only room for the train, means running a risk of a [illegible]re never heard of before in connexion with railways. [illegible] accidents arising from short-circuiting in Liverpool, [illegible]ew York, and on two of the London "tubes" are cases in point. We, of course, are aware that accidents are bound to arise in connexion with rapid travelling which cannot be reasonably anticipated In the case of ordinary railways the snapping of a rod or coupling, or the bursting of a steam-pipe, belongs to this class. But in regard to electric railways it is demonstrated again and again that almost always the cause of accident is the failure of insulation. The explanation of the defect is simple, but explanation does not appear to afford a way out of the evil, and until such a way is found all sense of security vanishes. The same defect has led to outbreak of fire in the dwelling-house. It is appalling to think of the ease with which an insidious glow can be established in the casings and beneath the floor. The current taking a short route, the wires heat up and, as often as not, the woodwork or carpet bursts into flame We have had personal experience of such occurrences, and it seems to us that greater control is required in regard to the way in which installations are fitted up in private houses. We cannot think that the electrical engineer will admit that he is baffled by such a defect, the exact nature and cause of which he perfectly well knows We also think it desirable that the electric-supply companies should issue to their customers a few elementary hints on the handling and management of the current for domestic purposes. Very few people understand what a "cut out" or safety fuse is and still less its function Much needless alarm would be spared the householder if he could be made to understand a little about these things. As it is, he looks upon electricity as a mysterious force which is easily provoked to do mischief. Should anything occur (however slightly abnormal it may be), perhaps a weird fizzing noise, or the "implosion" of a lamp, or the sudden, intense illumination of the filament through leakage somewhere, he is invaded with a species of terror and is powerless to act, being afraid that he is on the eve of a disaster nothing short of electrocution. His fears are intensified by the accounts which he remembers reading of horses being killed suddenly by walking upon the lid of an electric box in the street—and such instances are known and they are not entirely rare, being due once again to the failure of insulation. Once more we ask, Cannot the failure of insulation be prevented?

## FOOD-SELLERS AND THE LAW.

THREE convictions obtained in the London police-courts during a single week illustrate the dangers which beset the humbler classes of the community and the extraordinary effrontery with which the adulteration of food is carried on in spite of the efforts made to check it. They will also to some extent, we hope, serve as a warning to those who endeavour to grow rich by imposing on their neighbours In one a Suffolk farmer was fined £10, with £3 3*s*. costs, for depositing for sale at the Central Meat Market the carcass of a pig with regard to which Dr. W. Collingridge, medical officer of health of the City of London, was of opinion that it had died from acute tuberculosis. It may not have actually drawn its last breath without the intervention of the butcher, but the man who stated that he was employed to kill it and who certainly prepared it for sale and forwarded it to London gave evidence and admitted that the hearts, livers, and lungs of this animal and another were given to the dogs, although the carcases were considered good enough for the food of human beings in the metropolis. We are pleased to note that the expenses of the obliging butcher as a witness were disallowed by the magistrate. An inspector of the West Suffolk police informed the court that the defendant in this case was chairman of the local School Board and a guardian of the poor. In the second prosecution which we have noted Frank Ward, carrying on business at Sidmouth-street, Hackney, was convicted of selling as "butter" at 1*s*. a pound stuff composed to the extent of 94 per cent. of cotton-seed oil. Mr. Ward pleaded in extenuation that it was his first offence, or rather his first conviction, and if it proves to be his last the penalty of £10 with two guineas costs and the alternative of a month in gaol will not have been exacted in vain. The third case to which we call attention seems to show that a difficulty may arise in the minds of some magistrates where the legislature orders them to punish those who sell goods not of the nature, substance, and quality of those demanded by the purchaser, and leaves it to their good sense to determine what is or is not of that nature, substance, and quality, without laying down a definite standard or analysis for their guidance A woman keeping a small grocer's shop in Southwark was summoned under the Food and Drugs Act for selling as golden syrup a compound which, indeed, contained 15 per cent. of cane sugar, but of which the residuary 85 per cent, was starch glucose. Mr. Paul Taylor at the first hearing of this case adjourned it, apparently in order to consider whether in the absence of any standard or legal definition of "golden syrup" he could convict, and finally he only imposed a nominal penalty of 5*s* with 12*s* 6*d*. costs. This leniency may have been prompted by pity for the ignorance of the retail trader, but if light punishment is to be the reward of the shopkeeper who professes ignorance he will have but little temptation to inquire the local authority, and any person so suffering who is lodged in any common lodging house, may, with the like consent and on a like certificate, be so removed by the order of the local authority

"An order under this section may be addressed to such constable or officer of the local authority as the justice or local authority making the same may think expedient, and any person who wilfully disobeys or obstructs the execution of such order shall be liable to a penalty not exceeding £10"

The powers conferred upon local authorities by this section were extended by Section 4 of the Canal Boats Act, 1877, to any sanitary authority within whose district a canal or any part of a canal may be situate in order to permit the removal of infectious cases from canal boats The section was also extended to ships by the Public Health (Ships, &c ) Act, 1885, Section 2 and Schedule It will be seen that in substance this Section 124 confers a power of removal upon local authorities acting in accordance with the certificate of a medical practitioner when the infected person — (1) is without proper lodging or accommodation, or (2) is lodged in a room occupied by more than one family; or (3) is on board a ship or canal boat, or (4) is in a common lodging house

The responsibility of the certifying practitioner becomes apparent when it is pointed out that the determination of what is "proper lodging or accommodation" rests with him In deciding this question he is apparently entitled to take into consideration the danger of infection to others In the case of WARWICK v GRAHAM,[1] the facts were that the respondent's son was suffering from scarlet fever at his father's house where a family of eight persons, including the patient, resided The house contained four rooms The patient occupied one room and had proper lodging and accommodation so far as he himself was concerned, but he could not be sufficiently isolated to prevent danger of infection to other inmates of the house who had to pass the door of the sick room The patient was properly cared for The medical officer made a certificate under the Public Health Act for the removal of the patient, but the justices refused to make an order on the ground that there was not sufficient evidence to show that the patient was without proper lodging and accommodation within the meaning of the section It was decided by the Divisional Court (DAY and LAWRANCE, JJ) that the section was directed to the protection of persons from infection and not merely to the protection of the sick person himself, and the case was sent back to the justices to make the proper order The learned judges here followed the cases of BOOKER v TAYLOR[2] and REG v DAVEY[3] In the latter case Mr Justice DARLING said "The legislature means to protect the public from infectious diseases If persons can obstruct and delay the operation of the order the whole purpose of the legislation may be defeated" Mr Justice CHANNELL expressed the view that the justices were wrong in thinking that they could go behind the order

It is thus clear that the certifying practitioner, who is usually the medical officer of health, has power to order the removal of rich and poor alike, if he thinks that course advisable in the interest of those living in the neighbourhood In cases where extreme measures have to be adopted owing to the opposition of the patient's friends the medical officer of health will do well to take a second opinion as to the nature of the disease from which the patient is suffering It is obvious that in legal proceedings which might be brought by a patient removed *vi et armis* from his home as the result of mistaken diagnosis the case for the defence would be materially strengthened by independent testimony So long, however, as the medical officer of health acts in strict accordance with the provisions of the 124th Section of the Public Health Act, 1875, he will be protected from legal proceedings by Section 265 of that statute which provides (*inter alia*) that "No matter or thing done by any local authority or joint board or port sanitary authority, and no matter or thing done by any officer of such authority or other person whomsoever acting under the direction of such authority, shall, if the matter or thing were done *bona fide* for the purpose of executing this Act, subject them, or any of them personally to any action, liability, claim, order, and whatsoever, and any expense incurred by any such authority, member, officer, or other person acting as last aforesaid, shall be borne and repaid out of the fund or rate applicable by such authority to the general purpose of this Act" Strict adherence to the very letter of the law is therefore essential In the Scotch case of MITCHELL v the MAYOR OF ABERDEEN[4] an action was brought against a medical officer who had directed the removal of a child suffering from an infectious disease without an order of justices, as required by Section 42 of the Public Health (Scotland) Act, 1867, which corresponds to Section 128 of the English Act He was held liable in damages, the court declaring that he was not entitled to the protection afforded by Section 118 of the same Act, which is identical in terms with Section 265 of the Act of 1875 above quoted. It seems that the words used in the Public Health Act, 1875 are quite wide enough to protect any private practitioner who acts with the sanction, and in pursuance of the orders of, the local authority

So much for the legal right of the local authority, acting by their medical officer, to direct the forcible removal of an infectious patient Those who are doubtful about the expediency of having recourse to extreme measures may be to some extent relieved by a study of the "General Report upon the Use and Influence of Hospitals for Infectious Diseases," which was presented in 1882 to both Houses of Parliament, and which was re issued in 1894 The late Sir RICHARD THORNE there made the following observations upon the working of the 124th Section of the Public Health Act, 1875 —

> "One result of the inquiry has been to show how seldom such compulsory measures have been resorted to, the cases brought under my notice amounting in all to not more than some three dozen at the outside In several instances, however, where persuasion has failed, either certain preliminary steps have been taken to procure a magistrate s order or the order itself has been obtained with a view of proving that the sanitary authority had the power in certain cases of resorting to compulsion, and in the majority of districts one such exhibition of power has sufficed to obviate any further resort to it."

Sir RICHARD THORNE also pointed out that when once an order had been obtained it was in nearly every instance gradually disappeared. The extremities were constantly cold. The temperature fell slowly to normal on the fourth day and was subsequently subnormal, reaching 95·5° in the rectum on the evening before death which took place on the eighth day of the illness. There was alternately constipation and diarrhœa, and 48 hours before death and 27 hours after the suppression of urine blood-colouring matter and broken-down blood cells were constantly in the fæces, which previously were blood-stained only occasionally. The heart began to fail on the fourth day. The skin became more and more jaundiced. On the fifth day after admission mucous casts were passed. Examination of the blood showed destruction of the red corpuscles which finally were reduced to 1,166,000 per cubic millimetre, while the leucocytes were 66,450 and the nucleated red cells 22,150. The alkalinity of the blood was diminished by 80 per cent. At the necropsy acute nephritis and intestinal catarrh were found, but nothing to account for the melæna.

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[1] June 9th, 1899 15 Times Law Reports 410

[2] Times, Nov 21st, 1892

[3] (1899) 15 Times Law Reports 344

[4] 20 Ct of Sess Cas (4th ser ) [illegible]

## THE CHEMISTRY OF NERVE DEGENERATION.

WE desire to call the attention of all neurologists, and of those specially interested in the treatment of insanity, to a paper by Dr. F. W. Mott and Dr. W. D. Halliburton published in the Philosophical Transactions, Series B, vol. cxciv., pp. 437–466. The title of the paper is "The Chemistry of Nerve Degeneration" and it well merits study, not only as a model of the way in which researches of this kind should be conducted, but also because the writers draw conclusions of considerable practical value in the diagnosis of nervous disorders. The keystone of the paper is the importance of excess of choline in the blood in cases of nerve degeneration, not only in diseases such as general paralysis, but in various diseases of the central and peripheral nervous system. The detection of choline, which is a product of the decomposition of lecithin, is effected by a chemical test, the obtaining of the yellow octahedral crystals from the blood, and also by a physiological test—viz, a temporary fall of pressure when injected intravenously in animals. The degenerated nerves in the animals were examined by the Marchi reaction which consists of a mixture of osmic acid and Müller's fluid by which the degenerated nerve-fibres are stained an intense black, whilst the healthy fibres are not stained. We do not propose to follow the writers in their various experiments. It is enough to say that the whole subject is clearly and scientifically worked out and that it forms a very valuable addition to our present knowledge of the chemistry of the blood in disease. There is good reason for saying that these valuable experiments were suggested by work previously done by Dr. Mott in the post-mortem rooms of the London County Asylums, and we take this opportunity of asking why the appointment of a special pathologist is confined to the asylums under the jurisdiction of the London County Asylums. We should like to see the experiment extended to the asylums under the control of the Metropolitan Asylums Board. At the imbecile asylums there is a profusion of material which is completely thrown away, and material of the most valuable kind, for among the weak-minded degenerates who form the bulk of the population of these district asylums are examples of disease set up in more elementary conditions than are met with in the county asylums, and in these undeveloped types there may be found clues to the unravelling of the more complicated structure of better developed brains, and lesions of a congenital kind which may better elucidate the true nature of physiological as well as pathological processes. So far the District Asylums Board has not made any move in this direction; it has carried out, more or less completely, its function of housing and maintaining a certain number of imbecile and demented people, and it may think that in doing this it has fulfilled its office. But we say very decidedly that its duty is not completed with this performance. It is surely part of the obligation of a great body to see that nothing should be lost of the material which it has at its disposal to further ends which may eventually be of the greatest advantage to the people generally and to the insane population in particular. The patients of these district asylums are very cheaply maintained, and certainly the medical element does not figure largely in the expenses. It may be sufficient for carrying on the care and treatment of the patients, but to do more than this is out of the question, the medical staff have not the time to devote to laborious scientific investigation, and the appointment of a pathologist who could work on the lines so successfully inaugurated by Dr. Mott would, we feel sure, be a welcome addition to the efforts that are now being made in London to place the teaching and the investigation of insanity on a proper basis. Is it not somewhat of an anomaly that the administration of lunacy in London should be under two distinct boards each independent of the other? The time seems to have arrived when the whole lunacy system should be fused into one body, more especially as there are in the district asylums many patients who are actually suffering from chronic insanity, as distinguished from mere imbecility, and who were at one time under the protection of the Lunacy Laws. For instance, what a convenience would result, to say nothing of an economy, from having the maintenance, the administration, the distribution, and the classification in the hands of one authority. The system would not be too large and it would be quite practical to work the strings from one centre. Moreover, convenience would ensue from the possibility of interdigitating one class of building with another in the matter of classification and treatment, what an opportunity for the correct compilation of results and statistics and for the creation of a harmonised system where at present there is confusion. The Asylums Board may be very well left with the management of the infectious hospitals, work to which it has risen in a most praiseworthy manner, but it can well afford to delegate its functions in a part of the lunacy question to the County Council, and we think that the latter would willingly embrace the opportunity for a consolidation of these scattered units. It is true that the district asylums were constituted in 1870 by a special Act introduced by Mr. Gathorne Hardy, and most probably some fresh legislation might be necessary before the care of the imbeciles could be transferred to another body by the one to which it was first committed, but in view of the great advantage which would result from what we are now recommending no difficulty need be apprehended on the legal score. The subject of the best form of accommodation for the treatment of patients connected with London is still occupying the earnest thought of the County Council, and the various proposals for the erection of "receiving houses," of a special building for the complete treatment of acute cases in London, and of other improvements are still *sub judice*. Before final arrangements are made it is to be hoped that the advisability of incorporating the existing separate units will be carefully considered.

## THE TRAINING OF STATE CHILDREN.

HOW to provide for the training and maintenance of destitute children is a question which has occupied the minds of local authorities and of public-spirited philanthropists for more than one generation. It has given rise to a variety of schemes for its solution, which, nevertheless, if we are to judge from the practice of boards of guardians, remains to be found. The divergence of opinion which is thus indicated is most regrettable both from an economic and from a social standpoint. We seem to have as yet no into the quality of the goods that he sells. Exemplary punishment, on the other hand, warns him and others that the retail trader should be, in relation to his customers, an expert who can and must protect them against deception. Beyond this we should hardly have thought that "golden syrup" needed definition. Those persons, not being entirely ignorant, who ask for "golden syrup" know that, roughly speaking, it is a by-product of sugar, and that sugar is derived from sugar-cane or beetroot by processes into which they do not inquire. The entirely ignorant expect to get "golden syrup" such as their parents gave them when they were young, or such as they have been in the habit of consuming, and neither the well-informed nor the ignorant ask for starch glucose at their grocers'. If they did ask for it by name—an exceedingly unlikely contingency—they would be entitled to have it, and if it was sold to them diluted with the product of the sugar-cane or the beetroot the vendor would be liable to prosecution under the Food and Drugs Act for selling that which was not of the nature, substance, and quality of the goods demanded. A standard definition of what ordinary beer should contain was not required in order to enable magistrates to convict under the Sale of Food and Drugs Act persons who sold beer containing appreciable quantities of arsenic, the presence of which, by the way, was accounted for by the use of glucose in brewing. It is, no doubt, possible to draw up definitions of the elements that all articles of diet should contain, in anticipation of the ingenuity that may be exercised by ingenious traders in diluting them, but it would not be easy to make such a list complete, and the case of the beer referred to, which was argued before the High Court on appeal, has shown that it is not necessary from a legal point of view. We observe that Mr. Paul Taylor is reported, in giving his decision, to have said that he supposed that there would be no objection to the sale of the compound described before him under the name of "treacle." Not being aware of the learned magistrate's reason for this remark, we can only say that in our opinion to sell starch glucose as treacle would be as objectionable as to sell it as golden syrup. The term "treacle" was originally, in accordance with its derivation, a medicinal term used for certain antidotes for the poisonous bites of wild beasts and snakes. Of its derivation and the meanings which it has borne in mediæval times those who ask for "treacle" in small grocers' shops are entirely ignorant. They are not in the position either of manufacturers who, we believe, distinguish by the terms "treacle," "golden syrup," and "molasses" fluid products obtained at different stages or by different processes when the sugar of commerce is being prepared. The persons who ask their grocers for treacle, golden syrup, or molasses all, in our opinion, mean the same thing, and they certainly do not mean or desire to have any such compound as that which has been described.

## SMALL-POX IN LONDON

THE Local Government Board has issued the following notice for the information of the public: "There is reason to believe that the spread of small-pox in London is very materially aided through the instrumentality of persons who, though not recognised as attacked by the disease, are nevertheless suffering from a modified form of it and are conveying its infection to others. The Local Government Board are advised that it is important that where persons, especially adults, develop what is supposed to be chicken-pox no time should be lost before authoritative medical opinion is obtained as to the nature of the malady, and that as respects anyone brought into relation with a case which is regarded as one of chicken-pox steps should at once be taken to obtain or renew that protection against small-pox which is afforded by vaccination. It is believed that many persons who have been recently revaccinated fail to submit themselves to medical inspection, as they should do, a few days after the operation, but assume from the appearance of the arm either *that the operation had been successful* or that they are insusceptible to small-pox. These assumptions, however, are not always correct, and it is highly important that all who are revaccinated, especially during the prevalence of small-pox, should be inspected by a qualified medical man." The returns for the week are slightly better as regards numbers. On Saturday, Jan. 18th, 22 fresh cases were notified and removed; on Sunday, the 19th, there were 25 fresh cases; *on Monday, the 20th, there were 37 fresh cases*; on Tuesday, the 21st, there were 26 fresh cases; and on Wednesday, the 22nd, there were 35 fresh cases. The City of Westminster has taken the very wise course of making chicken-pox a temporarily notifiable disease under Sections 55 and 56 of the Public Health (London) Act, 1891. The order of the Mayor, Aldermen, and Councillors comes into force to-day (Friday), the 24th. We think that this is a very sensible decision on the part of the City of Westminster and one calculated to lead to the diagnosis of many a case of small-pox which might very likely have passed unnoticed otherwise. We may add that Westminster makes the eighth borough in which chicken-pox must be notified, the others being Hampstead, St. Pancras, Hackney, Holborn, Bethnal Green, Greenwich, and Paddington. The Local Government Board has issued a circular to extra-metropolitan guardians calling to mind former circulars issued in February, 1893, and July, 1895. These circulars deal with small-pox in casual wards and workhouses. When such a case occurs measures should at once be taken to secure as far as practicable vaccination or revaccination of the other inmates.

## DEATH FROM TAKING 60 GRAINS OF ACETANILIDE

TOXIC symptoms have frequently followed the administration of acetanilide (antifebrin) even in medicinal doses, but cases of fatal poisoning must be very rare. One is described by Dr. Philip King Brown in the *American Journal of the Medical Sciences* for December. A man, aged 37 years, was given 60 grains of acetanilide in six powders for headache and he took them all within a few hours. When seen by his medical attendant (after what interval of time is not stated) he was slightly delirious and complained of pain in the head and in the left umbilical region. There were pyrexia, rapid heart, marked constipation, slight jaundice, nausea, and vomiting. Calomel in small doses followed by salts produced a copious but bloody motion and the urine was dark red. On the following day he was admitted to hospital. The pulse was 78, soft and compressible; the temperature was 100·2° F.; the lips and nails were extremely cyanotic; and there was slight jaundice. *He complained of pain in the left* side of the abdomen and there was tenderness in the epigastrium and in the region of the left kidney. The skin was moist and the gums were bluish. The urine was strongly alkaline and deep red—nearly black. The colour was shown to be due to hæmatoporphyrin. There was a small sediment which contained granular casts. On boiling a large coagulum formed. On the day after admission only 150 cubic centimetres of urine were passed; after this there was complete suppression. There was great thirst which was quenched with milk, but soon everything that was given was rejected and rectal feeding had to be adopted. Though nothing was given by the mouth for days the vomiting continued. Cough and expectoration were persistent. There was slight delirium and the reaction of the pupils to light became more and more sluggish; in the end the pupils were widely dilated. The reflexes were first exaggerated, then they of small-pox occurring in their respective districts. Copies of this information are at once sent to all the medical officers of health in the county of London, so that every medical officer is put in early possession of all available information as to cases occurring in other boroughs, which may affect his district. The London Government Bill of 1899 has thrown some difficulties in the way of health administration in the metropolis. For instance, the hospitals to which cases of infectious disease are removed are dissociated entirely from the disease-preventing authorities; but, considering the multiplicity of authorities dealing with public health matters throughout the county of London, we think that the said authorities are doing their best to ascertain and to identify cases of small-pox and to limit the spread of this very infectious complaint.

## THE MUNICIPAL INSPECTION OF LONDON RESTAURANTS.

A resolution was adopted by the London County Council at its meeting on Tuesday last, that the Public Health Committee of the Council should be asked to consider and to report as to the best means of exercising periodical inspections of the kitchens of public restaurants. The resolution called attention to the fact that in London there are many thousands of persons whose business compels them to have the greater part of their food in public restaurants and undoubtedly it is of material importance that such food should be prepared in wholesome and sanitary surroundings. The Public Health Committee, in devising machinery for carrying out effective methods of investigation, will keep before it the plans adopted in the official inspections of bakehouses and factories, and it is our belief that it will find in many eating-houses of the metropolis a state of things justifying the action of the Council many hundred times over.

## CRIME IN GENERAL PARALYSIS.

In the *Journal of Mental Science* for January Dr. W. C. Sullivan, deputy medical officer of H.M. Prison, Pentonville, has published an article on the medico-legally important subject of crime in general paralysis. While crime has been extensively investigated in recent years in association with conditions of arrested or distorted cerebral and physical development (criminal anthropology), less attention has been given to a class of criminals in whom the morbid aptitude for criminal acts is connected with acquired cerebral degeneration or defect, such as might be caused by alcoholic intemperance or general paralysis. The examination of conduct in chronic alcoholism shows a remarkable frequency of suicidal and homicidal impulse as well as a tendency to sexual crimes, a subject to which attention has already been called in these columns.[1] In general paralysis, on the other hand, says Dr. Sullivan, the character of conduct was entirely different. A rough illustration of this might be given in statistical form. During nine years (1888 to 1896) among convicted prisoners certified as insane in the local prisons of England and Wales there were 274 cases (261 males and 13 females) in which the form of mental disease was considered to be general paralysis. Amongst these 261 male general paralytics homicide or homicidal attempts constituted the crime in nine cases, suicidal attempts were met with in eight cases, sexual offences in 13 cases, assaults in 21 cases, crimes of acquisitiveness in 144 cases, threats in eight cases, and other offences in 58 cases. Crimes of acquisitiveness were notoriously common in general paralysis, their most typical form being petty larceny, fraud, forgery, and embezzlement. Generally the circumstances and execution of the offence showed a characteristic silliness, though occasionally the general paralytic did commit robbery or fraud with an appearance of adequate motive and premeditation. The most important point to be noted was that this tendency existed in the exalted and optimistic variety of general paralysis and not in the depressed or melancholic form. Very often the impulses to theft or undue acquisitiveness preceded the grandiose delusions by a long period of time or were met with in the purely demented type of general paralysis without delusions. Besides this impulsive origin, paralytics who had lost money or blundered in their accounts might in a more lucid phase embezzle to make good the deficit—a point of practical importance in relation to the question of legal responsibility. Paralytics are also very amenable through their *naïveté* to criminal suggestion by others. Magnan quotes the case of a patient who was sent by his wife to steal in the Bon Marché, and Foville mentions two instances where paralytics were used as tools to utter forgeries. Acts of violence may be committed by paralytics when their grandiose tendencies are opposed, but the majority of grave acts of violence depend on a primary homicidal impulse generated by the more or less persistent state of emotional depression. Sexual offences in early paralysis—in the form of rape, defilement of children, and offences against public decency—are not uncommonly met with.

## A CASE OF DENTAL DISEASE OF OBSCURE ORIGIN.

A case of disease of dental origin terminating fatally is recorded by Mr. E. W. Roughton in the last issue of the Transactions of the Odontological Society. The patient, a man, aged 36 years, complained of a swelling in the region of the left angle of the mandible. When seen by Mr. Roughton about two months after the onset of the trouble there was a large inflammatory swelling involving the region of the angle of the mandible and extending upwards on to the cheek, forwards to the submaxillary region, and backwards over the sterno-mastoid muscle. The gum in the region of the molars was swollen and the skin over the swelling was red and œdematous. Deep-seated suppuration was suspected, but there was marked absence of pain, tenderness, and fever. An incision into the swelling evacuated a little serum but no pus. Fomentations were then applied in the hope that the swelling would suppurate freely and then clear up. The reverse, however, occurred, for the swelling slowly but steadily increased in size and declined to suppurate. An exploratory incision was next made and two or three small pieces of necrosed bone were removed. A large quantity of soft, friable granulation tissue was found but there was no collection of pus. Subsequently a sequestrum about an inch square was removed and the mandible fractured spontaneously. The swelling gradually extended down the neck and displaced the trachea and larynx. The swelling in the neck was then freely incised, but still no collection of pus was discovered; some small pieces of dead bone were, however, removed. A bacteriological examination of the tissue was made and an almost pure culture of streptococcus pyogenes was obtained. There was no actinomyces. The condition of the patient became worse, the wounds in the neck assumed a phagedænic character and the skin between them sloughed, and death took place owing to the ulceration laying open the carotid artery. The post-mortem examination showed that the mandible on the left side was destroyed as far forward as the lateral incisor; the internal organs were healthy and there was no evidence of pyæmia. The case is of interest from many points of view. 1. The absence of pain from first to last. 2. The slight degree of fever. During the 10 weeks the patient was in hospital only twice did the certain standard of the average cost per child which ought fairly to be required for this work, nor have we apparently any well-defined ideal of what the result of training should be. One thing is not desired: it is not intended to leave the child of poverty in the grasp of those habits of mind which tend to pauperism. On the contrary, it is generally understood among those who have gone most deeply into the subject that there can be no real progress unless the whole course of education is inspired by those principles of self-reliance and social responsibility which govern the robust life of self-respecting communities. There is abundant proof to show that it is in vain to think of developing any such inspiration in children maintained together by the score and hundred, as they are in many great parochial charities. It is quite exceptional to find in the institution-bred child that healthy individuality which is characteristic of children who have been boarded out in the freer and more natural atmosphere of family life. Between these two extremes of social existence there are not a few intermediate systems, the cost of which and their influence upon character have been tested by a lengthy experience. We believe we are right in saying that success, whether economic or educational, varies in direct and fairly accurate ratio with the degree to which the practice of segregation has been carried. There are training ships, certified cottage-homes, facilities for boarding out and for emigration, all available for the orphaned or forsaken children of this country and, as a rule, they are found to justify the expectations founded on them. On the other hand, we find parishes like Woolwich, Greenwich, and Stepney expending large sums on the creation of so-called village communities, the very title of which is expressive of pauper aggregation with all its mischievous associations. It is inconceivable that two methods so contrary should produce similar results. And experience has proved that they do not.

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[1] The Lancet, April 14th, 1900: On Alcoholism and Suicide.

## ASPHYXIA FROM PRESSURE ON THE CHEST.

IN the *Boston Medical and Surgical Journal* of Jan. 2nd Dr. H. L Burrell and Dr. L. Crandon have described a remarkable case of "Traumatic Apnœa or Asphyxia"—stoppage of respiration by pressure on the chest. This condition is well known as a cause of death, but it has been principally studied post mortem, because usually it is fatal in a few moments. Hence the value of a case of recovery such as the following. A man, aged 22 years, was caught between an electric car and a doorpost and his chest was compressed antero-posteriorly as in a vice for three minutes, then, when the car was moved, he fell unconscious. An hour later, when admitted to hospital, he was still unconscious. The pulse was 100 and weak but regular; the respirations were 30 and shallow. The hands and nose were cold. Blood flowed from the ears and the nostrils. The pupils were small and equal and did not react to light; there was great chemosis. The knee-jerks were absent and the other reflexes were diminished. There was a fracture of one or more of the left lower ribs but subcutaneous emphysema of the left chest anteriorly was an obstacle to examination. The most striking feature was a dusky, bluish, mottled appearance of the skin of the head, face, neck, and chest as low as the third rib. At first the patient was thought to be cyanosed, but the colour was not universal, did not disappear on pressure, and persisted after he improved. Uniformly distributed all over the dusky skin were minute areas (from 0 5 to 1 millimetre in diameter) of normal tint surrounded by ill-defined bluish borders which united into a meshwork. This condition extended over the lips to the mucous membrane of the mouth. There were considerable subconjunctival and minute retinal hæmorrhages The urine contained albumin and blood. Nitroglycerine $\frac{1}{25}$th of a grain; atropine, $\frac{1}{64}$th of a grain; and strychnine, $\frac{1}{25}$th of a grain were given subcutaneously. After four hours consciousness returned. On the fourth day the patient was comfortable but the livid colour was unchanged. On the ninth day the colour began to fade but it did not go through the modifications of an ecchymosis; on the twelfth day it had all but disappeared. The patient was discharged practically well in the fourth week. There are several historical examples of this accident—the rush of the mob at the Champs de Mars in 1837, when 23 persons were crushed to death; the panic at the Pont de la Concorde in 1866, when a mob crushed nine of its members to death; the fire at the Vienna Ring Theatre in 1881 with nearly 1000 fatalities; the panic at the Victoria Hall, Sunderland, when nearly 200 children were asphyxiated by being crushed in a corridor; and the charity bazaar fire in Paris in 1897. Dr. Ollivier, who examined the bodies of the victims of the Champs de Mars catastrophe, says that without exception the face and neck were of a uniform violet tint and spotted with ecchymoses. In nine persons there were subconjunctival extravasations, in four sero-sanguineous froth ran from the mouth and nose, in four blood flowed from the nose, and in three from the ears; and in seven there was fracture of ribs. In females the sternum was fractured The large veins were filled with blood and the vessels of the pia mater were engorged. There were effusions of blood into the posterior part of the lungs. In the Pont de la Concorde cases Tardieu found punctate hæmorrhages in the loose tissue of the pericranium, under the visceral pleura, and on the surfaces of the heart and abdominal viscera. The peculiar colour of the skin described above is explained by Dr. Ollivier as due to stasis of carbonised blood in dilated and paralysed capillaries. The indications for treatment are manifest. If the patient is seen immediately after the accident artificial respiration should be performed; later, stimulants should be used, as in the case related.

## THE CONTROL OF SMALL-POX IN AND AROUND THE METROPOLIS.

IN our issue of Jan. 18th (p. 175) we discussed the question as to what the new metropolitan borough councils and other authorities of London were doing with regard to controlling the spread of small-pox. We also mentioned that it was possible that some members of Parliament might be asking what the London County Council was doing with regard to small-pox; and we suggested that the enemies of the Council might hold that body lukewarm in regard to the prevention of small-pox. At the meeting of the County Council which was held on Jan. 21st Mr. G. J. Cooper, the chairman of the Public Health Committee, took THE LANCET very seriously to task, and is reported as saying that no better answer could be made to the article to which we have referred than the report which the Public Health Committee had presented. That report now lies before us and we can assure Mr. Cooper that its contents afford a complete answer to the hypothetical question which we put in our issue of last week. From this report we learn that common lodging-houses, in which a case of small-pox has occurred, have been constantly visited by the officers of the Council and that some slight pecuniary assistance has been given, owing to which the inmate of a common lodging-house, if ill, has been found to be willing to keep himself isolated in a particular room until he can be certified to be suffering from some malady which warrants his removal to an infectious diseases hospital. There is, of course, no power of compulsory vaccination, but the Public Health Committee believes that objections may be sometimes overcome by the offer of a small pecuniary consideration. The medical officer of the County Council has made an arrangement with each of the borough medical officers by which the latter supply him daily with all particulars which they have been able to ascertain with regard to each case gas used was equivalent to 33 grammes of cyanide to 100 cubic feet of space. Shelves were fixed across the window of the room, and on them the cages containing animals and insects were placed for easy examination. House flies exposed in the ordinary wire traps were killed in from two to four minutes after effervescence began in the cyanide jar. Bed-bugs were placed in tubes plugged with two inches of cotton, and these were put inside a Florence flask plugged with five inches of cotton. The bugs were therefore under seven inches of cotton. The room was closed in this experiment for 25 minutes, when all were removed at once to the open air and examined. Out of 60 or 70 insects two very young ones were alive. In a Florence flask with the mouth wrapped thickly with cotton mosquitoes (culex pungens) were killed in four minutes. Small black ants in test-tubes plugged with one inch of cotton were killed in five minutes. Rats in cages fell in convulsions in from two minutes to three and a half minutes from the beginning of the evolution of gas and ceased to move in from 30 to 40 seconds after falling. Mice and guinea-pigs succumbed more easily than did rats. Dr. Fulton and Dr. Stokes conclude that in hydrocyanic acid gas an exceedingly rapid and powerful agent is available for the destruction of all animal and insect pests within all fairly tight enclosures, and they point out that by its prompt action on mosquitoes, rats, and flies it is likely to be useful in the prophylaxis of yellow fever, malaria, filariasis, plague, and enteric fever. The gas is, of course, extremely dangerous to man, but they say that it is by no means unmanageable. After each of the experiments the room was entered instantly for the purpose of removing insects and animals, no other precaution being used than the suspension of respiration while in the room.

## AN OPERATION FOR THE REMOVAL OF PROMINENT ALVEOLAR PROCESS OF THE MAXILLA.

AN undue prominence of the anterior portion of the maxilla, even when edentulous, is often a source of much trouble to the dental surgeon who is anxious to insert a satisfactory and artistic denture. In the January issue of the *International Dental Journal* Dr. W. Howard records a case where the difficulty was overcome by removing a portion of the prominent bone. An incision was made from the region of the canine on one side to that on the other, the line taken being along the summit of the alveolar process. The muco-periosteum was raised and the bone was exposed for some distance both on the labial and the palatal aspects. The alveolus was then removed with bone-clippers to a depth of from one quarter to half an inch from the canine to the canine. The rough edges of the bone were smoothed and the muco-periosteum was then replaced and trimmed, a sufficient amount being allowed for shrinkage. The edges of the wound were united with catgut sutures. The result was in all respects satisfactory from an æsthetic point of view.

## IMMUNITY FROM SMALL-POX.

WE have received a letter from a correspondent pointing out that although the statistics recently published in relation to the present outbreak of small-pox afford useful information regarding the number of vaccinated and unvaccinated persons attacked by the disease, yet no mention is made of cases occurring in persons who have not only been previously vaccinated but have also had small-pox. One attack of the disease protects for a considerable period against a second attack, and should the patient again suffer from small-pox after an interval of some years the attack usually runs a mild course. Similarly, vaccination of a person who has had small-pox is rarely successful, but we are far from suggesting that such is always the case. We do not know of any recorded case of small-pox attacking a person who not only has previously had the disease but has also been subsequently successfully vaccinated. Many small-pox patients state that they have had a previous attack, but if careful inquiry is made into the symptoms, distribution of eruption, and duration of illness, and if the scars, if such be present, are examined, the alleged first attack usually proves to have been chicken-pox. Dr. J. MacCombie, writing in Professor T. Clifford Allbutt's "System of Medicine," states that in three-fourths of the cases of so-called second attack that have come under his notice he was able to satisfy himself that the first attack had been one of chicken-pox, and in most of the others there was not sufficient evidence to show whether the first attack had been small-pox or not.

## NURSING OF THE SICK POOR IN WORKHOUSES.

THE President of the Local Government Board has appointed from among the officers of the department a committee (consisting of Mr. Grant Lawson, M.P., Parliamentary secretary, Mr. W. E. Knollys, C.B., chief general inspector and one of the assistant secretaries, and Dr. A. H. Downes and Mr. A. Fuller, Poor-law medical inspectors, with Mr. R. H. A. G. Duff as secretary) to consider this subject. The committee will inquire and report as to the qualifications of nurses and probationers, the difficulties in obtaining an adequate supply of these officers, and the regulations necessary to define the respective duties of the master or matron and of the superintendent nurse.

## THE DISTRIBUTION OF PLAGUE.

A TELEGRAM from the Governor of the Cape of Good Hope, received at the Colonial Office on Jan. 15th, states that for the week ending Jan. 11th the cases of plague in the Cape Peninsula numbered 0. At Port Elizabeth there was one case, that of a coloured person. At Mossel Bay the cases numbered 2, both Europeans. In all the other places the cases numbered 0. The deaths from plague throughout the whole colony numbered 0. The area of infection remained unchanged; and the cases of plague in persons under naval and military control numbered 0. As regards Mauritius, a telegram from the Governor received at the Colonial Office on Jan. 17th states that for the week ending Jan. 16th the cases of plague numbered 27 of which 21 were fatal.

## THE INVESTIGATION OF CANCER.

SUNDRY paragraphs having appeared lately in the daily press concerning the investigation of the cause and treatment of cancer we think it well to state that we have authority to say that a draft scheme has been drawn up by an eminent surgeon which has been submitted to and received the approval of various leading members of the medical profession. It is proposed to raise a sum of money sufficient when invested for the income to defray the expenses of the investigation, and at a meeting held on Oct. 23rd, 1901, at which the Presidents of the Royal College of Physicians of London and of the Royal College of Surgeons of England, as well as nearly all the members of the special finance committee in connexion with the laboratories of those colleges respectively, were present, it was unanimously resolved :—

> That we cordially approve of a proposal which has been made to raise a sum of money, the interest of which shall be devoted to the investigation of the causes, prevention. and treatment of cancer. We are of the opinion that under the control of a suitably elected advisory committee an effective scheme could be drawn up, and that a convenient and suitable place for the investigations would be the laboratories belonging to the Royal Colleges.

We understand that considerable interest has been shown in and towards this movement by several highly placed and temperature record: 100° F. 3. The extensive formation of a friable granulation tissue exuding a thin serous discharge and the almost entire absence of suppuration. 4. The local character of the disease [illegible]

## SANITARY IMPROVEMENTS AT WINDSOR CASTLE.

CONSIDERABLE improvements, amounting to reconstruction, have been made in the sanitary arrangements of the southern part of Windsor Castle, recently occupied for a few days by their Majesties, by the officials of His Majesty's Office of Works under the advice and supervision of Professor W. H. Corfield, their consulting sanitary adviser. The whole of the drains under the south towers, from Edward the Third's Tower to the Victoria Tower inclusive, have been done away with, so that there is now no drain under the buildings on that side of the castle, and new watertight iron drains have been laid outside the buildings. Internal water-closets and soil-pipes have been cleared away, ventilated lobbies formed in connexion with the water-closets, new soil-pipes fixed outside the building, and the best improved appliances of all kinds fixed. Suitable disconnexion arrangements have been provided between the new drains of these towers and the castle sewers, so that each of the towers is, in fact, so far as the drainage is concerned, a house in itself. Similar improvements, we are informed, will gradually be carried out throughout the rest of the castle.

## THE DIFFERENTIAL DIAGNOSIS OF SIMPLE ABDOMINAL CONTUSION AND OF CONTUSION WITH INTESTINAL INJURY.

THE *Boston Medical and Surgical Journal* of Dec. 5th, 1901, contains a valuable paper on this subject by Dr. John T. Bottomley. He points out the difficulty of obtaining reliable statistics and pleads for a careful study of cases of abdominal contusion in the first few hours so as to assist in the solution of the all-important question of the time at which an operation should be performed. He has himself adopted the method of comparing all the available cases (20) of undoubted severe intestinal injury from contusion admitted to the Boston City Hospital (undoubted because proven by necropsy, operation, or death from acute peritonitis) with an equal number of cases of undoubted simple contusion (undoubted because the symptoms disappeared in a few days) The latter were *chosen* cases only in that an attempt was made to obtain cases of simple contusion as nearly as possible identical with those of intestinal injury. The following were the causes in both classes: striking by a wagon shaft, falls from various heights, kicks (human and equine), being run over, being fallen on or struck by objects, and squeezing. Thus causes apparently identical may produce a trivial or severe injury. But severe well-localised violence is usually an important factor in intestinal injury. Injuries caused by flying objects such as pieces of board from circular saws are liable to be serious. Injuries which are quite similar may cause profound shock in one patient and none in another; the pain may be intense in one and slight in another. Pain was present in all the cases of intestinal injury and in all but one of those of simple contusion. It may be the only symptom of a most severe injury—e.g., complete rupture of the ileum. Vomiting occurred on admission in 10 cases of each class; it was absent in two cases of intestinal injury and in seven of simple contusion, but in about half the cases (of either class) in which it was absent on admission it appeared within 2 hours. Its appearance late in, or after, the first 24 hours is usually of serious import. As to shock, muscular spasm, distension, tenderness, external signs of violence (contusion, abrasion, or traumatic hernia), dulness, alterations of temperature and pulse, analyses of the two series of cases show that none of these symptoms can be relied upon in diagnosis. Of the 20 cases of intestinal injury operation was performed in 11, and in only one with success; the nine cases treated expectantly were all fatal. In the successful case operation was performed in less than four hours after admission; four cases were operated on five or six hours after admission, one 12 hours, four 24 hours, and one 48 hours. In the cases not operated on the average duration of life after the injury was 2·33 days, the extremes being seven days and one day. In the cases of simple contusion the symptoms disappeared on an average in 4·43 days; in two cases exploratory incisions were made; nothing was found, and uneventful recovery ensued. Dr. Bottomley concludes that no sign or combination of signs indicates the nature of the injury and that the only means of making a diagnosis sufficiently early for treatment is by laparotomy. To wait for symptoms of peritonitis is, he says, to wait too long. Improvement in the first few hours may be deceptive; it may be only reaction from shock and should, he thinks, furnish the opportunity for operation. Many operations would be no doubt performed in cases in which there is no intestinal injury, but they are attended with little danger. Nimier[1] states that of 307 cases of abdominal contusion treated expectantly 92 were fatal, and Schmitt says that the expectant treatment of cases of abdominal contusion sufficiently severe to suggest perforation gave a mortality of 97·5 per cent.[2] On the other hand, Petry found that the mortality of 42 similar cases treated by laparotomy was 66·7 per cent. Kirstein had a mortality of 55·5 per cent. in 18 cases; in four laparotomy was done within five hours of injury and all were successful. His statistics show that every hour that passes after the injury lessens the chance of recovery after operation. Dr. Bottomley's careful analysis is disappointing in that he arrives at the purely negative conclusion that early diagnosis of the nature of the injury is impossible; but even if his view as to laparotomy be not accepted his ingenious and original method of attacking a very difficult problem is admirable and he has clearly established a most important fact—i.e., the close similarity of the early symptoms of simple abdominal contusion and of contusion with rupture of the intestine, which should be a warning to the practitioner to regard every case with anxiety.

## HYDROCYANIC ACID GAS IN PUBLIC HEALTH WORK.

UNDER this title Dr. John S. Fulton and Dr. William R. Stokes of Baltimore describe in the December number of the *Maryland Medical Journal* a variety of experiments on the destruction of bacterial, insect, and animal life by means of hydrocyanic acid gas. The chemicals employed were cyanide of potassium, concentrated sulphuric acid, and water, in the relative proportions of 1, 1·5, and 2·25. The amount of gas to be used was expressed in terms of cyanide—so many grammes of cyanide per 100 cubic feet of enclosed space. The following composed the apparatus in which the gas was generated. Three jars, placed at suitable relative elevations, were connected by syphon tubes. The requisite amount of cyanide was placed in the lowest and largest jar. The intermediate jar contained the water, and the upper jar the concentrated acid. The lower of the two syphons was automatic, and actuated by a definite height of liquid in the intermediate jar. It did not therefore operate until the last few ounces of acid were being delivered from the upper jar into the intermediate one. By this means the operator had time to leave the room and to close it behind him, and there was no danger of effervescence causing the chemicals to escape from their containers. The amount of

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[1] Archives de Médecine et de Pharmacie Militaires, March, [illegible].

[2] Münchener Medicinische Wochenschrift, July 19th, 1898.

*Absorptive bases.*—In this class of ointments the basis must not only penetrate but pass through the skin. Purified and hydrated wool-fat possesses this property in a high degree because, it is supposed, of its power to absorb more than its weight of water, and also because it is not a true fat but a cholesterin analogous to the sebaceous secretion. It has other advantages, being practically unalterable, never becoming rancid, and, when pure, not being affected by medicinal agents. Experiments reported by Unna, Shoemaker, Kiernan, and others have demonstrated its great absorptive power, ointments of narcotic extracts with this basis being effective in twice the dose given by the mouth; quinine, potassium iodide, and mercury produced their constitutional effects and were found in the urine shortly after inunction with ointments containing these agents with wool-fat. It is said to be especially useful in application to the orifices of the body in genito-urinary practice, and for other purposes. It is often mixed with oil, wax, and especially theobroma oil, and Helbing uses the following mixture, the addition of paraffin and wax reducing its absorptive power equal to that of lard: hydrous wool-fat, 65 parts; paraffin, 30 parts; ceresin, 5 parts. Such mixtures are largely used as substitutes for lard or oils, owing to their freedom from rancidity and their resistance to chemical agents, while possessing the same rate of absorption as the animal and vegetable fats and oils. The experiments of Shoemaker go to prove that the oleates do not pass through the skin, but exercise an intra-cutaneous effect; they cannot, therefore, be used for producing systemic effects; undiluted wool-fat should be used when systemic effects are desired. The 1898 British Pharmacopœia directs hydrous wool-fat to be used in the preparation of hamamelis and hemlock ointments.

# A DECADE OF PUBLIC HEALTH WORK IN THE ADMINISTRATIVE COUNTY OF LONDON.

## II[1]

READERS of Mr. Shirley Murphy's previous reports will be prepared to find that a large portion of the volume before us is occupied with a discussion of the behaviour of preventable disease in London during the year 1900. The zymotic—or, as the Royal College of Physicians of London prefers to call them, the epidemic—group of diseases first comes under consideration. And here we are pleased to notice what is, if we mistake not, an entirely new departure in these reports. We refer to a series of diagrams showing the seasonal distribution in London of each of the common infectious diseases in the successive weeks of a long series of years. By means of a curve the mean mortality in each week is shown as a percentage above or below the mean for the year, and by the help of these diagrams it is possible to forecast with some approach to accuracy what will be the probable course of a given disease at any desired period of the year. For example, to take the case of small-pox, the diagram for this disease is based upon the mortality experience of 60 years (1841–1900). The curve exhibits two maxima, the first corresponding with the end of January and the beginning of February and the second corresponding with the fourth week of May. The curve reaches the mean line, which is represented by 14 weekly deaths, in the first week of July; it then further steadily falls until the end of September, when it touches the lowest point, and thereafter as steadily rises until it again reaches the mean line in the third week of December. According to the experience of the last 60 years, then, we see that in London small-pox attains its greatest prevalence during the first half and its least prevalence throughout the second half of the year. In this respect it contrasts strongly with scarlet fever, diphtheria, and enteric fever, all of which diseases, if their rate of mortality is to be trusted, show diminished prevalence during the earlier months and increased prevalence during the later months of the year.

These instructive diagrams are a development of a like series prepared 10 years ago by Dr. W. Ogle of the General Register Office. Mr. Shirley Murphy has, however, brought them up to date and consequently has greatly increased their value for statistical purposes. We recognise the appropriateness of their appearance in the reports of the county medical officer of health rather than in those of a Government department. It is much to be desired that, if possible, Mr. Shirley Murphy will insert in his future reports similar curves showing reported *attacks* (instead of deaths) for each of the common infectious diseases that are notifiable under the London Act of 1889. There is no question that a set of diagrams so constructed and based on the experience of the metropolis for a period of ten years would be simply invaluable for administrative sanitary purposes.

In view of the existing serious prevalence of small-pox amongst us Mr. Shirley Murphy's remarks concerning the earlier cases of this disease that appeared in London during 1900 will be of special interest at the present time. It appears that in the course of the year 86 persons in all were *certified* to be suffering from small-pox, but in 13 of these cases subsequent examination showed that there had been errors in diagnosis. London had been free from small-pox during the last six months of 1899, and although in the course of 1900 several cases were imported from abroad, the disease never became established within the county until after its close.

"It is well deserving of note," Mr. Shirley Murphy says, "that much of the small-pox in London in 1900 had its origin in infection received abroad. The first case of the group of 18 cases, occurring mostly in Hackney, was that of a boy living in proximity to the Eastern Hospital, the date of whose attack appears to coincide in point of time with those of patients in the Eastern Hospital who had been infected by a man in that hospital who was admitted on Dec. 7th, and was removed, suffering from small-pox, on Dec. 9th, 1899. This man had returned from Jerusalem suffering from small-pox. If this explanation of the boy's illness be correct some 25 cases of small-pox had their origin in this source." Other instances are given in the report which show that infection had been imported several times from Paris and other foreign parts in the course of the year, but that in every case the measures adopted by the local sanitary authorities were successful in limiting the spread of the disease. Speaking of the changing age incidence of small-pox mortality in London in successive periods since 1841, Mr. Shirley Murphy points out that whereas in the period 1842–1850 the deaths of children under five years of age constituted nearly 70 per cent. of the total deaths, the proportion steadily fell in subsequent decennia until it reached a minimum of 25 per cent. in the 10 years 1881–90. The reduction in successive periods was undoubtedly due to more complete vaccination of the infant population, and the increase in the mortality at early ages which has been observed since 1890 corresponds almost exactly with the growing neglect of infant vaccination which is shown in a table to have taken place in recent years. It is an ominous fact to which public attention cannot be too forcibly directed that in the year 1898 (the latest for which returns are available) about one-third of the infant population of London below the age of one year were unvaccinated.

The incidence of scarlet fever in 1900 was below the normal, and so likewise was the virulence of the attacks as measured by their case mortality. For this reason the medical officers of health of the various districts have had less occasion than in other recent years to comment on special outbreaks of that disease. We note, however, that in the year under present review, as in previous years, school attendance excited a marked influence on the spread of scarlet fever amongst children of school age. The summer holidays of the London board schools in 1900 began on July 26th—i.e., in the latter part of the thirtieth week of the year—and the schools re-opened on August 27th—i.e., at the beginning of the thirty-fifth week. From a table given in the report we find that during the holiday period—namely, the interval between the thirty-second and thirty-fifth week—the incidence of scarlet fever upon children of from three to 13 years of age was *below* the average by nearly 16 per cent., whereas in the four weeks following the holidays the incidence rose to 69 per cent. *above* the average. It is therefore impossible to avoid the conclusion that school attendance was largely responsible for this difference in the spread of scarlet fever, more especially since the statistics of previous years have pointed to a similar conclusion. Exactly the same lesson is derivable from the statistics of diphtheria. In the year 1900, as in wealthy personages and there is good reason for thinking that success will attend it if some effort is now made. In view of what has already been done in Germany, the United States, and in Italy it is quite time that this country should bestir itself in the matter. As soon as the scheme has been made public we shall return to the consideration of the question.

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[1] No. I. was published in THE LANCET of Jan. 11th, 1902, p. 112.

## THE FOURTEENTH INTERNATIONAL CONGRESS OF MEDICINE.

DR. F. W. PAVY, F.R.S., has been elected to the office of President of the National Committee for Great Britain and Ireland of the International Congress of Medicine, in place of the late Sir William Mac Cormac, Bart., K.C.B., who so worthily filled the office for many years.

## ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE courses of lectures to be delivered at the Royal College of Surgeons of England during 1902 are as follows: On Monday, Wednesday, and Friday, Feb. 10th, 12th, and 14th, Mr. C. P. White, Erasmus Wilson Lecturer, will give lectures on the General Pathology of Tumours; on Feb. 17th, 19th, and 21st Dr. T. G. Brodie, Arris and Gale Lecturer, will lecture on the Pulmonary Circulation, more particularly in relationship to Variations in Cardiac Activity; on Feb. 24th, 26th, and 28th Professor W. McAdam Eccles will lecture on the Anatomy, Physiology, and Pathology of the Imperfectly Descended Testis. The first lecture will deal with the anatomy, the second with the physiology and a portion of the pathology, and the third with the rest of the pathology. Each lecture will be illustrated by lantern slides. On March 3rd, 5th, and 7th Professor F. G. Parsons will lecture on the Blood-vessels of Mammals in relation to those of Man; and on March 10th, 12th, 14th, 17th, 19th, and 21st Professor C. Stewart, F.R.S., will lecture on Organs of Respiration. All the lectures will commence at 5 P.M.

THE first place on Wednesday, Feb. 26th, has been obtained by ballot for the second reading of a Bill "to secure the better training of midwives and to regulate their practice."

THE annual dinner of the West London Medico-Chirurgical Society will take place on Wednesday, Feb. 19th, at 7.30 P.M., at Frascati's, Oxford-street, W.

THE KING has approved of the appointment of Dr. Wroughton Gerald Heath, medical officer of Montserrat, to the Legislative Council of that Presidency.

# Pharmacological Notes.

### OINTMENTS AND OINTMENT BASES.

IT is satisfactory to find that the ointments of the 1898 edition of the British Pharmacopœia have earned the commendation of those who are responsible for the preparation of the forthcoming United States Pharmacopœia. According to C. S. N. Hallberg, Ph G.,[1] these ointments, in the opinion of the United States Pharmacopœia Committee of Revision, are a vast advance over those of any and all other pharmacopœias, excepting the German and Austrian (1900) revised editions, which have not yet been studied. In a preliminary report by the sub-committee on ointments it is shown that in previous United States pharmacopœias the various bases for ointments have been chosen solely for pharmaceutical reasons and without any discrimination as to the general therapeutical purposes of this form of medication. Considered from the therapeutical standard the ointments may be divided into three groups, as follows:—

1. Protective: Non-absorbent or epidermatic.
2. Emollient: Nutritive, absorbent, or endermatic.
3. Constitutional, systemic: Absorptive or diadermatic.

These generalisations, though empirical, afford a basis for the study of these preparations in the light of the present state of medical science. The researches of Unna, Liebreich, and Shoemaker have demonstrated the necessity of taking the character of the fat into consideration, in order that the desired effect of an ointment may be obtained. Shoemaker, in "Ointments and Oleates," says: "That the oleaginous basis possesses valuable physiological and therapeutical properties peculiar to itself is proven by the fact that the sebaceous secretion of the skin is of an oleaginous composition and consistence. In estimating the value of an ointment we must take into consideration the separate virtues of the fatty basis and the included drug or drugs. ...... Sebum consists of fat cells, free fat and epithelial débris, and has the following chemical composition: olein and palmitin, 40 per cent.; casein, 13 per cent.; gelatin, 8 per cent.; water, 35 per cent.; and small quantities of sodium chloride, phosphate, and sulphate. It is unmistakeably a natural or physiologic unguent." The sebum is related to the nutrition of the hair, maintains the skin in a soft and flexible condition, fortifies it against changes in temperature by regulating the heat, acts as a lubricant, thus obviating deleterious friction, and is protective against irritant discharges. It acts as a preservative to the cuticle, protecting it from maceration by excessive perspiration and consequent exposure of the sensitive cutis vera. The varied uses of ointments are indicated by this enumeration of the properties and functions of the sebum; and the foregoing classification is useful in discussing the choice of ointment bases.

*Non-absorbent bases.*—When a purely external contact is desired the paraffins in their three different forms—viz., liquid, soft, and hard paraffins—afford the best bases. Such ointments may be required as (1) protectives; (2) antiseptics; (3) *astringents*; (4) *counter-irritants*; (5) germicides; and (6) parasiticides. These paraffins should be bland and neutral; sometimes they produce irritating and stimulating effects instead of being purely protective, lubricating, or emollient; these ill-effects are ascribed to sulphur and other impurities. These bases are used for the following drugs in the 1898 British Pharmacopœia: the nitrate, red and yellow oxides, and red iodide of mercury, ammoniated mercury, zinc oleate, creosote, eucalyptus oil, boric, salicylic, and carbolic acids, glycerin of lead subacetate, iodoform, and the carbonate and iodide of lead.

*Emollient—absorbent bases.*—Lard, sometimes with an addition of wax and oil, and, in the case of alkaloids, of oleic acid, afford vehicles with a range of melting points well adapted to the varying pharmaceutical and therapeutical requirements of this class of ointments. Probably fresh, pure lard is the ideal basis for endermatic medication, but the commercial article, often an emulsion-like mixture of lard, tallow, cotton-seed oil, borax, and water, is unfit for use. Carefully prepared lard, benzoinated and preserved in a cool place, resists decomposition for a long time and answers admirably for the extemporaneous preparation of many ointments, but it is easily affected by many chemical reagents—e.g., the oxides of mercury. Lard in becoming rancid decomposes into fatty acids which produce irritation where an emollient effect is desired. Lard and bland animal and vegetable oils penetrate into, but not through, the integuments. Theobroma (cacao) oil affords one of the most elegant vehicles of this class, having an agreeable odour and not being prone to rancidity. As a nutrient cod-liver oil is the most effective when applied by inunction. These fats are intended for the following therapeutical purposes: emollient (also protective), anodyne, alterative, local irritant, resolvent, sedative, and stimulant. The drugs of this class officially used in the British Pharmacopœia include galls, opium, mercury, oleate, red iodide, subchloride and nitrate of mercury, sulphur, potassium iodide, chrysarobin, zinc oxide, belladonna, cantharidin, iodine, sulphur iodide, *the alkaloids aconitine, atropine, cocaine*, and veratrine, resin, stavesacre, capsicum, and liquid tar. The rosewater, compound mercury, and spermaceti ointments are also of this class.

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[1] Pharmaceutical Journal, vol. lxvi., pp. 30 and 39.

granted by the county council for connecting the remainder of the drains of the asylum with the public sewer, and that a piece of ground which has a long frontage opposite the asylum grounds should be purchased for £500.

*Royal Asylum of Montrose (Annual Report for 1900).*—The average number of patients resident during the year was 661 and comprised 300 males and 361 females. During the year 190 patients were admitted, and of these 79 were males and 111 were females. The number of first admissions was 154—viz., 65 males and 89 females. Dr John G. Havelock, the medical superintendent, states in his report that in 50 of the cases admitted there was an acknowledged hereditary predisposition to insanity, in 31 there was a history of alcoholic intemperance, in 15 cases domestic troubles and business worries were assigned as the cause, in 15 old age appeared to be the determining factor, while in 42 no cause could be ascertained. The number of patients discharged as recovered during the year was 67, or 10·1 per cent. of the average number resident. The deaths during the year amounted to 57, or 8 6 per cent. as calculated on the same basis. Post-mortem examination was made in all cases where the consent of the relatives could be obtained. Of the deaths five were due to pneumonia, six to epilepsy, seven to general paralysis, seven to senile decay, 10 to cardiac disease, 11 to phthisis and other forms of tuberculosis, and the rest to other causes. Suicidal tendencies were marked in a large proportion of the patients admitted, and the inquiries of Sir John Sibbald now published for the first time show that Forfarshire and the neighbouring county of Kincardine have a larger proportion of suicides compared with the population than the rest of Scotland. The same authority states that "the counties of the east coast of Scotland all show higher suicidal rates than the western counties. It is curious that the city of Dundee shows a lower rate than the rest of Forfarshire. It is so far in favour of the view of those who say that Celticism and Catholicism prevent suicide, for Dundee contains the largest proportion of Irish Catholics of any part of Forfarshire." Certain parishes in the two counties named send a very high proportion of suicidal patients to the asylum and suicides are specially frequent in these parishes. "A possible explanation of this," says Dr. Havelock, "seems to be that of inherited predisposition, for the suicidal tendency is strongly hereditary in most cases and is prone to increase unduly in districts where the population is stagnant and stationary. The whole subject is beset with problems of extreme interest and difficulty." New villas are now completed and accommodate 60 male patients of the quiet and convalescent class. The cost with furnishings has amounted to less than £115 per bed. There is a notable increase of private patients paying the higher rates of board who are accommodated in Carnegie House. Additions and alterations in the form of electric lighting have been made throughout the building. The recent decision of the managers to join the Scottish asylums laboratory scheme is regarded as an important step in the right direction. The report of the house committee shows a profit in the farm and garden department of £416, but it records with regret a considerable deficit in the financial statement for the year. "This has been in great measure due to the same causes as last year, while the recent increase in patients' board has not yet come into full operation. Provisions have again risen in price and coal has increased in cost." The Commissioner in Lunacy states in his report that Carnegie House was found in admirable order, the surroundings of the patients being replete with every comfort. The patients in the asylum proper bore every evidence of being well cared for and their dress and personal appearance were satisfactory. The wards were clean and in good order and the medical registers were found to be kept with care and accuracy.

*Hereford County and City Asylum (Annual Report for 1900).*—The average number of patients resident during the year was 377 and comprised 177 males and 200 females. The admissions during the year amounted to 87—viz., 46 males and 41 females. Of these 64 were first admissions. Mr. C. S. Morrison, the medical superintendent, states in his report that "the influx of incurable senile cases is the most prominent and depressing feature of this asylum." The work of the staff is crippled by so excessive a proportion of helpless chronic and senile patients who present no prospect of recovery. The evil is to be remedied by having separate blocks for acute and curable cases, while the majority of the chronic helpless and incurable patients should be housed more cheaply in buildings erected at less cost. Nine males out of the 46 among the admissions were insane from the results of alcoholism. With respect to this Mr. Morrison observes that "these cases touch the fringe of a very large ethical State question of the necessity of promoting temperance by better education. We are to suppose that the flood of prosperity which has secured a higher wage to the labourer has been in excess of what his education and social environment have allowed him to expend in a more profitable way. ...... The increase of alcoholic insanity with a higher wage is not incidental to this country alone, but observable generally. ...... The natural enemy of all excesses should be the schoolmaster." The number of patients discharged as recovered during the year amounted to 31—viz., 15 males and 16 females, or 8 2 per cent. of the average number resident. The deaths during the year amounted to 32, comprising males and females in equal proportion, or 8·49 per cent. as calculated on the same basis. Of the deaths one was due to meningitis and cerebral hemorrhage, one to tuberculosis of the intestines, two each were due to epilepsy and general paralysis, two to asphyxia by choking, three to Bright's disease, 10 to senile decay, and the rest to other causes. Post-mortem examinations were made in 25 cases. Three inquests were held during the year, two on epileptics who had died from accidental suffocation, and one on a case of death following self-inflicted injuries previously to admission. For the first time in many years the asylum has been free from any influenza in a virulent epidemic form. This exemption is attributed chiefly to the "mildness of the winter, which never necessitated the over-heating of the air in the basement to maintain the necessary temperature. By over-heating we seem to lose some of the available moisture in the atmosphere necessary to maintain the healthy tone of the respiratory passages. ...... How far the evil necessity of such over-heating has conduced within recent years to increase in this asylum pulmonary phthisis is a matter needing further investigation." A number of patients had been boarded out for nearly 10 years, the cost of which has already reached £14,000, and it is now proposed that these patients should be brought back, as the boarding-out contracts are about to lapse. The asylum is to be enlarged to the extent of providing accommodation for 150 additional patients, and this, it is estimated, will cost about £30,300, representing in round figures £200 per bed. Electric illumination is installed throughout the new buildings and in the old blocks it will replace gas. The effluent from the sewage farm has been rendered innocuous and less offensive by the adoption of combined bacteria- and filter-beds and for the present they seem to be efficient. The Commissioners in Lunacy state in their report that the wards were bright, that the dormitories and bedding were in excellent condition, and that the appearance of the patients was neat and satisfactory. The medical case-books were very well kept

# Public Health and Poor Law.

## LOCAL GOVERNMENT BOARD.

### REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

*On Recent Prevalence of Diphtheria in the Prestwich Urban District*, by Dr. THEODORE THOMSON.[1]—Prestwich, an outlying suburb of Manchester, with a population (including the Prestwich Asylum) of about 12,000, suffered in 1900 from a severe and sustained epidemic of diphtheria Dr. Thomson visited the district in consequence of the request of the Prestwich Urban District Council for local inquiry into the causes of this epidemic, and he revisited the locality in 1901 in view of the continued prevalence of the disease and with reference to sundry questions of sanitary administration. The epidemic of diphtheria in 1900 fell with great severity upon one portion of Prestwich, the village of Rooden Lane. In this village, with a population of some 3200, as many as 70 cases of diphtheria were notified, while the rest of the district contributed only six cases; and in 1901 Rooden Lane had 52 notified diphtheria cases, as against 12 which previous years, the spread of this disease also seems almost to have been determined, at any rate at school ages, by aggregation of the children at school.

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[1] London: Eyre and Spottiswoode, East Harding-street; Edinburgh: Oliver and Boyd; Dublin: E. Ponsonby. Price 2d.

From the table respecting diphtheria we find that whilst in the holiday period the attacks amongst children of the ages of from three to 13 years were *below* the average by 32 per cent., they were 45 per cent. *above* the average in the four weeks succeeding the holiday period. Diphtheria seems to have shown less prevalence in London as a whole during 1900 than the average of the previous four years. The disease showed the greatest proportional prevalence in the districts of St. Saviour Southwark, Fulham, Stoke Newington, Plumstead, Lee, and Camberwell; and the least in St. Martin-in-the Fields, Paddington, and St. George's Hanover-square. The mortality from diphtheria in London as a whole in 1900 was considerably below the average; it was equal to 0·34 per 1000 of the population, against an average rate of 0·49 per 1000 in the 10-year period 1890–99. Enteric fever was notified during the year under review in 4317 cases, giving a ratio of 1 0 attack in each 1000 of the London population, as compared with an average ratio of 0 8 per 1000 in the previous 10 years. The death-rate from this disease in the county generally was equal to 0·16 per 1000, a rate which, although slightly lower than that of the immediately preceding year, was nevertheless, with that exception, higher than the rate in any year since 1893. In the distribution of enteric fever mortality in 1900 the northern and eastern groups were above, and the western and central groups were below, the average rate for London. In discussing the causes of enteric fever in London the reports of several of the local health officers give accounts of the communication of infection from one person to another. Dr. Reginald Dudfield observed this in four instances; Dr. L. C. Parkes speaks of the extension of the disease from one member of a family to seven others; Dr. J. F. J. Sykes gives account of two households in St Pancras in one of which the first case was followed by six others and in the second by nine others; Dr. G. Newman connects nine cases in Clerkenwell with one or other of three cases occurring among children attending the same school; Dr. L. T. F. Bryett gives particulars of six series of such cases occurring in Shoreditch; Mr. C. R. Kempster attributes a group of cases occurring in Battersea to the same cause; and Dr. W. A. Bond mentions the case of two nurses who were infected while in attendance upon cases of this disease. The above instances are confirmatory of the evidence which has been accumulating for many years past in the experience of hospital physicians and others and which affirms the communicable nature of enteric fever *under certain conditions.* We know of a physician of long experience in the hospital isolation of cases of enteric fever who distinctly asserts the infective character of this disease; he further states that his own painful experience of this fact in the persons of several members of his staff has caused him to avoid the employment of young and presumably susceptible nurses in the treatment of enteric fever and to restrict the nursing of that disease either to those who have been rendered immune by a previous attack or to the older members of the staff.

## ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY meeting of the Council was held on Jan. 16th, Mr. H. G. HOWSE, the President, being in the chair.

The SECRETARY reported that he had not received any essay on the Diagnosis and Treatment of Bullet Wounds of the Chest and Abdomen, the subject of the Jacksonian Prize for the past year. It was resolved that the amount of the dividends accruing from the Jacksonian Fund for the past year should be added to the principal of the fund.

The PRESIDENT stated that he would deliver the Hunterian Oration in 1903.

A letter was read from Mr. Herbert W. Page expressing the wish to resign his seat on the Court of Examiners at the end of the pass examination for the Membership to be held this month. The PRESIDENT stated that the vacancy thus occasioned would be filled up at the ordinary meeting of the Council in March, and that the vacancies which would be occasioned by the expiration of the periods of office of Mr. W. J. Walsham and Sir William H. Bennett would also be filled up at that meeting, Mr. Walsham not being a candidate for re-election.

Mr. T. Bryant was re-elected as representative of the College on the Council of the Queen Victoria Jubilee Institute for Nurses for three years.

A letter was read from Lady MacCormac thanking the Council for the sympathy expressed to her on the death of her husband.

A letter was read from the Secretary of the Medical Board of St. Luke's General Hospital, Ottawa, communicating a resolution adopted by the members of the medical staff of the hospital expressing regret at the death of Sir William MacCormac, and recording their appreciation of his efforts in the cause of science and the advancement of the best interests of the medical profession.

A letter was read from the President and General Secretary of the Fourteenth International Medical Congress to be held in Madrid from April 23rd to 30th, 1903, inviting the College to send a delegate to the Congress. Mr. Edmund Owen was appointed the delegate

A letter was read from Mr. Bryant reporting the proceedings of the General Medical Council at their late session. The thanks of the Council were given to Mr. Bryant for his services as the representative of the College on the General Medical Council.

On the motion of Mr. EDMUND OWEN it was resolved that the names of the Honorary Fellows should be continuously printed in the College Calendar and that in case of death the date thereof should be appended.

The March meeting of the Council will be held on Thursday, March 20th.

## ASYLUM REPORTS.

*Devon County Asylum (Annual Report for 1900).*—The average number of patients resident during the year was 1166, comprising 486 males and 680 females. The number of cases admitted during the year was 249, and of these 222—viz., 100 males and 122 females—were first admissions. The admissions exceeded those of the previous year by 32. Mr. Arthur N. Davis, the medical superintendent, states in his report that the *number of admissions* during the year was, with one exception, the largest in any one year since the opening of the asylum. The number of cases discharged as recovered during the year amounted to 112—viz., 44 males and 68 females, or 9 6 per cent. of the average number resident. The deaths during the year amounted to 85—viz., 47 males and 38 females, or 7 29 per cent. as calculated on the same basis. The mean average age at death for both sexes was 58 years. No inquest was held during the year. The casualties during the year amounted to eight and were principally the result of falls among aged patients, but in no case was death consequent upon the injury. Of the deaths two were due to nephritis, three to colitis, four to cerebral hemorrhage, four to cardiac disease, seven to epilepsy, nine to senile decay, 10 to phthisis and general tuberculosis, 11 to pneumonia, 20 to general paralysis of the insane, and the rest to other causes. *There has been no illness* of an epidemic character, but there were two cases of enteric fever and several cases of erysipelas and influenza. "On the whole the general health of the patients has been good, notwithstanding the continued accumulation of old and feeble cases." Among the principal causes of insanity in the admissions hereditary influences were found in 26 cases, previous attacks in 25, alcoholic intemperance in 15, and senile mental decay in 17. *Employment in the garden and on the* farm for the male patients has been freely provided and with great benefit. "In the workshops only a limited number find employment on the male side, but a very large proportion of the women are usefully engaged in the needle-room, laundry, and wards." The Commissioners in Lunacy state in their report that the general appearance of the day-rooms, wards, and dormitories has been much improved and speaks well for the management. *Some degree of overcrowding* still exists on the male side. The condition of the patients in respect to personal tidiness was satisfactory, and the medical records and post-mortem notes were well and carefully kept. The committee of visitors to the asylum state in their report that the weekly charge of maintenance per patient has been raised from *8s 9d.* to *9s. 3d.* The committee have recommended that the sum of £500 should be

The annual rate of mortality in these towns, which had been 20·1 and 18·3 per 1000 in the two preceding weeks, further declined last week to 17·7 per 1000. In London the death-rate was 18·0 per 1000, while it averaged 17·6 in the 74 other large towns. The lowest death-rates in these towns were 4·8 in Hornsey, 8·0 in Derby, 9·2 in Smethwick, 10·3 in Kings Norton, 10·7 in Birkenhead, and 10·8 in Walthamstow; the highest rates were 24·0 in Wolverhampton and in West Hartlepool, 24·1 in Bolton, 24·2 in Stockton-on-Tees, 27·9 in St. Helen's, and 31·8 in Merthyr Tydfil. The 5035 deaths in these towns included 534 which were referred to the principal zymotic diseases, against 510 and 482 in the two preceding weeks; of these 534 deaths 158 resulted from measles, 90 from whooping-cough, 85 from diphtheria, 59 from small-pox, 57 from scarlet fever, 50 from diarrhœa, and 35 from "fever" (principally enteric). No death from any of these diseases was registered in Hastings, Southampton, Ipswich, Burton-on-Trent, West Bromwich, Derby, Wallasey, Wigan, Warrington, Rochdale, or West Hartlepool; the highest zymotic death-rates were recorded in Great Yarmouth, Handsworth, Aston Manor, Oldham, Rotherham, Stockton-on-Tees, and Merthyr Tydfil. The greatest proportional mortality from measles occurred in Great Yarmouth, Aston Manor, Stockport, Oldham, Preston, Rotherham, Stockton-on-Tees, South Shields, and Merthyr Tydfil; from scarlet fever in Aston Manor, Handsworth, St. Helens, and Bolton; from diphtheria in Hanley; and from whooping-cough in Stockton-on-Tees. The mortality from "fever" showed no marked excess in any of the large towns. 55 deaths from small-pox were registered in London, three in Tottenham, and one in Hornsey, but not one in any other of the 75 large towns. The number of small-pox patients in the Metropolitan Asylums hospitals, which had been 666, 754, and 873 at the end of the three preceding weeks, had further risen to 877 on Saturday, Jan. 18th; 213 new cases were admitted during the week, against 226, 261, and 306 in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital at the end of the week was 2760, against 3137, 2987, and 2864 on the three preceding Saturdays; 288 new cases were admitted during the week, against 263, 313, and 250 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 452 and 366 in the two preceding weeks, further declined last week to 307, and were 296 below the corrected average. The causes of 65, or 1·3 per cent., of the deaths in the 75 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Salford, Bradford, Leeds, and 37 other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Aston Manor, Liverpool, St. Helens, and Middlesbrough.

### HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 23·2 and 19·6 per 1000 in the two preceding weeks, rose again last week to 20·8 per 1000 and was 3·1 per 1000 above the mean rate during the same period in the 75 large English towns. The rates in the eight Scotch towns ranged from 14·1 in Leith and 17·1 in Edinburgh to 23·1 in Paisley and 23·5 in Glasgow. The 673 deaths in these towns included 23 which resulted from measles, 13 from diarrhœa, 11 from whooping-cough, six from scarlet fever, six from diphtheria, and four from "fever." In all 63 deaths were referred to these principal zymotic diseases last week, against 86, 70, and 56 in the three preceding weeks. These 63 deaths were equal to an annual rate of 2·0 per 1000, which was slightly above the mean rate last week from the same diseases in the 75 large English towns. The fatal cases of measles, which had been 36, 30, and 23 in the three preceding weeks, were again 23 last week, and included 20 in Glasgow and two in Dundee. The deaths from diarrhœa, which had been 12 and 19 in the two preceding weeks, declined again last week to 13, of which six occurred in Glasgow, four in Dundee, and three in Edinburgh. The fatal cases of whooping-cough, which had been 12 and five in the two preceding weeks, rose again to 11 last week, and included nine in Glasgow. The deaths from scarlet fever, which had been seven, four, and two in the three preceding weeks, increased again last week to six, of which three were registered in Greenock. The fatal cases of diphtheria, which had been eight, five, and four in the three preceding weeks, rose again to six last week, and included two in Edinburgh and two in Dundee. The deaths from "fever," which had been seven and three in the two preceding weeks, increased last week to four, of which two occurred in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 182 and 142 in the two preceding weeks, rose again last week to 176, and showed an excess of 37 over the number in the corresponding period of last year. The causes of 18, or nearly 3 per cent., of the deaths in these eight towns last week were not certified.

### HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 29·4 and 25·0 per 1000 in the two preceding weeks, further declined to 23·4 per 1000 during the week ending Jan. 18th. During the past four weeks the death-rate has averaged 26·2 per 1000, the rates during the same period being 19·5 in London and 20·5 in Edinburgh. The 170 deaths of persons belonging to Dublin registered during the week under notice showed a decline of 12 from the number in the preceding week, and included six which were referred to the principal zymotic diseases, against nine and 10 in the two preceding weeks; of these two resulted from diarrhœa, one from measles, one from diphtheria, and one from "fever." These six deaths were equal to an annual rate of 0·7 per 1000, the zymotic death-rates during the same period being 2·2 in London and 1·0 in Edinburgh. The mortality from diarrhœa slightly exceeded that recorded in the preceding week; while that from diphtheria and from "fever" showed a decline. The 170 deaths in Dublin last week included 39 of children under one year of age and 52 of persons aged 60 years and upwards; the deaths of infants showed a marked increase over the number in the preceding week, while those of elderly persons slightly declined. One death from violence and two inquest cases were registered; and 58, or more than a third, of the deaths occurred in public institutions. The causes of 10, or nearly 6 per cent., of the deaths in Dublin last week were not certified.

## THE SERVICES.

### ROYAL NAVY MEDICAL SERVICE.

Fleet Surgeon Robert William Williams has been placed on the Retired List, with permission to assume the rank of Deputy Inspector-General of Hospitals and Fleets. Dated Jan. 10th, 1902.

### ARMY MEDICAL STAFF.

Surgeon-General Thomas Francis O'Dwyer is placed on retired pay. Dated Dec. 26th, 1901.

### ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel A. O. Geoghegan is appointed to the charge of the Station Hospital at Shahjehanpur. Colonel J. F. Supple, Principal Medical Officer, Bombay and Nagpur Districts, proceeds to Poona to officiate as Principal Medical Officer, Bombay command. Lieutenant-Colonel W. O. Wolseley, in medical charge of the Station Hospital, Belgaum, has proceeded to Bombay to officiate as Principal Medical Officer, Bombay and Nagpur Districts.

### IMPERIAL YEOMANRY.

Essex: J. J. Macgregor to be Surgeon-Lieutenant.

### INDIA AND THE INDIAN MEDICAL SERVICES.

The King has approved of the retirement from the service of the undermentioned officers:—*Bengal Establishment:* Lieutenant-Colonel Edward Bovill, dated Nov. 8th, 1901. Captain Albert Edwin Hayward Pinch, half-pay list, dated Dec. 17th, 1901. *Madras Establishment:* Lieutenant-Colonel Mervanji Pestanji Kharegat, dated August 8th, 1901.

### ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain E. W. Barnes to be Surgeon-Major. Surgeon-Captain William Baron Cockill, 2nd Volunteer Battalion the Border Regiment, to be Surgeon-Captain.

### VOLUNTEER CORPS.

*Rifle:* 2nd Cadet Battalion the King's Liverpool Regiment: Henry James Bailey to be Surgeon-Lieutenant. 2nd occurred in the rest of the district Dr Thomson was able to dismiss the possibility of milk having served in this instance as an agent in the dissemination of diphtheria With regard to the question whether various unwholesome conditions which were met with in Rooden Lane (e g , privy midden nuisances, unpaved yards, and house drains connected directly to sewers) played a part in promoting the recent prevalence of diphtheria his report speaks with suitable caution "in our present uncertainty as to the conditions particularly favourable to the life and growth of the diphtheria bacillus" It would be greatly to the advantage of the public health if careful research could be undertaken which would make it possible to express a more certain opinion on this matter and so to determine how far diphtheria is capable of repression by preventive measures specially directed against insanitary surroundings of dwellings There appears to be no doubt that at Rooden Lane the spread of diphtheria was aided, and perhaps largely aided, by the transmission of infection from the unrecognised sick *to the healthy while at school together* Closure of schools had a distinctly beneficial influence Moreover, the fact that scarcely any diphtheria occurred in the village of Prestwich, only half a mile from Rooden, has to be associated with the circumstance that each of these villages has its own public elementary schools and that there is but little attendance of children from the one village at the schools of the other While pointing out defects in administrative action in certain directions Dr Thomson shows that, on the whole, the measures to combat diphtheria adopted by the district council and its officers were *thorough* Antitoxin inoculation was used on a considerable scale as a preventive measure, but the degree of success obtained is not indicated in the report. Mr T Stephenson, the medical officer of health, made a practice of examining the throats of the children attending school, with satisfactory result Dr Thomson's observations as regards the general sanitary circumstances of Prestwich district are less favourable to its local sanitary administration, and he points to a number of conditions which it is to be hoped that the district council will take steps to remedy Though the privy-midden has been often condemned we cannot refrain from quoting Dr Thomson on the subject —

> No worse conservancy system for populous localities has yet been invented than the privy midden capacious deep usually permitting soakage of its liquid contents into the surrounding soil and above all foul smelling Its occasional cleansings lead to further fouling of the ground on which by way of preliminary to removal its contents are thrown Only noses inured to stinks can tolerate such a system and no such noses should be found among those whose duty it is to act as guardians of the public health

*On the Sanitary Circumstances and Administration of the Gildersome Urban District, and upon Recent Prevalence of Enteric Fever therein* by Dr W W E FLETCHER [2]—This report records some interesting facts with regard to a small outbreak of enteric fever attributable to contamination of a particular milk supply Gildersome for several months antecedent to March, 1901 had been suffering somewhat excessively from "sporadic enteric fever, occurring in different parts of the district and not attributable so far as could be ascertained to any single common cause of infection But from March 7th to April 15th 25 cases of enteric fever were notified from 18 houses Of these households 16 were supplied by a particular milk seller Dr Fletcher ascertained that two members of the family of this milk seller had been attacked during February by illness which it seems certain in the light of subsequent events was enteric fever, and on March 9th another member of this family had an undoubted attack of the disease The milk seller in question was a man in a small way of business, and the householders who suffered from fever formed a large proportion of his customers The way in which the milk may have become infected at the milk seller's does not appear to be indicated in the report, no doubt because no trustworthy facts could be ascertained The facts given by Dr Fletcher with regard to the sanitary condition and administration of Gildersome indicate that this small district belongs to a type which may be expected to become common in certain counties—a locality which has only in recent times become urban in character, but which is already losing its population by reason of the exhaustion of its local coal mines. Such districts present particular difficulties as regards sanitary improvements Amendment is needed in many directions, but the district with a population of the working class which is now no more than 3000, has already borrowed some £12 000 and is obliged to spend a further large sum to complete its sewerage scheme Unless some new industries succeed in Gildersome it is probable that as years go on the population which remains will be less able to afford the rates required to repay the debt of the district, and correspondingly unwilling to incur any expense in matters of public health

*On the Sanitary Circumstances of the Llandilofawr Rural District Carmarthenshire, and on Sanitary Administration by the Rural District Council*, by Dr S W WHEATON [3]—This report also deals with a colliery district Population has been steadily falling off in almost all the parishes of the large district of Llandilofawr in Carmarthenshire, with the exception of the subdistrict of Llandebie, in the Amman Valley, where mining and manufactures are in progress In the greater part of the district are villages comprising many empty and dilapidated dwellings, while in Llandebie and its neighbourhood large collections of *dwellings of an urban character are springing* up These new houses leave much to be desired, for example their roofs are frequently without eave spouting and they have been constructed without damp proof courses It is evident that much stricter supervision of building operations is required The great trouble throughout the district, strange as it may seem when its hilly character and high rainfall are considered, is lack of water In Llandebie the inhabitants have to depend on three private wells, two of which are liable to serious contamination, in Penygroes the villagers have to go 400 yards away to a mere dipping place, which is apt to fail them in the summer, when they resort, as is common in this part of the country, to water coming from abandoned coal workings Dr Wheaton gives many striking instances of villages with unsatisfactory supplies and habitual scarcity of water The difficulties of obtaining a good public supply no doubt may be great in some of the villages in question, but it is evident that a great improvement could be effected in the majority of places (Llandebie for example) with very little difficulty Where there is abundance of water in watercourses and streams no care seems to be taken to prevent pollution Privies are frequently built over streams and refuse of all kinds is thrown into them The district council appears to have paid little attention to the advice of their medical officer of health in these or in other matters and they have insisted upon the reappointment of an inspector of nuisances who appears to be past his work The prospects of "sanitary progress' in Llandilofawr hardly seem bright, but it may be hoped that some improvement will follow the publication of Dr Wheaton's report

## VITAL STATISTICS

### *THE DEATH RATE OF 1901*

As all medical officers of health are now required to complete their annual reports to the Local Government Board by the middle of February in each year the following figures have been provisionally compiled for their convenience from the quarterly reports of the Registrar General

*England and Wales 1901 Annual Birth- and Death rates, and Rates from the Seven Chief Epidemic Diseases*

| — | Annual rates per 1000 living | | | Infant mortality |
|---|---|---|---|---|
| | Births | Deaths (all causes) | Deaths from seven chief epidemic diseases | Annual death rate of infants under one year per 1000 births |
| England and Wales | 28·5 | 16·0 | 2·05 | 151 |
| Rural England and Wales | 27·2 | 15·7 | 1·56 | 138 |
| 33 Great towns | 30·0 | 18·6 | 2·63 | 165 |
| 67 Smaller towns | 29·0 | 17·1 | 2·24 | 163 |

### HEALTH OF ENGLISH TOWNS

In 75 of the largest English towns 8629 births and 5035 deaths were registered during the week ending Jan 18th artery with his thumbs, and a third to prepare and to apply a tourniquet? May I put this question, How often can a lecturer get his class subject to bear the application of a tourniquet really tight enough to stop absolutely the arterial flow? Short of this, what does the demonstration amount to but of a partially tight tourniquet which in practice will indefinitely increase the hæmorrhage? It may be that this is the demonstration only too exactly imitated by some of the pupils.

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[2] 1901 price 6d

[3] 1901, price 3d

Mr. J. B. G. Gidley-Moore asks me, in THE LANCET of Jan. 18th, p. 194, how I would deal with the case he quotes from the *Daily Mail* of a man who died before he could be taken to the hospital after having had *both legs* cut off by a chaff-cutter. I only know of the accident to *one arm* as seen in the country, the hand crushed by the rollers, or crushed and the fingers cut off. A hand was cut off and the bleeding arrested by plunging the forearm into a bag of flour. In a more extensive case a man's arm was drawn in to the elbow whilst the knives cut off his forearm in slices. Bleeding was checked by local pressure and he was taken two miles to a hospital where he got well. It must be some kind of very large chaff-cutter to draw in *both* a man's legs—they would first be crushed by the rollers before being cut off. The result would not be different from a railway accident. Owing to the shock and the crushed ends of the arteries there would be no great arterial hæmorrhage, so that the instruction to an elementary class as regards such an accident should be that elevation and local pressure is to be applied at once and the tourniquet reserved until the patient is anæsthetised and the surgeon is ready to explore the injury. Anything less than the rapid and efficient application of a tourniquet would only increase the bleeding and hurry on the end noted in the above case.

It is evident that elementary first-aid instruction would gain indefinitely and theoretical considerations drawn from surgical practice could be revised by the publication of reports of cases in which the nature of the accident, the time elapsing before the application of first aid, the exact nature of the first aid, the amount of instruction undergone by the person rendering it, and the condition of the patient when first coming under surgical treatment, should be fully set forth. After all, this last must be the final test as to what should be and what should not be the actual instruction given on elementary first aid. One must keep in mind the apostolic maxim about milk for babes and meat for strong men. The misapplication of tourniquets is another instance of the saying that "a little knowledge is a dangerous thing."

I am, Sirs, yours faithfully,

Brook street, W., Jan. 21st, 1902. WALTER G. SPENCER.

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*To the Editors of* THE LANCET.

SIRS,—May I be allowed to indicate some additional defects in "first-aid" instruction suggested by the discussion in your columns on "First Aid for Primary Hæmorrhage: the Wrong Teaching Given to Ambulance Classes"?

In the St. John Ambulance Association's manual, "First Aid to the Injured," 34 pages are devoted to instructing the pupil how to diagnose and to treat various fractures and dislocations. Apparently the pupil is expected, as a result of a course of lectures, to develop into a skilled diagnostician. He, obviously, cannot treat a fracture or a dislocation unless he has first ascertained that a fracture or a dislocation is present. If a surgeon who has had five years' training as a student, not to mention years of actual practice, can often only diagnose these injuries with the aid of a general anæsthetic or the x rays, it is hardly surprising to find that the holder of a first-aid certificate should be unable to make a correct diagnosis, and, if unable to diagnose the injury, of what use is his skill in applying different combinations of handkerchiefs and sticks to suit the particular injury which he imagines to be present?

The time honoured story of the first-aid man who tied up the leg of an unconscious patient with a most artistic arrangement of umbrellas and handkerchiefs prior to removal to hospital, where the house-surgeon found the sound leg encased in umbrellas and the fractured leg looking after itself, is probably a statement of fact. How much better would it be for the injured members of the general public if the first-aid pupil were taught as follows: 1. It is not his business to attempt to diagnose fractures and dislocations. 2. He can do no good and may do harm by manipulating the injured limb. (The manipulations which have ultimately to be made by the surgeon are quite painful enough without subjecting the patient to a preliminary torture at the hands of the first-aid man.) 3. Unless the patient has to be moved from the site of the accident, the right thing to do is simply to support the injured limb in the least painful position, usually the arm in a sling, the leg on pillows. 4. When the patient has to be moved the whole limb should be immobilised, totally regardless of the first-aid man's diagnosis of fracture, dislocation, or other injury.

I should not envy the feelings of the first-aid lecturer who discovers one of his family who has injured a leg being put to considerable pain by the useless, and therefore unnecessary, manipulations of one of his first-aid class in a well-meant attempt to find out "what was the matter"; or even, as advised on page 45, trying to pull the leg into what he imagined to be its "more natural shape." When the manual proceeds to discuss the treatment, based on differential diagnosis, of unconscious patients who may be drunk, epileptic, apoplectic, faint, or what not, the ridiculous side of the question is seen at its best. The half-page of directions for general treatment of insensible patients includes nearly all that is either necessary or useful. Direction No. 2, to lay the patient on his back, is absolutely wrong—he should be laid on his side. If he vomits while on his back he stands a very good chance of sucking vomited matter into his air-passages. Add to the half-page of general directions instruction how to keep the patient warm, if convulsed to prevent him from injuring himself or biting his tongue, if the breathing ceases to perform artificial respiration after clearing the mouth and pharynx, and the first-aid man will know how to do practically all that is called for in the interests of the patient. Plenty of instruction is given in the methods of moving injured individuals, but very little stress is laid on the folly of moving a patient who is suffering from severe shock. The policy of "doing nothing" is not one that appeals to the enthusiastic first-aid man, nor, for the matter of that, to the general public. The two following cases which have occurred within the last 12 months illustrate the prevailing ignorance on this point. A man, severely injured by getting in front of a saluting cannon, was carried half a mile to a medical man's house, where he expired in 15 minutes. An infant, aged nine months, was carried over two miles to a hospital, on arrival at which the state of collapse was so great that it was impossible to think of undressing the patient, who never rallied and died at the end of seven hours. It cannot be too strongly pointed out that, in cases of very severe injury or excessive loss of blood, to carry about a patient, already nearly dead, is simply to obliterate any chance that there might be of recovery. The surgeon must be brought to the patient, not the patient to the surgeon.

Judging from the manual, the first-aid must be able to decide such trifling matters as fracture of ribs, injury of lung, and injury of the various abdominal viscera, including internal hæmorrhage. Arguing from the correspondence on the treatment of hæmorrhage, I expect to be told that for man who attends only one course of lectures such di gnosis is impossible, but for a man who has attended severa courses such diagnosis is simply child's play. It is easy t see why the general public, who are given to understand tha the first-aid man can at once diagnose any of the abov conditions, is apt to condemn as hopelessly incapable an medical man who does not make a diagnosis in five minute The surgeon who is called to an obscure case of injury to th abdomen must often long to be able to make his di gnosis with the ease and rapidity of the holder of a firs aid certificate.

I am, Sirs, yours faithfully,

Plymouth, Jan. 19th, 1902. C. HAMILTON WHITEFORD

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*To the Editors of* THE LANCET.

SIRS,—May I say a word as an old teacher of "fir aid" on the subject of Mr. W. G. Spencer's letter THE LANCET of Jan. 4th, p. 54? I feel sure a gre deal of the present teaching of first aid is bad *becau it attempts too much.* No doubt the time may con when the explanation of the anatomy and physiology of th human body may be usefully summarised in two or thr lectures. But that day will not arrive until such subjec are taught as they ought to be taught in schools by a course of study and demonstration on dead and living anim tissue. First aid may, however, be learned without attemp ing to explain everything, by an appeal to knowledge whic as matters stand, is really not available. Take the case of

Volunteer Battalion the Gordon Highlanders: Surgeon-Major W. S. Cheyne to be Surgeon-Lieutenant-Colonel.

### VOLUNTEER MEDICAL STAFF CORPS.

*The Glasgow Companies*: Surgeon-Lieutenant D. J. MacKintosh, to be Lieutenant on appointment as Transport Officer. Robert Ramsey to be Surgeon-Lieutenant.

### SOUTH AFRICAN WAR NOTES.

The following have been discharged from hospital to duty: Lieutenant H. F. Hart, R.A.M.C., Lieutenant W. H. Odlum, R.A.M.C., Lieutenant Edward Bennett, R.A.M.C., and Civil Surgeons Kernhoeu and Eustace.

### RECENT DESPATCHES AND THE CONCENTRATION CAMPS.

The extension and development of the blockhouse system, some desultory fighting, with the capture of a few laagers, and the usual sick returns, mainly make up the news from South Africa. It has been a matter of surprise to many people in this country that the Government did not, in the matter of the concentration camps and the alleged ill-treatment of the Boer women and children, seize an earlier opportunity of taking the public into its confidence by intimating the effect of Lord Kitchener's despatches, instead of waiting for the opening of Parliament for their publication *in extenso.* Such a course would no doubt have materially curtailed, if it did not altogether put an end to, the agitation and exaggeration which have been going on of late in this country and abroad. It almost looks as if the Government had cleverly withheld the information in its possession in order to seize upon the most fitting time for publishing it with the best effect, for it is scarcely likely that people would have allowed themselves to be deluded, as they have been, had they known all the facts and how flimsy and insincere was the foundation on which the agitation rested. It was very natural, of course, that public feeling should be greatly touched by the deplorable accounts of the amount of sickness and mortality occurring among the Boer families located in these camps. The publication of Lord Kitchener's despatches describing all that had taken place between him and General Louis Botha and others has, however, thrown quite a new and strong light upon the situation. Mr. Chamberlain had no difficulty in his recent speech in the House of Commons in proving that Lord Kitchener had no option in the matter, but had perforce to adopt the course thrust upon him by the Boer generals in order to prevent the occurrence of still worse evils than those which actually befell the encamped Boer population. The statement of facts regarding the origin and history of these concentration camps set forth in the despatches from South Africa, and so effectively epitomised by the Colonial Minister in his speech, not only afforded a clear account of the nature and causes of the diseases which prevailed, but showed that no effort that humanity could suggest had been spared in trying to deal with the matter. It would probably have proved more merciful in the end, by shortening the course of the war, if the British authorities had altogether refused to undertake the task of rescuing the families forsaken by the Boers and had left them, as any other nation would have done, to their fate. Actuated by motives of humanity those in authority in South Africa could not face the responsibility of adopting such a pitiless course. It is, therefore, illogical and unjust to talk of our "barbarous methods" in connexion with these camps.

### MENTIONED IN DESPATCHES.

In despatches from Lord Kitchener published in the *London Gazette* of Jan. 17th the following names are mentioned: Lieutenant J. M. Sloan, R.A.M.C., for distinguished good service in Colonel Benson's action at Braakenlaagte on Oct. 30th, 1901; Captain G. D. Laing, Medical Officer 5th Imperial Yeomanry, for good service under heavy fire in Colonel Von Donop's action at Kleinfontein on Oct. 29th, 1901; Lieutenant T. E. Fielding, R.A.M.C., for good service at Itala on Sept. 26th, 1901.

Serjeant-Major P. H. Green, R.A.M.C., and Lance-Corporal W. J. Wilson, R.A.M.C., for good work under fire. Lance-Corporal Wilson has been promoted corporal by the Commander-in-Chief.

### THE HEALTH OF THE NAVY.

The statistical report of the health of the navy for the year 1900 has just been issued in the form of a blue-book. It is stated that the returns for the total force serving afloat in the year 1900, after making allowance for exceptional conditions on the Cape of Good Hope and West Coast of Africa and China Stations, may be regarded as satisfactory. The aggregate number of cases of disease and injury recorded for that year furnishes a ratio of 882·29 per 1000, which compared with the ratio for 1899 shows an increase of only 2·66 per 1000 and a decrease of 11·22 per 1000 when compared with the average of the last three years. We hope to deal more fully with the report later.

### REINFORCEMENTS FOR INDIA.

On sanitary as well as upon military grounds the decision of the Government to send seasoned troops from India to replace young soldiers now serving in the South African war seems to be a wise step. According to a telegram from Calcutta it is stated that about 6000 troops, drawn in companies from the various regiments in India, are about to start for South Africa. These men, who are seasoned soldiers, will be replaced by young soldiers now serving at the front, so that there will be no further depletion of the British garrison in India.

### DEATHS IN THE SERVICES

Surgeon-General W. Nash, A.M.S. (retired), late Principal Medical Officer at Netley, on Jan. 19th, 1902, aged 63 years.

# Correspondence.

"Audi alteram partem."

## FIRST AID FOR PRIMARY HÆMORRHAGE THE WRONG INSTRUCTION GIVEN TO AMBULANCE CLASSES.

*To the Editors of* THE LANCET.

SIRS,—My former letter on "First Aid for Primary Hæmorrhage," in THE LANCET of Jan. 4th, p. 54, detailed cases such as have been under my own observation. Others have less directly come under my notice and some of your correspondents have confirmed me. I do not know whether the men who made the statements had attended classes held under the auspices of the St. John Ambulance Association or some other. If so, they may never have qualified for a certificate—indeed, have been unqualified "first-aiders." Yet it will scarcely be argued that their notions as regards improvised tourniquets can have been derived elsewhere than from ambulance classes. I have been referred to the "First Aid for the Injured," a copy of which, in its second edition, revised 1901, I have obtained from the St. John Ambulance Association. Examining this authority one finds both in the syllabus for the second lecture of the elementary course of five lectures (p. 7), and also in the text (pp. 76–104), that all the emphasis is laid on arterial hæmorrhage—i.e., the rarest condition of hæmorrhage to which the average pupil will have the opportunity of rendering first aid. The arrest of arterial hæmorrhage occupies 25 pages, venous hæmorrhage receives two pages, and bleeding from small arteries and veins, called "capillary hæmorrhage," half a page and a reference to "wounds." There are 15 figures in the text relating to arterial hæmorrhage, none to impress the mind regarding direct pressure with the hands, &c., for the more frequent kinds. 13 of the figures relate to tourniquets and proximal pressure on the large trunks, the remaining two being a duplicate of the knotted bandage for the scalp.

Why not instruct by concrete examples of arterial hæmorrhages drawn from the more frequently recurring cases in which elementary first aid might possibly render service? A man has cut his throat and just nicked his carotid, or been stabbed above the clavicle and blood is welling up, or the arm has been deeply cut into by machinery, or a butcher's knife has slipped and stabbed him in the femoral artery. Supposing the butcher's boy present at the last accident, he having attended an elementary ambulance class, which sort of instruction would now enable him to do something single-handed? That which has told him to lay the man down, to tear larger the cut in the clothes, to thrust the cleanest cloth at hand into the wound, and then to keep up pressure with fingers and fist until medical assistance comes—or a more elaborate demonstration where the lecturer has the class subject stripped, then one pupil is told off to press on the imaginary wound, a second to control the femoral quite an unnecessary amount from that small fee due to them.

I am, Sirs, yours faithfully,
G. G. GIDLEY.
Cullompton, Devon, Jan. 19th, 1902.

*** Our correspondent, when making his annual return for income-tax purposes, must include his income "from all sources," that from his appointment as medical officer included. He may claim the repayment of the duty deducted by the Post Office authorities (provided, of course, that he has paid income-tax on the return made by him), and should direct his claim for repayment to the Secretary, Inland Revenue (Repayment Branch), Somerset House, W.C. We presume his statement "every Christmas quarter" at 1*s.* 2*d.* in the £ refers to last Christmas only.—ED. L.

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## THE SANATORIUM TREATMENT OF CONSUMPTION.

*To the Editors of* THE LANCET.

SIRS,—A few words will suffice in dealing with Dr. Arthur Latham's references to my letter. I am informed that there is nothing to support my "deduction" that a patient must spend two or three years in a sanatorium. I never made it. I merely quoted the words of Dr. Clifford Allbutt *verbatim et literatim* who declared that this length of time was necessary for the obsolescence only of the disease. The attitude of Germany I have (and want) nothing to do with. Suffice it to say that Germany has had 40 years' experience of sanatoriums and has not made the progress we have who have relied exclusively on works of sanitation. Dr. Latham says that I recognise sanitary defects as the main etiological factor in consumption, and yet object to the removal of patients from such debilitating influences to the "fresh air" of sanatoriums. What I said was that, having recognised the cause, you should remove *it* and not the patients. I claim that the money squandered on sanatoriums which could be used for striking at the root of the trouble is badly spent. It may be that these institutions form "only one of the lines along which we have to work," but I have yet to learn that any serious effort has been made by the association at their own expense to clear away insanitary dwellings and remedy sanitary defects. The modern notion is not to trust to tried methods but to convert the earth into a mighty limbo for the aggregation of cases of infective, and so-called infective, diseases the occurrence of which could and should have been prevented. I am sorry I said something which had been already said by Sir John Burdon Sanderson. I tender that gentleman my apologies for having presumed to think in the same grooves as himself.

Now for the "fresh air" of sanatoriums. I regard it as a humiliation that latter-day "scientists" are prepared to do battle for a theory which is consumed at its own focus. The tubercle bacillus is or is not a pathogenic organism. Is it only pathogenic when it is desired to terror-strike governments into the passing of compulsory laws? to obtain powers for the wanton destruction of the country's foodstuffs? to intimidate municipalities? and does its pathogenicity stop at the doors of the sanatorium? Does the *circulus vitiosus* become converted into an angelic halo when once the patient has taken up his abode? I leave Dr. Latham's assertion that in the midst of the coughing and spitting sanatorium crowd there are considerably fewer tubercle bacilli than in an ordinary dwelling to the judgment of your readers. The bactericidal properties of the sunshine which, of course, finds its way into all sanatoriums, even in our *triste* climate during the winter months, prevents the "spread of infection," &c. One wonders if, in addition to forming a corner in fresh air, the association has taken out Royal Letters Patent for the exclusive manufacture of sunshine during the winter months. But this organism, the pathogenicity of which justifies sanitarians in demanding the most preposterous restrictions, leaves the medical and surgical staffs of Brompton Hospital severely alone, although tubercle bacilli are found there in enormous numbers. It does not touch the stationary inhabitants of health resorts frequented by consumptives, although these poor creatures in search of health are hunted from place to place, forbidden to land, and shut out of hotels by the panic-mongering of public health enthusiasts who are supposed to take a kindly interest in their fate. The theory of the infectivity of consumption shares with the "endogenous spore-formation" theory the honour of being a means to an ignoble end. When the assertion that spitting at large constituted a terrible public danger was referred back to the scientists who had proclaimed that exposure to one minute's sunlight killed the tubercle bacillus we were told that the real danger lay not in the bacilli, but in their practically indestructible spores, which delectable theory left a distracted world without means of escape. It was not necessary that these spores should ever have been *seen*. The new method of philosophising is to start a theory and then invent facts to fit it. In the fulness of time somebody had the courage to doubt the existence of these spores, and now the theory is given up. I am advised to apply to one of the London isolation hospitals for a refutation of my argument that aggregation is bad. I shall there learn that "the sequelæ and complications compare favourably with those which obtain in ordinary houses." Secondary infection and post-scarlatinal diphtheria never do obtain in ordinary houses. They are the fruits of aggregation solely. I can assure Dr. Latham that he will have to look beyond these islands—beyond the continent of Europe—before he finds any evidence which will justify the existence of the aggregation hospital.

Now if a patient of the so-called isolation hospital falls a victim to secondary infection during a residence of a few weeks, how shall the sanatorium patient escape who is kept within striking distance of the cause of his disease for two or three years? If the organism does not strike there can be but one explanation, which is that it is powerless to strike and the theory of infection cannot be logically held. To enter into the pretence that there is some skill in sanatorium treatment which cannot be acquired by a man of average intelligence without serving an apprenticeship deserves to be called by a name which describes it passing well.

There is no more need for large "special" hospitals than for "special" physicians. The Nordrach Institution had a world-wide reputation while its construction was primitive in the extreme, consisting of a pair of villas with an old, disused factory as an addendum

A word in conclusion. The profession will do well to adopt an even more cautious attitude than usual towards published sanatorium statistics. We heard the other day of 14 out of 40 sanatorium "cured" patients being dead and one *in extremis* within 12 months of their discharge. The figures were published by patients' friends—not by the authorities of the sanatorium.

I am, Sirs, yours faithfully,
EDWARD DEAN MARRIOTT.
Nottingham, Jan. 16th, 1902.

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## "MUNICIPAL AUTHORITIES AND THE FEEDING OF INFANTS," AND "THE INFLUENCE OF MATERNAL FACTORY LABOUR ON INFANT MORTALITY."

*To the Editors of* THE LANCET.

SIRS,—In preparing the numbers of Vol. CLXI. of THE LANCET for binding I notice an annotation under the first of the above headings at p. 608 of your issue of August 31st, 1901, and at p. 814 of that of Sept. 21st, 1901, a letter by the health officer of Norwich (Dr. H. C. Pattin), to which, by your indulgence, I desire to make brief reference. In your annotation you characterise the circulation at Norwich and Darwen of a leaflet on the subject of infant feeding as a "most salutary *precedent*," whilst Dr. Pattin in his communication refers only to those issued at Nottingham, Newington, and by the National Health Society. Permit
to observe that this Norwich "precedent" is (like t
present letter) a somewhat belated one, as for many ye
most excellent leaflets on this subject have been circulat
by the Corporation and Sanitary Association of Manchest
and also by the East London Hospital for Children and t
Liverpool Infirmary for Children. In addition, the Corpo
tion of Stockport in 1899 widely circulated a simi
publication which had been edited by the local medi
society; hence your allusion to the Norwich and Darw
circulars as a "precedent" is unintentionally, but,
viously, inaccurate. Let me also at once say t
I am quite sure Dr. Pattin had no wish to ignore w
has been done elsewhere and was no doubt unaware
it, though in regard to Stockport the facts are alluded to
the *British Medical Journal* of June 2nd, 1900, p 1388, a

bleeding vessel, as Mr Spencer says, why not advise people to stick to local pressure alone as enough for the tyro to learn? or in the case of poisons, without inquiring too particularly as to their exact nature, to emetics? in the case of fractures to immobilising apparatus, and so on? To speak the truth, can any really practical knowledge be obtained without experience? I hold that the converse proposition lies at the root of almost all the useless education of to day.

I am, Sirs, yours faithfully,

Dingwall, Jan 20th 1902 WILLIAM BRUCE

## THE ETHICS OF THE PUBLIC VACCINATOR

*To the Editors of* THE LANCET

SIRS,—In THE LANCET of Nov 23rd, 1901, p 1445 under the heading "The Ethics of the Public Vaccinator," a correspondent states as follows "A public vaccinator can claim no payment for vaccination of persons residing outside his district" Is this a fact? and will you kindly explain the law on the subject?—I am Sirs yours faithfully,

FREDERICK WILLIAM ASHAM

Glasshouse street W Jan 20th 1902

*** The law is contained in Section 11 of the Vaccination Act of 1867 —ED L

## THEATRES AND THE SAFETY OF THE PUBLIC

*To the Editors of* THE LANCET

SIRS,—Amongst all the wise precautions against danger from fire in theatres which are being insisted upon or suggested there is one point, and that the most essential of all, that is persistently overlooked When fire breaks out in a building the most pressing and the most rapidly acting danger of all is that of suffocation Why on earth do not architects and others responsible for the construction of theatres face this question? What is needed is the means of letting out the fumes at or near the roof—in other words, a capacious chimney In a theatre this could be done without extreme difficulty or cost The part of the theatre over the stage rises higher than the auditorium and might on three sides, possibly on four, have large Venetian shutters which, when open, might give some 300 square feet of opening which would allow the fumes to escape and so provide 15 or 20 minutes of safety for the escape of the audience At the same time fresh air would be drawn in over the escaping audience and prove another factor working for safety These louvres should be in charge of a man or men during the whole performance who in case of need could readily open them by means of a lever, and they should be opened for a time after every performance so as to clean out completely the used up atmosphere and thereby add to the comfort and the wholesomeness of the building

I am, Sirs yours faithfully,

Leeds Jan 21st 1902 T PRIDGIN TEALE.

*To the Editors of The Lancet*

SIRS —I see that in a leading article in THE LANCET of Jan 18th, p 173 you say that the London County Council is "determined to check the overcrowding of the gangways of theatres with spectators during the performances" I do not know how long the London County Council has been fired with this salutary resolution, but I think that if any county councillor will go during a performance to any of the London theatres which are doing really well and will inquire for seats in the pit or upper circle or in any of the cheaper parts of the theatre he will get the answer, "Standing room only," or be solicited with the offer of "good standing room" and will find that scores of his fellow citizens are availing themselves of such offers as a matter of course A few weeks ago I was present myself at the first performance of a popular play at the Haymarket Theatre and sat on a step in a gangway crowded to suffocation which I fancy would have become a scene of considerable danger had there been an alarm of fire Theatrical managers naturally do what they are allowed to do in the direction of making money, and I should suggest that the determination of the London County Council will have little result unless it is energetically carried out.

By the way, I was present during part of the Krause trial on Friday last and your recent remarks on the ventilation of the Old Bailey seemed to have had considerable effect The public gallery was nearly empty and so were the gangways The seats were not more than full and windows widely opened at the end of the court opposite the jury box admitted a good deal of fresh air from which unusual intruder some of those persons nearest to it sought to protect themselves by putting their pocket handkerchiefs over their heads

I am, Sirs, yours faithfully,

Jan 20th, 1902 A MEMBER OF THE BAR

## REMOVAL OF THE APPENDIX VERMIFORMIS.

*To the Editors of* THE LANCET

SIRS,—Will you permit me to express my agreement with the arguments of Mr W H Battle in his article in THE LANCET of Jan 18th, p 143, on the advisability of removing the appendix vermiformis after suppuration caused by appendicitis? It is obvious that no surgeon would advocate the removal of the appendix if the mere evacuation of the abscess sufficed to ensure a complete and lasting recovery. Mr Battle's seven cases prove that in many instances the diseased appendix when left behind may not only retard healing but may give rise to dangerous recurrence of the abscess at a later period My own experience is in entire accord with this Although in many, perhaps the larger proportion of appendicular abscesses treated by simple drainage the wound heals and no further trouble results I am convinced that in many cases the appendix left behind considerably prolongs suppuration, retards healing, and remains a source of present discomfort and future danger

The cause of this lies in the frequency with which the appendix contains one or more concretions This is clearly shown in Mr Battle's instructive series of cases I cannot, however, agree with him when he says that "the appendix should be removed as soon as possible after the healing of the abscess" On the contrary, I agree with the contention of Mr J Rutherford Morison that the appendix should be and can be removed in almost every case of suppurating perityphlitis at the same time that the abscess is evacuated Without denying that in some few cases the procedure may be impracticable or unadvisable owing to the general state of the patient, I am convinced by my own experience that in the majority of instances it is neither difficult nor dangerous to remove the appendix in addition to evacuating the abscess at the same operation The main obstacle to this procedure in the minds of surgeons—the risk of infecting the general peritoneal cavity and setting up general peritonitis by breaking down adhesions in the search for the appendix—is more imaginary than real, if I may judge by numerous experiences So long as extravasation of pus into the loin and pelvis is prevented, as it easily can be by proper packing, adhesions may be broken down freely among the coils of small intestine with positive advantage, because pus shut off in separate recesses which would otherwise remain is often evacuated in this way, indeed, in severe cases where the peritonitis is spreading I regard free separation of adhesions and evacuation of pus as the most important part of the operation

I am Sirs yours faithfully,

Wolverhampton Jan 20th 1902, EDWARD DEANESLY

## GENERAL POST OFFICE APPOINTMENTS AND INCOME-TAX

*To the Editors of* THE LANCET

SIRS,—I am holding the appointment of medical officer to the post office here at the usual General Post Office rate, but every Christmas quarter there is a deduction made from the amount in the proportion of *1s 2d* in the £ on the year's gross receipts due to me

I have written various letters to the authorities complaining that as the amount is due as a subscription or club it is in no sense a net profit accruing to me, but nothing has been done in the matter and each year sees the same thing occur Probably you or some of your readers will tell me what is the best course to pursue both for myself and the profession at large for it is certainly unfair that the Government should expect the profession to attend post-office officials (some of whom earn large incomes) at a charity fee and then to deduct essential to the prophylactic action of vaccination since it is by their action that the required area of scarring is produced. If the latter conclusion is the right one, attempts to exclude these micro-organisms from the lymph by treatment with glycerine, and from the skin by aseptic precautions, would tend only to defeat the object we have in view.

I am, Sirs, yours faithfully,
HENRY W. P. YOUNG, M.D., D.P.H. Cantab.
Norbury, S.W.

## "LOOKING BACK":[1] "ON BATHING" THE SKIN AS AN ABSORBENT ORGAN.

*To the Editors of* THE LANCET.

SIRS,—This problem, which was discussed in THE LANCET in 1824, recalls the recollection that it was the subject of my first contribution to medical literature. It was published in THE LANCET in 1839. I was then a student at St. George's Hospital. In a surgical ward a man took a bath containing tartar emetic! This induced severe vomiting. It might be objected that the man swallowed some of the bath-water. I saw no evidence of this, and was satisfied that he had absorbed enough through the skin to cause the vomiting. The case made a lasting impression on my mind as an instructive example of the absorbent property of the skin. It may be regarded as a beautiful experiment, rich in therapeutical suggestions. I have often turned it to useful account in practice.

The eliminating and in-taking functions of the skin, as of other organs—for example, the lungs—are influenced by the balance between repletion and vacuity. Experiments on the absorbent power of the skin must be ruled by this law. If the vascular system is replete absorption is arrested, and inhalation, aerial and liquid, is active. And *vice versâ*, if vacuum is the dominant condition then inhalation or in-drawing is active. It is not a little remarkable that this question of the absorbent capacity of the skin which was discussed in THE LANCET in 1824 should still remain undetermined after 78 years of physiological and pathological observation. The physician has, however, adopted it more or less directly in practice. But the pure physiologist of to-day, if we may take Sir Michael Foster as an authority, still looks doubtfully upon the absorptive power of the skin. He says: "In the case of the sound human skin the balance of conflicting evidence is in favour of the view that soluble non-volatile substances are not absorbed." But surely the problem may be definitely solved by well-directed experiments which take due account of the law that nature abhors a vacuum.

I am, Sirs, yours faithfully,
Jan. 15th, 1902. ROBERT BARNES.

## AN UNUSUAL COMPLICATION OF INFLUENZA.

*To the Editors of* THE LANCET.

SIRS,—In answer to Sir John W. Moore's question in THE LANCET of Jan. 18th, p. 191, respecting "An Unusual Complication of Influenza" which I reported in THE LANCET of Jan. 11th, p. 89, I may say that there was no symptom of typhoid fever, and that the temperature was never above 100° F., and the pulse never above 110.

I am, Sirs, yours faithfully,
J. G. CARRUTHERS, M.R.C.P. Edin.
South Norwood, Jan. 20th, 1902.

## A DANGEROUS PRINCIPLE.

*To the Editors of* THE LANCET.

SIRS,—Continuing the correspondence which has taken place under the above heading in THE LANCET of Dec. 21st, 1901, p. 1764, and Jan. 11th, 1902, p. 121, I beg to trespass further on your indulgence by requesting you kindly to insert the following copy of a letter directed by me to the Under Secretary of State, Home Office, Whitehall, on Jan. 17th, 1902:—

SIR,—I have the honour to acknowledge and to thank the Secretary of State for his letter B37039—8, dated the 16th inst., informing me "that the Council of the Royal College of Surgeons in Ireland allow to Licentiates the privilege of perusing the charters, by-laws, and ordinances, &c., of the College, as printed in one volume, and that" I "have availed myself of an offer of this privilege, but that the Licentiates are not entitled to be supplied with copies of such charters, by laws, &c."

On this ruling of the Council I will only say that it cannot but prove highly inconvenient to such Licentiates as may require professional collegiate guidance outside this portion of His Majesty's kingdom; for instance, in England, Scotland, the Colonies, or British Dependencies.

On the other hand, I beg respectfully to point out to the Secretary of State that in my letter to you [of Jan. 9th] I quoted for his information a letter of the Secretary of Council of the College [dated Jan. 2nd] *addressed to a Fellow* of the Royal College of Surgeons in Ireland, stating "that there are no copies of the by-laws available. A new edition is being prepared, but it will take some time to bring out this edition as several changes are contemplated in the by-laws and charters."

I would also add, in reference to the present attitude of the Council in withholding a copy of the by-laws from the Licentiates, that I hold a communication from the secretary of that Council dated June 21st informing me that "the *revised* by-laws are being printed and as soon as they are ready" I "can have a copy." On June 21st I *was*, and continue to be, a Licentiate. It is evident that since that date the *opinion* of the College as to the advisableness of issuing its by laws to Licentiates has *changed*.

*Respecting the special copy of "charters, by-laws, and ordinances,* &c.," which Licentiates have "the privilege of perusing," I have to observe that I inspected the said copy so far back as Feb. 25th of last year—a date subsequent to the February, 1901, Fellowship Examination—and in May of last year another Licentiate of the College also inspected and took notes from the volume [dated January, 1886] proffered him by the Registrar, R.C.S.I. This Licentiate is prepared to corroborate my statement in the following special particulars.

(A.) In the Charters the following is laid down both in those of 1844 and 85, pages 43 and 59 respectively: "And the examiners, or any number of them declared by the by-law to be competent to transact business as a court of examiners, shall in the presence of the President, or, in his absence, of the Vice-President and two or more Members of *the Council, examine ...... any candidate for a Fellowship."*

(B.) In the by-laws no mention is made in them of the number "declared ...... to be competent to transact business," unless an "educational ordinance" or other "ordinance" can be regarded as such. These, however, are printed in the volume referred to as a class of rules, differing from by-laws, and I should imagine if they have not received the sanction of the Secretary of State as required by the Charter of 1844, or the sanction of the Lord Lieutenant of Ireland as required by the Charter of 1885, they cannot be regarded as by-laws. (There is no evidence of such sanction.) In fact, pages 62 to 66 are specifically intituled on each page as "By-laws," and under the heading of the title "By-laws of the Royal College of Surgeons in Ireland" (page 62) may be read "which have received the approval of the Queen *in conformity with last Clause of Sec. 7 of Supplemental Charter."*

(C.) In the Ordinances it is true the number of examiners is laid down.

(D.) In the Educational Ordinances the following appears at page 106 of the volume:—

FELLOWSHIP EXAMINATIONS.

"*Presence of Councillors:* The President or Vice-President and two Members of Council shall be present at the Oral Examination," &c. My contention, therefore, is that the President, Vice-President, and Council of the Royal College of Surgeons in Ireland at the Ordinary Fellowship Examination of February, 1901, did not observe their charters or their by-laws if it be conceded that the educational ordinances can be classed as such, and I would respectfully urge upon the Secretary of State to give me the reply to my letters of Dec. 9th and 14th, *in which I ask specifically if the corporate body* concerned deny the accuracy of my statement that the witnesses prescribed were not present on the occasion stated. I subsequently referred to this question on Dec. 18th as being not a *personal* but a *constitutional* one, and I *contend that it is made in the* best interests of the College itself and of the vast body of Fellows and Licentiates which it is empowered by the Crown to make and to control.

I have the honour to be, Sir, your obedient servant,
S. WESLEY WILSON.

P.S.—Kindly see affidavits sent Oct. 22nd: (*a*) As to non-observance of charters; (*b*) method taken by a Fellowship Examiner to procure Fellowship candidates for his son's tuition.—S. W. W.

My apology is due to you for thus far trespassing on your space, but I do so that the profession generally will recognise the justice of the claim that Licentiates have privileges which must not be foregone by a corpora licensing body, however strenuously such corporate bo may endeavour to ignore the fundamental principles of i existence and the legal carrying-out of functions for whi it is responsible to the State.

I am, Sirs, yours faithfully,
Dublin, Jan. 18th, 1902. S. WESLEY WILSON.

## BEEF WORM IN THE ORBITAL CAVITY

*To the Editors of* THE LANCET.

SIRS,—In the account of his case of Beef Worm in t Orbital Cavity in THE LANCET of Jan. 4th, p. 19, Mr. T. W. Gann is under the impression that the case is unique. M I be allowed to draw his attention to an almost identical ca already recorded (with very instructive illustrations) by I Fred. Keyt, assistant colonial surgeon, British Hondura a colleague in the same colony and in the same service Under the circumstances it is singular that this earli also in a prominent leading article in the same journal of July 7th, 1900, p. 38, on "Infant Feeding and Maternal Education," as well as in *Public Health* for February, 1901.

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[1] THE LANCET, Jan. 4th and 11th, 1902.

[1] Vide Brit. Med. Jour., Feb. 10th, 1900.

In reference to this question of maternal education, I think it is due to the progressive Corporation of Stockport to place prominently and distinctly on record to its credit the fact that it is the first and only body that has hitherto attempted to grapple practically with the question, as at the discussion on Infant Mortality at the Cheltenham meeting of the British Medical Association the teaching of infant hygiene was advocated by more than one speaker without any reference to the fact (of which at least two of them were fully aware) that such instruction was already being systematically given in the elementary schools at Stockport. On Feb. 1st, 1900, the teachers of that town, together with one of H.M. Inspectors of Schools (*Mr. F. T. Howard, M.A.), met the sanitary committee by invitation, and the outcome of the conference was that the teachers unanimously agreed to arrange for the* instruction of the elder girls in the feeding and management of infants, using as their guide a booklet (copy herewith), drawn up at their request by the writer and supplied by the sanitary committee. The committee also offered a money prize to each school in which the subject was taught, and supplied approved forms of feeding-bottles, &c. A trained health visitor was appointed who visited each school occasionally to supplement by demonstration and otherwise the instruction given by the regular teachers. My successor (Dr. Meredith Young) states that the system thus *inaugurated works excellently, and personally testifies to the* soundness and satisfactory result of the teaching, whilst the sanitary committee is not a little proud of the real "precedent" which its action has furnished.

I further desire to refer to Dr. G. Reid's suggestion[1] that mothers should not be allowed to return to work in factories for at least three months from the date of their confinement, as they would then probably suckle their babes till the most precarious period of life had been tided over. In Stockport, where the infant mortality was very excessive, I found on personal analysis of 5101 deaths of infants during 1890-99 that as many deaths (one-fifth of all) took place in the first month of life as in *the second and third together, whilst three-fifths of all* occurred during the remaining nine months, these figures closely conforming to those at pp. 11-17 of the Registrar-General's Annual Report for 1891. Having regard to the food- and comfort-yielding value of the mother's earnings, is it, therefore, worth while to advocate a measure that cannot possibly benefit four-fifths of the infants that at present die? And has it ever occurred to Dr. Reid that such prolonged idleness would inflict great and useless hardship on a large number of mothers whose *infants die within* a few days of birth, or long before the expiration of the suggested three months? Is it not, moreover, a fact that in 1893 or thereabouts a special sub-committee of the Council of the British Medical Association found itself unable to recommend this measure and that after careful inquiry by the Home Department the then Home Secretary (Mr. Asquith) decided against it? Judging from the enormous number of deaths from "prematurity," "low vitality at birth," &c., as well as from personal knowledge of the conditions of factory life, *I am inclined to think that any* legislative change, if such be practicable, should be in respect of pregnant women who often continue to work in the mills almost to the *hour of their confinement.* With regard to *crèches,* which Dr. Reid also recommends, they have been tried with most intensely disappointing results in Liverpool and other places, for the simple reason that mothers will not use them, preferring to pay as much as 4*s.* per week to some ignorant neighbour to look after their babes. The strict enforcement and extension of the Infant Life Protection Act, together with the instruction of those who in the near future will become mothers, seem to be the most hopeful means of dealing with this national evil Apologising for the length of this communication on a subject which has for many years been of special interest and official importance to me,

I am, Sirs, yours faithfully,
CHARLES PORTER,
County Medical Officer of Shropshire; late Medical Officer of Health of Stockport.

Shrewsbury, Jan. 14th, 1902

⁂ Dr. Charles Porter encloses some admirable leaflets dated 1899 and a pamphlet dated 1900. The word "precedent" was obviously incorrect and we think it well to apologise in advance to any municipality that may have issued leaflets previously to the sanitary authorities of Stockport.—ED. L.

# THE RELATION OF THE CHURCH TO SANITARY REFORM.

*To the Editors of* THE LANCET.

SIRS,—The suggestion of "Vicar" in THE LANCET of Jan. 18th, p. 192, is most valuable—viz., that the edge of the chalice at the celebration of the Holy Communion should be wiped with a fair linen cloth between each administration. It will, I hope, become universal. Although the use of separate cups would, of course, absolutely eliminate the dangers of infection, yet it is extremely improbable that such a custom would ever find favour except among very few—in fact, though it is now some two or three years since the idea was suggested I have never heard of its being adopted except in a very few Dissenting places of worship. Rightly or wrongly, the "usages" of churches of the Establishment are governed mostly by tradition—*ancient in all cases and in some supposed to be primitive*: tradition first, sanitation, or what you like, second. Witness the almost unanimous opposition of the Church to cremation Moreover, in many churches, and not only in those of the most "advanced" type, it is the custom for the celebrant not only to consume the wine that may be left, but also to rinse the emptied chalice and drink the rinsings—so great is the veneration (and surely no charitable person would sneer at it) in which the consecrated elements are held. How could this be done with a multitude of little cups?

I am, Sirs, yours faithfully,
Wherstead Vicarage, Ipswich, Jan. 20th, 1902. R. A. L. NUNNS.

# THE ESTIMATION OF THE EFFICIENCY OF VACCINATION BY THE SCAR AREA.

*To the Editors of* THE LANCET.

SIRS,—The method of estimating the efficiency of a vaccination by the area of the scars produced seems to me unsatisfactory for the following reasons. By employing an aseptic lymph and by taking rigid precautions against sepsis throughout the course of the vaccinia, it is, I believe, possible to obtain good vesicles which will dry up without ever becoming pustular and which will leave hardly any scar at all. *Results approximating this ideal I myself have obtained* in a considerable number of cases of secondary vaccination by the following method. The operation having been performed with the usual aseptic precautions, a dressing of dry boric acid lint was applied and fixed with strapping. At the end of six days or a week, when the vesicles were well developed, this dressing was removed, the arm bathed with antiseptic lotion, and a dry dressing of bicyanide gauze applied. When examined about 10 days later the pocks would be found to have scabbed over, the scabs being adherent to the gauze. It was then only necessary to cut the gauze so as to leave a circular piece adherent to each scab. *When the latter fell off in the ordinary way it left* only a very small scar indeed. In one case, for instance, although large vesicles developed, the spots when examined two months after presented small patches of hyperæmia not more than a third of an inch in diameter in which four or five little areas of scar tissue of about the size of a pin's head could be seen.

If, on the other hand, vaccination is performed without any special aseptic precautions the vesicle will become a pustule, the pustule an ulcer, a considerable portion of the corium will be destroyed before healing takes place, and thus a large scar will be produced. Now, I take it, that all bacteriologists will admit that pustulation is effected by the entry of pyogenic organisms into the vesicles. It appears to me, therefore, that the size of the resultant scar in vaccination depends almost entirely *on the extent to which these* organisms have been at work. I am thus driven to one of two conclusions, either that suppuration in the vesicle is not an essential of vaccinia, but is merely the result of sepsis and that, therefore, a large scar is of no value except as evidence of insufficient care, or that the action of pyogenic organisms is have fully appreciated the conditions of the appointment, they wish before inviting your attendance to make it clear to you that this appointment will require you to pay visits to schools for 400 school sessions from 9.30 to 12 and from 2 to 4.30, together with the digesting of the information and the drawing-up of reports concerning such visits in the time outside school hours.

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[1] THE LANCET, August 24th, 1901, p. 549.

The committee might be willing to allow this work to be spread over two years, instead of one year, if you are unable to give up so much time as the 400 visits in one year would require, but they wish the work to be finished in one year if possible, and they would prefer to make the appointment in such a case for one year only, offering a remuneration of 50 guineas for the payment of such 200 visits. If you are still an applicant for the post of oculist under the conditions as above explained they will be glad if you will appear before the sub-committee on Tuesday, Jan. 28th, 1902, at 11.30 A.M.

Faithfully yours,
For G. H. Croad, Clerk of the Board (H.S.W.).

# THE DESTRUCTOR NUISANCE AT TORQUAY.

(By our Special Sanitary Commissioner.)

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### The Inhabitants Petition for an Investigation.—The Explanations given by the Local Authorities in answer to the Complaints.

A considerable number of the inhabitants of Torquay have complained bitterly of the nuisance occasioned by the refuse destructor recently built in that town. After many endeavours to obtain from the town council an abatement of this nuisance a petition was sent to The Lancet which was drawn up in the following terms:—

> We, the undersigned inhabitants of the borough of Torquay, injuriously affected by the smoke fumes and gases ejected from the refuse destructor and having after repeated efforts failed to obtain from the town council the promise of adequate remedial measures, respectfully petition the Editors of The Lancet in the public interest to send a commission to inquire into matters so vitally affecting the health of Torquay and to point out what measures must be taken to safeguard the purity of the air.

This petition bore 70 signatures, including the names of several medical men and prominent residents, and more signatures, it was stated, could easily have been obtained if more time had been devoted to collecting them. Some of the signatories declared that they would willingly have removed to another quarter or to another town, but, having purchased their houses or rented them on a long lease, they were unable to do so. They protested that their health was seriously affected, and they were convinced that this was due to the destructor, because they had not suffered in that manner before the destructor was built, and they recovered whenever they were able to live for a short while elsewhere.

Before dealing in detail and at length with these complaints and attempting to describe the problem at issue, it is only fair to give what may be called the official version of the question. In this the mayor, the chairman of the Destructor Committee, and the borough surveyor very courteously afforded me every facility. From the borough surveyor, notably, I was able to obtain the history of what had occurred. Thus, I was informed that up to the year 1895 the household and garden refuse used to be carted away to various "tips." The principal deposit or "tip" was just beyond the former borough boundaries at Windmill Hill. This is inland and to the north of the town. There was a secondary "tip" in a much more central position, close to the Torquay General Hospital and in the valley that divides the town in half. To the south-east and on the outskirts of the town there was another "tip" where the refuse was readily disposed of for use in the kitchen-gardens. Cartloads were sent to anyone who could utilise the refuse as manure for gardens. These persons had themselves to sort out the "hard core"—that is to say, the broken galley-pots, tins, and other hard substances, which they threw over the cliffs or on to any convenient waste land. As for the waste-paper, it was gathered together in a heap to await the dispersing effects of the next gale. There were also a number of smaller "tips" in different directions, and there is no knowing how long this very simple manner of dealing with a very complex problem might have continued but for the action of the Local Government Board. In 1895 this authority insisted that the Marychurch Urban District Council must build an isolation hospital. Thereupon a site was selected for the proposed fever hospital close to the main "tip" at Windmill Hill. It was then estimated that there were on this spot some 10,000 cartloads of decomposing town refuse. This was an immense heap and its proximity to a hospital could not be tolerated. Complaints were made also in regard to other, though minor, "tips" which were likewise in the Marychurch district. This raised a very nice point of law. Torquay is wedged in between two rural districts. Where was the refuse to be deposited if it was refused by these two districts? and had the fact that the "tips" had been sanctioned for many years established a right to continue using them? The refuse could not be left in the streets of the town. But the Marychurch authorities urged that they were prevented from building the hospital they had been ordered to construct. They called upon the Torquay Town Council to abate the nuisance, and they declared that the whole of the district round the main "tip" was inaccessible in consequence of the stench and the legions of rats that bred and flourished on the refuse depôt. These verbal protests were followed by an official notice which was served on the Torquay Town Council on May 11th, 1896. By that time the Torquay sanitary authorities had already ceased to take refuse to Windmill Hill; but they were now called upon to remove the great heap that had accumulated. Again, it was a moot question as to whether, after having allowed the depôt to be made, there existed any legal right to enforce its removal. This was indeed an embarrassing situation. Emissaries were despatched far and wide to persuade the farmers in the surrounding rural districts to come and to fetch the refuse away as manure. Here and there a farmer availed himself of this offer, but this help was very limited and insufficient. Fortunately there was close at hand a brickfield, and the owner offered to allow a claypit to be filled up with the refuse if it was subsequently covered over with two feet deep of earth. This was done and the Windmill Hill refuse-heap was completely removed, so that the difficulty with the Marychurch authorities was overcome.

At Torquay, however, the refuse continued to accumulate, and, if the mischief which had been done in the past had been remedied, there was no provision for the future. The "tips" that remained, especially the one in the valley near the Torquay General Hospital, were badly situated and altogether unsuitable, but no other and better sites could be obtained. Thereupon a series of ardent discussions were held by the Torquay Town Council which resulted in the conclusion that there was no other method of disposing of the refuse than by fire. Having thus agreed on the general principle it was almost as difficult to determine which of the many and rival destructors was best suited for the purpose in view. A travelling committee was therefore appointed to see what had been done elsewhere, and they went to Bournemouth, Southampton, Eastbourne, and to several Lancashire towns. These inquiries resulted in the preference being given to the new Warner high temperature destructor, and a scheme was devised forthwith for the building of a destructor on this system, with six cells or chambers. Then commenced the battle of the sites. 20 different sites were selected and proposed and it was most difficult to decide where the destructor should be put. All these matters had taken two years to debate. As the claypit by the brick-kilns was rapidly filling up something must be done. One by one the various sites proposed were eliminated and eventually a site was selected at Upton, in the direction of Windmill Hill but somewhat nearer to the town, and in October, 1896, the specifications were approved. The next month tenders were invited from two firms and elaborate schemes were sent in, but they were all too expensive. Then it was resolved to reduce the size of the destructor from six to four cells. Messrs. Goddard, Massey, and Warner undertook to build a destructor which would consume eight tons of refuse per 24 hours in each cell, or 32 tons in the four cells. As at that time only about 20 tons were collected in the course of a day this allowed a margin of 12 tons for the future extension of the town. For actual needs only three cells were necessary.

Having thus at last fully matured its scheme the Torquay Town Council now applied to the Local Government Board to sanction a loan of £6500 for the building of the destructor. In January, 1897, the Local Government Board sent Colonel A. G. Durnford, R.E., to hold a public inquiry previously to assenting to the loan. The town clerk then explained that, if properly worked, the destructor would cause no nuisance whatsoever. It was true that a memorial signed by 50 owners and occupiers objected to the site selected; but this did not mean much, for the majority of the signatories resided at a considerable distance from the proposed site. In the *Torquay Directory and South Devon* record should have escaped Mr. Gann's observation, but, of course, allowance must be made in such matters for the exigencies of "bush life." There is, however, I fear, a growing tendency on the part of some to ignore the work of others. This may be due to the number and voluminous character of our works of reference, to which the pressure of work makes it impossible for many to refer. But one cannot help lamenting this tendency to overlook or ignore the painstaking work of others, not alone because one likes to see credit paid where credit is due, but because one is loth to see the fairer courtesies which always existed between members of our profession in danger of being brushed into oblivion. Thus a noble calling may soon degenerate into a "pushful" profession.

I am, Sirs, yours faithfully,
GEORGE FERDINANDS, M.D. Aberd.

Aberdeen, Jan. 8th, 1902.

## CANCER AMONG HINDOOS.

*To the Editors of* THE LANCET.

SIRS,—With reference to Mr. C. B. Keetley's letter in THE LANCET of Jan. 18th, p. 192, on this subject I append the names of the three or four accredited booksellers in London from whom the annual reports of the medical institutions of India may be obtained. Mr. E. A. Arnold, 37, Bedford-street; Mr. B. Quaritch, 15, Piccadilly; Messrs. Constable and Co., 2, Whitehall-gardens; Messrs. Sampson Low and Co., St. Dunstan's House, Fetter-lane; Messrs. Luzac and Co., 46, Great Russell-street; and Messrs. Kegan Paul, Trench, Trubner, and Co., Charing-cross-road.

I hope this will partly mollify Mr. Keetley. As I am on the eve of leaving for India and have none of my works of reference at hand I am unable, except on my own *ipse dixit*, to give him the proper and more scientific—*ergo*, more up-to-date—definition of the word "Hindoo." On my arrival at my destination in Madras I shall, if the subject is still open in your columns, remedy my present inability.

Do not any of Mr. Keetley's dictionaries (those of an encyclopædic character) clear up the point "whether the Mahomedans circumcise or not"?

I am, Sirs, yours faithfully,
C. DONOVAN, B.A., M.D., B.Ch. R.U.I.,
Captain, I.M.S.

Instow, N. Devon, Jan. 21st, 1902.

*To the Editors of* THE LANCET.

SIRS,—In THE LANCET of Jan. 18th, p. 193, I notice a statement to the effect that Jews are less prone to cancer than other civilised peoples. This statement is certainly erroneous so far as the Jews in the United States are concerned; and it seems to me that the balance of evidence is against its acceptance as applied to most other countries. Dr. Billings' statistical reports show that in the United States the Jewish mortality from cancer is almost the same as that of the rest of the white population. He gives the cancer mortality per 1000 deaths for Jews and Gentiles as follows:—

| | Jews. | Other U. S. Whites. |
|---|---|---|
| Males ... . ... .. | 13·58 ... ... ... | 13·09 |
| Females.. .. .. | 21·65 ... ... ... | 23·59 |

It was the opinion of the late Sir B. W. Richardson—who had considerable experience among London Jews—that they were as prone to cancer as other London people. Billroth's experience in Vienna and elsewhere coincides with this. Moreover, from observations made by Bauby in the neighbourhood of Toulouse, it appears that pork-eaters are no more prone to cancer than those who feed on other kinds of meat.

I am, Sirs, yours faithfully,
Clifton, Bristol, Jan. 18th, 1902. W. ROGER WILLIAMS.

## IS SALT A PROBABLE CAUSE OF CANCER?

*To the Editors of* THE LANCET.

SIRS,—The interest which has been created by the publication in your influential paper of Dr. James Braithwaite's theory with regard to salt being a cause of cancer has been very marked, and as a number of other newspapers have commented on the subject the idea seems to be gradually spreading abroad that what has hitherto been considered and proved to be a wholesome and necessary article of diet is in fact a thing to be shunned and avoided as dangerous. Dr. Braithwaite says the idea originated in his mind by his noticing the comparative immunity of the Jews from this disease, and explains it by the difference in their diet, which he says consists mainly "in the absence of bacon and ham from the diet of the Jews."

I think all your readers must admit that Dr. Braithwaite in his very interesting paper has conclusively proved that in those sections of country where a very large amount of bacon and ham is consumed the disease of cancer is most prevalent, and I merely write to suggest that it is possibly not the salt, but the unclean bacon and ham, that is responsible for the scourge, and as I have lived on the other side of the Atlantic for a number of years and know something of the manner in which pigs are fed over there I cannot see how it can possibly be otherwise. The greater part of the bacon and ham consumed in this country is imported from the United States and Canada, and it is a notorious fact that at many slaughter-houses in those lands the pigs are habitually fed on the entrails and blood of slaughtered animals. Unfortunately, owing to a very imperfect system of cattle inspection, some of the cattle which are killed there are infected by diseases of a cancerous nature, and if the pigs are fed upon the entrails of such animals it follows that their bodies are likely to become impregnated with the effects of such a diet, and if Englishmen persist in eating the flesh of such a carnivorous animal so impregnated they will probably reap the consequences, while the Jews who refuse to eat such food will naturally be exempt from such disease.

In the Revised Statutes of Ontario, chap. 248, sec. 108, the sanction of the Provincial Government is given to the feeding of pigs with blood, offal, and the meat of any dead animal, but the Act provides that they must not be fed on *decomposed* or *putrid* blood and offal, and that these must be steamed before feeding the pigs. It further provides that if the medical health officer discovers that the pigs have been fed upon putrid offal, then he has power to destroy such pigs so as to prevent them from being used as food for man. It is not a place, however, where the medical health officer likes to spend much of his time and therefore the inspection is not very rigid. It has become rather fashionable in recent years to impugn the accuracy of the Bible in many respects, but those portions of it which call our attention to the inadvisability of indulging in swine's flesh may be well worthy of consideration in the light which has been thrown on the subject by the statistics in Dr. James Braithwaite's exhaustive paper. Any information which may be the means of putting us on our guard against this terrible disease must be hailed with satisfaction.

I am, Sirs, yours faithfully,
Hanover-terrace, W., Jan. 22nd, 1902. R. D'OYLY NOBLE.

## MEDICAL APPOINTMENTS UNDER THE LONDON SCHOOL BOARD.

*To the Editors of* THE LANCET.

SIRS,—In THE LANCET of Dec. 14th, 1901, p 91, the London School Board advertised for "two oculists (of either sex) for the purpose of testing the eyesight of the children in the senior departments of the schools of the Board and for giving such advice and taking such steps thereon as may be desirable." The salary offered was 100 guineas and the work was expected to be completed in one year. The statement of duties expected being a little vague, I therefore wrote for further details. In reply regret was expressed that no further details could be given. I sent in an application with required testimonials and references. After some days I received the inclosed letter which, I think, might be of interest to the profession. Evidently experience is not considered a necessity, or such a handsome remuneration for so much important work would not be offered, seeing that practically all one's time would be required to carry out the duties.

I am, Sirs, yours faithfully,
Jan. 18th, 1902. A RETIRING CANDIDATE.

[INCLOSURE.]

SCHOOL BOARD FOR LONDON.
Victoria Embankment, W.C., 17th January, 1902.
POSTS OF OCULISTS.

DEAR SIR (OR MADAM),—I am directed to state that the committee have favourably considered your written application, but as they think it possible from your standing in your profession that you may not increase in the building of new houses close to the destructor. Since the selection of the site for the destructor 100 cottages have been built within 400 yards and the St. James schools which are also close at hand have likewise been erected after the destructor. Consequently, it is maintained that the complaints are greatly exaggerated and sometimes purely imaginary, and that when they have been partially justified this has been due to the imperfect working of the destructor, and that imperfections of this nature can and will be rectified. Such, as far as I was able to ascertain, were the main arguments brought forward in defence of the destructor. These, however, represent but one side; it will now be necessary to consider what is said on the other side and to examine in detail the complaints made.

(*To be continued.*)

## NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

### *The Plague Epidemic: A General Increase.—Plague Vaccine.—The Reconstruction of Bangalore City.*

THE last plague returns show 9198 deaths throughout India for the week ending Dec 21st, as against 7795 in the week preceding, and 2267 in the corresponding week of last year. The principal figures are: Bombay districts, 5274 against 4735; Punjab, 1914 against 1685; Mysore State, 533 against 404; Madras districts, 324 against 233; Bengal, 327 against 291; and North-West Provinces and Oudh, 176 against 228. It will be seen that all the districts, with the exception of the last, return an increased mortality. Kashmir returns 361 deaths for the fortnight, and Bombay city reports on Dec. 31st for the previous week 180, an increase of five on the previous week. Calcutta also reports an increase, 28 deaths being returned for the week ending Dec. 28th as against 15 for the previous week. Since the general returns were published a further increase is reported from the Punjab, especially in the districts of Jullunder, Hoshiarpur, and Sialkot. A fresh province, the Nabha State, is now infected and returns 124 deaths. For some reason or other Poona city is left out, and yet we know from the local press that a large number of deaths are occurring in the city daily. Karachi had 54 deaths and Hyderabad State 55 A case of plague has been discovered in Madras city, which has up till now been free. These returns are very ominous, as the increase is general, and in several districts where plague raged last year a recrudescence seems imminent About this time last year the disease developed in Calcutta, so that it is only to be expected that a decided increase will show itself shortly. Bombay city also shows signs of another recrudescence.

In the week ending Dec. 27th 40,081 doses of plague vaccine were sent out from the Research Laboratory in Bombay.

As the result of plague the city of Bangalore has been largely reconstructed. Of the 10,800 houses 1922 have been demolished Five and a half miles of new streets have been made. The southern extension, chiefly to be occupied by Hindus, is laid out in the form of a rectangle with an open space in the middle of 22 acres which will be used as a public recreation ground, and the houses around run north and south and east and west in parallel lines. In addition there are reserved two other open spaces of six acres and nine acres in area respectively This settlement is divided up into eight blocks, each block being reserved for members of a particular section of the community. The chief roads—viz., approach, boundary, and diagonal—will be 100 feet wide. The population will amount to 31·8 per acre. In the rear of each row of houses there will be a conservancy lane. It is reported by the superintending engineer that "for symmetry, regularity of street frontages, for accessibility by the shortest routes, for air spaces and for public squares, for convenience of conservancy and for perfect drainage they can only be equalled by some of the most recent cities of America." The northern settlement has been very similarly planned. The total cost to the State has been less than six lakhs and when all the sites have been sold the net cost will hardly exceed two lakhs. This is a splendid example for other Governments in India to follow.

**Jan. 3rd.**

## LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

### *The Proposed University for Liverpool.*

A DEPUTATION of governors and members of the Senate of University College, Liverpool, consisting of Sir John Brunner, Bart., M.P., Sir Alfred L. Jones, K.C.M.G., Mr. A. F. Warr, M.P., Principal A. W. W. Dale, Professor Rubert W. Boyce, Mr. E. K. Muspratt, Mr. W. E. Willink, and Mr. J. W. Alsop, waited upon the Lord Mayor on Jan. 13th and presented him with an influentially signed requisition to convene a meeting at an early date to consider the desirability of establishing a university within the city of Liverpool "for the advancement of knowledge and for the diffusion and extension of arts, sciences, and learning." Among the signatories to the requisition were the Earl of Derby, K.G., the Lord Bishop of Liverpool, and Mr. William Rathbone, formerly M.P. for Liverpool. The Lord Mayor has fixed Monday, Jan. 27th, for the meeting to consider the subject of the said requisition.

### *The David Lewis Northern Hospital.*

At the annual meeting of the trustees of this hospital held on Jan. 15th the retirement of Mr. Chauncy Puzey, the senior honorary surgeon, was announced. Mr. Puzey retires in accordance with the law of the hospital regulating the term of office of the honorary medical staff. The chairman expressed the deep regret of the committee at Mr. Puzey's retirement, and in recognition of its high appreciation of his valuable and self-sacrificing services for the past 26 years recommended his election by the trustees as a member of the committee in addition to the post of honorary consulting surgeon. It is a pleasing fact to record, in view of the recent trouble at Macclesfield, that the relations between the committee and the medical staff of the David Lewis Northern Hospital have always partaken of the most cordial character. Among other matters of interest noticed by the chairman were the usefulness of the apparatus for the treatment of lupus, kindly provided by Mr. Benn W. Levy, which had been doing such excellent work that it had become necessary to instal a second lamp, for which Mr. Levy had made himself responsible, and he has kindly promised to bear the whole cost of working the apparatus for another year; also the amount of good effected by the horse ambulance, now in charge of the corporation, which had been called out 1016 times during the year. The ordinary expenditure had been £9543 as against £7956 in 1900. There was a balance of £4425 due to the bankers of the charity. The receipts from all sources had been £10,153; including £1943 from the ex-Lord Mayor's Hospital Century Fund and £1742 from the Hospital Saturday and Sunday Fund. 1801 patients were admitted to the hospital during the year 1901, whilst there had been 8954 out-patients, involving 26,540 attendances.

### *Malaria on the West Coast of Africa: Newly Discovered Parasite.*

Sir Alfred L. Jones, K.C.M.G., the chairman of the Liverpool School of Tropical Medicine, has received from Major Ronald Ross, F.R.S., late I.M.S., who is directing the malaria expedition of the Liverpool School of Tropical Medicine which is now engaged in investigations on the West Coast of Africa, the following message: "I have great pleasure in informing you that Dr. Dutton has made a very important discovery at Bathurst. He has found a new kind of parasite which causes fever in human beings The parasite is like the one which causes the fatal tsetse fly disease among horses in South Africa."

### *The Home for Epileptics at Maghull.*

In THE LANCET of June 29th, 1901, p. 1865, allusion was made to the generous offer of Sir Alfred L. Jones, K.C.M.G., to contribute the sum of £1000 towards the funds of the above institution, on condition that a further sum of £9000 be raised within six months from the date of his offer (June 22nd, 1901). The £10,000 were required to purchase and to equip a farm for the employment of male patients who had been trained to regular work at the "home." The six months expired on Dec 22nd, 1901; and it has come out that £8175 have been promised. This amount is £825 short of the sum stipulated upon by Sir Alfred L. Jones, but, with his usual generosity, he has kindly consented to extend

*Journal* of Jan. 20th, 1897, a report is given of the Local Government Board inquiry, and this local paper states that :—

> So convinced was the council that no nuisance would arise that, subject to a clause in the contract, it had taken upon itself all responsibility. The clause provided that the contractors should be held answerable for the efficient working of the destructor for the first 12 months.

The borough surveyor, Mr. H. A. Garrett, is reported to have said that the chimney would be 150 feet high, and if the stokers did their work properly there would be no nuisance. He stated that there had not been a single complaint from the inhabitants of the houses situated close to the Bournemouth destructor. Mr. Warner supported this view by explaining that he had been connected with the erection of from 300 to 400 destructors. Then, alluding to the spot selected at Torquay, he is reported to have said that :—

> The site proposed was the most favourable one which he had ever seen and his firm was quite prepared to indemnify the council for 12 months. They had erected destructors immediately adjoining house property, but had never received complaints after erection, although there were many before. At Buxton the destructor was close beside a favourite walk, while at Hornsey it adjoined the works of the New River Water Company.

Mr. Warner added, when alluding to the apprehensions of neighbours, that he felt "convinced that there would be no cause whatever for complaint." Mr. Harris, however, who owned property at Upton, presented a memorial signed by 32 ratepayers protesting against the site selected, but the town clerk replied that there were 719 ratepayers in the district in question.

In the face of such evidence it is not surprising that the council should have entertained no apprehensions as to the unsuitability of the site proposed. Though it is, perhaps, easy to be wise after the event, still I must confess to great surprise in reading this evidence. It is considered necessary to build high chimneys to destructors; but what is the use of a high chimney if the destructor is placed at the bottom of a valley? Either the combustion is so perfect that a high chimney is not necessary ; or, if it is necessary, then it ought to be considerably above the level of inhabited houses. But if a destructor is built at the bottom of a valley then the top of the chimney may be on the same level or even on a lower level than that of the houses erected on the surrounding hills. It seems only logical to conclude that if a lofty chimney has to be built so also should an elevated site be selected and there was such a site close to the valley that was chosen in preference. This is known as the Stantaway rock and is situated to the north-east of the Upton valley. There was also another elevated site to the north-west. But the objection was raised that if the destructor was built on the top of the hill it would be seen from all directions and would constitute an eyesore. As it is it must be confessed that the destructor has been very discreetly hidden and that it is more readily smelt than seen. The consideration which probably had the most weight in favour of the actual site is that it can be approached by six different roads. The refuse can be brought to this point in direct line from the various districts where it is collected ; whereas, in the case of many of the other sites which were suggested it would have been necessary to cart some of the refuse through several districts before reaching the destructor. As for the two hills, there is but one road leading to the Stantaway rock and two roads to the other hill, and, of course, the drawing of the refuse up a hill would involve extra expense in cartage. Altogether, therefore, if it be a fact that destructors create no nuisance whatsoever, then doubtless the site selected was the most convenient available. Evidence was adduced to show that persons living close under destructor chimneys had not complained ; but I would urge that what was wanted in this case was evidence to show that people could live on the same level as the top of the chimney without being inconvenienced. Such, however, were the reasons given for the selection of what appears to me to be a very unsuitable site.

The Local Government Board having given its assent to the loan the destructor was built and was ignited for the first time in September, 1898. At first, however, no refuse was destroyed. The object was to dry the brickwork and for this purpose only firewood was burnt. Yet, I was told, a week had not elapsed before a lady living in the Tor district wrote to the town council complaining that she was being poisoned by the refuse fumes. No refuse had been burnt, and, indeed, it was not till two months later that the full capacity of the furnaces as refuse destructors was put into action. This incident shows the power of suggestion, and this, no doubt, has played an important part in the complaints which have been made. At first there were, however, no further protests. But in the course of time a person who was building houses in the neighbourhood began to complain and soon many others followed suit. Complaints were even sent when the destructor was not in use. For instance, on one occasion new iron bars had to be put in the furnaces and for this purpose the fire had to be put out for a whole week. In spite of this complaints were made as usual. The fact is, that bad odours may arise from other causes. It was further pointed out to me that close to the destructor there are two tripe-boilers, a slaughter-house, and an iron-foundry with a blasting furnace that has not got a proper chimney. Then there are also four lime-kilns in the neighbourhood. But there are now a certain number of people whose minds are so impregnated with the destructor grievance that any odour which they may notice is at once put down to that one cause.

The complaints received by the town council did not flow in regularly. Sometimes they stopped altogether and this for as long as three months at a time. It cannot be said that the wind blows the fumes away from the town for so long a period. The worst time was undoubtedly during the summer. The refuse was then very light and there was not enough to keep the furnaces burning actively for the whole of the 24 hours. Therefore, from about midnight to eight o'clock on the next morning the destructor had to cease working. This intermittence caused the nuisance, for the combustion was imperfect while the temperature was being raised at the resumption of work. Also, it must be borne in mind that coals cost from 28*s.* to 30*s.* a ton at Torquay and therefore they are carefully economised. Every household has a cinder-sifter and there is consequently very little unburnt fuel in the ashes. In November, 1900, the boundaries of Torquay were extended to include the Marychurch and Chelston urban districts. This increased the population by 12,000 and consequently there is now enough refuse to keep the destructor going all night. But on Saturdays the work ceases at two o'clock P.M. and is not resumed till Monday mornings. The difficulty of raising the temperature which occurred every day has now only to be met on Monday mornings. Apart from this, if the attendants neglect the cells or allow them to get choked up and fail to extract the clinkers this may cause an unpleasant smell ; and such carelessness happens more frequently at night time. As the greater number of complaints relate to odours occurring at night this shows that the complaints are not all imaginary, since so many of them mention the very time when it is recognised that a nuisance may be caused by mismanagement.

In regard to the nature of the refuse burnt it should not give rise to any special danger. The offal from the fish is not taken to the destructor ; the greater part is used by the fishermen as bait for their lobster pots, and what little remains is buried with lime. Indeed, it is claimed that the refuse is exceptionally clean. According to the investigations made for the town council 12 per cent. of the refuse consists of paper and cardboard packing, 52 per cent. of garden and vegetable matter, 6·5 per cent. of screened cinders, 25·5 per cent. of fine ash and dust, and 3 per cent. of broken pots, pans, bottles, crockery—in fact, of "hard core." There is only 0·3596 per cent. of rags and bones, and the rest consists of bits of bricks, old iron, coal, coke, and the like. Garden prunings constitute the principal distinctive feature of the Torquay refuse. Consequently those who argue in favour of the destructor urge that there is nothing especially dangerous or offensive in such refuse and it is maintained that when a genuine nuisance is created it is not of long duration and is only due to the inefficient management of the furnaces or to the temporary interruption of the operations. When the furnaces have to be relighted then faggots and steam coal have to be employed, and this gives rise to the black smoke that has been complained about on several occasions. Yet the employment of this fuel must be continued till enough steam has been generated to move the engines that drive the fan for the forced draught. This inconvenience can now be considered as in a great measure set aside, for since the extension of the borough boundaries there is refuse enough to keep the furnaces going during six out of the seven days. In regard to inefficient clinkering this also, it is promised, will be more carefully superintended. Finally, it is pointed out that the nuisance cannot be very serious or there would not be such a rapid

# IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

### *Legal Fees of Expert Medical Witnesses in Ireland.*

IT will be remembered that an important decision in reference to the fees of medical men as witnesses in legal actions in Ireland was noted in THE LANCET some months ago. It was contained in the judgment of Mr. Justice Kenny, with whom Mr. Justice Barton and Mr. Justice Wright concurred, and it was to the effect that the fees for professional witnesses residing within five miles of Dublin were fixed by the schedule at one guinea a day for attendance in court unless in the opinion of the taxing master the case was exceptional and that, moreover, there was nothing exceptional in the particular case—an action against the Great Northern Railway Company of Ireland for damages for personal injuries in which the plaintiff was awarded £450. Mr. Justice Kenny held the opinion that the court was bound by the schedule and by the decision of the Master of the Rolls in Maconchy *v.* the Bank of New Zealand. He said that the taxing master was bound by the schedule not to allow more than one guinea a day to the medical men of Dublin, even to those of exceptional eminence The fees were accordingly reduced to the schedule allowance and the plaintiff gave notice of appeal. On Jan. 13th the case came before the Court of Appeal—Lord Justice Fitzgibbon, Lord Justice Walker, and Lord Justice Holmes. The most eminent members of the Irish bar were engaged. In the course of the argument it was stated that the taxing master had until quite recently made use of what was supposed to be his legal discretional power and, in fact, had allowed five guineas a day to medical men of eminence in Dublin for their attendance in court. He was examined and he is reported to have said that the case was in his opinion exceptional, because it had lasted for three days and had been adjourned over one day. Lord Justice Fitzgibbon, in giving judgment, said that on the questions put to the taxing master and the answers given they were not justified in making this an exceptional case or to increase the allowance under the scale. It was, he said, almost impossible to lay down a hard-and-fast rule as to what was an exceptional case, but he was clearly of opinion that there were no exceptional circumstances in this case, and that the taxing master should not have exceeded the scale in his allowance. Lord Justice Walker with Lord Justice Holmes concurred, and the appeal was accordingly dismissed. The effect of this decision, by which the discretionary powers of the taxing master in Ireland as regards legal fees to medical witnesses are so circumscribed, is of much importance. It is difficult to see in what direction it may trend. Medical men of position in Dublin will certainly refuse to help the courts of law and to give evidence under the reduced schedule of legal fees Their fees must therefore in future be guaranteed to them beforehand by the litigant who requests them to give evidence That, *primâ facie*, seems objectionable. It seems unfortunate that the law in England as regards many small but important matters fails to stretch over to us.

### *Royal College of Science for Ireland.*

Early last year a committee appointed by the Government recommended that the buildings in St. Stephen's-green, known as the Royal College of Science for Ireland, should cease to be used for science, and that the present Science and Art Museum, with a frontage in Kildare-street and another in Merrion-square, should be extended in order to embrace the work of the Royal College of Science and also that of the new and important Department of Agriculture For that object the Government has now determined to buy almost the whole west side of Upper Merrion-street, which is virtually an extension of Merrion-square West. It has been definitely decided to purchase the 13 mansions and houses extending up Merrion-street from the Government Museum Department in Merrion-square. The frontage is over 100 yards, and as the houses, gardens, and stables in Upper Merrion-street extend back for nearly 100 yards (288 feet) the Board of Works will thus acquire an area of about 100 yards square in the very best part of Dublin. The local papers have not noticed the matter and are probably unaware of its importance. From the medical point of view it is not devoid of interest, for Upper Merrion-street is only second to Merrion-square North as a favourite habitat for the medical profession of Dublin. They are almost all owners of long leases of the houses which they occupy. They have recently received notice from the Board of Works that application is intended to be made to Parliament in the ensuing session for an Act to acquire by compulsory purchase or otherwise the lands, houses, buildings, and premises in Merrion-street. The medical men who live along the northern side of Upper Merrion-street must therefore soon look out for houses elsewhere.

### *Coleraine Cottage Hospital.*

At the annual meeting of the subscribers held in the town hall, Coleraine, on Jan. 15th, it was reported that 71 cases had been treated during the year, and that 27 operations had been performed, all of which had been successful. The ordinary expenditure for the year was £444 3*s.*, and the ordinary income £444 2*s.* 10*d.*, of which the patients paid £105 2*s.* 6*d.* The other sources of income were chiefly subscriptions, donations, and church collections.

### *The Fund for the Family of the late Mr. W. Smyth.*

At a meeting of the Belfast committee of this fund held on Jan. 17th the report of the audited accounts showed that the Belfast subscriptions were (after paying the necessary expenses) £1328 6*s.* 11*d.* Since this audit further subscriptions of £21 19*s.* have been received and the Belfast Banking Company are kindly allowing interest on current balances. As the result of letters to the London press by "A Hospital Nurse" nearly £600 have been collected by Mrs. Henry Arthur Jones, of Portland-place, London, and this amount is to be amalgamated with the Belfast fund, making nearly £2000 in all. It is understood that the total of the combined fund raised for the family of the late Mr. Smyth will be £6000 The money is to be invested in a board of trustees as follows: the Duke of Abercorn, Mr. John Herdman, D.L., Mr. H. T. A. Warnock (Donegal), and the President of the Royal College of Surgeons in Ireland. Special votes of thanks were passed to the press, to Dr. W. H. Allen (Stanmore, Middlesex), to Miss Russell Geddis (the "Hospital Nurse" who originally wrote the letters to the *Standard*), to Mrs. H. A. Jones, and to all who had so kindly assisted the fund by collecting.

### *Lamentable Disaster in Belfast.*

Belfast was on Jan. 20th plunged into the deepest sorrow and mourning by a terrible accident which occurred in one of the large flax-spinning and weaving mills. About 9.30 in the morning a portion of the outer wall on the east side of the building gave way (due probably to a fracture of one of the cast-iron beams which rest on the brick piers through what is known as crystallisation in the iron), with the result that the heavy machinery was precipitated through the five storeys of the mill to the basement, carrying down many unfortunate workers and burying several under the débris. As a result of this most awful calamity—the most terrible which has ever occurred in the industrial history of Belfast—13 people have been killed and 12 patients—some very seriously injured—are lying at the Royal Victoria Hospital, Belfast. A rescue party, consisting of mill-workers, firemen, police, members of the salvage corps, and medical men, set to work to remove the débris, which consisted of several hundred tons of broken bricks, cement, and stonework, intermingled with iron beams and twisted and damaged pieces of machinery. A terrible scene was presented to the onlooker, while the noise was appalling owing to the cries of the terrified workers who had escaped, mingled with the groans and shrieks of those who had been partially engulfed. The task of clearing the fallen material was almost superhuman, the difficulty being due to the huge masses of heavy iron and steel machinery, but as the result of continued effort throughout the whole day and night, relays of workers being employed often at great personal risk, the work was accomplished, and one by one the unfortunate victims were rescued and conveyed in the fire brigade ambulances (of which three were constantly employed) to the Royal Victoria Hospital, where the most perfect and ample arrangements were made for their reception and treatment. The great feature of the cases, from a medical point of view, was the extreme shock. Simple and compound fractures of the limbs, severe head and pelvic injuries, and cases of damage to internal organs were among those admitted. The newspapers all speak in terms of the very highest praise of the splendid work of the rescue party, of the ambulance arrangements, of the devotion of the medical men who gave their services at the scene of the disaster, and of the thorough attention and care given to the unfortunate sufferers at the Royal Victoria Hospital.

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the time limit to enable the committee to raise the balance. In the meantime the committee has acquired a most suitable property at Maghull, which contains, in addition to a farmhouse and land, a modern residence which will be utilised as an additional home for female patients. There are now 70 male and 67 female patients in the three buildings of the "home," and many applicants are awaiting admission.

### *Liverpool Country Hospital for Chronic Diseases of Children.*

The treasurer of the above-mentioned institution reports that the efforts made for the collection of subscriptions towards the erection of the new hospital have been greatly encouraged by the generosity of friends, £8333 having been promised in addition to the amounts previously announced.

### *The Proposed Leigh Infirmary.*

The subscription list for the proposed Leigh Infirmary was opened last week and already over £8000 have been promised, including £2000 from the trustees of the Frances Charity, and £1000 each from the Leigh Coöperative Society, the Bedford Brewery, and the executors of the late Miss Farnworth. The Mayor of Leigh has subscribed £200. Lord Lilford has given three acres of land for building purposes.

### *The Liverpool Medical Institution.*

Mr. Rushton Parker has been elected the President of the Liverpool Medical Institution. Mr. Rushton Parker is the professor of surgery in University College, Liverpool, and is one of the honorary surgeons to the Liverpool Royal Infirmary. He is also an examiner in surgery at the Victoria University.

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## SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

### *Scheme for a Psychiatric Clinique in connexion with the Edinburgh Royal Infirmary.*

A WEEK ago a circular letter was addressed by Sir John Sibbald, M.D., late Commissioner in Lunacy, to a number of the leading physicians in Edinburgh and to a few prominent laymen, asking them to meet him at the Royal College of Physicians of Edinburgh to consider a proposal to establish a ward in the Royal Infirmary for the treatment of mental disorder in its early stages. The meeting was held on Jan. 21st in the afternoon. The chair was taken by Professor T. R. Fraser, President of the College, and there was a strong and representative attendance of hospital physicians and of asylum superintendents. A lord of session and several members of the board of management of the infirmary were also present. Professor Fraser, in intimating the reasons for calling the meeting, dwelt upon the fact that there were many cases of early mental disorder which called for careful and skilful treatment, such as could only be suitably provided in wards like those that the originators of the movement had in view. Sir John Sibbald was then called upon and he read a statement of his views. He dwelt upon the absence of provision for the hospital treatment of early cases of mental disturbance—the stage at which it was impossible to certify the person as insane, and therefore inadmissible to an ordinary asylum. At this stage it was of the greatest importance to the patient that he should be under careful medical treatment, and often of equal importance that he should be removed from his ordinary domestic environment. Many patients might by this means be saved from becoming hopelessly insane and ending their days in an asylum. Another class that would be benefited would be the cases of acute insanity of a temporary nature which could be successfully treated in the special wards of a general hospital without the stigma which was attached to even a short residence in an asylum as a certified lunatic. He referred at length to the system in vogue in Germany. He also dwelt upon the subject from the standpoint of its importance to the student who was to be a practitioner. The study of certified lunatics had become compulsory, but he thought that it was still more important to teach the student to recognise the early manifestations of disordered brain function and how to adopt suitable measures for the arrest of the condition at this stage. He held that the best possible arrangement was to have special wards for the reception and treatment of these cases in a general hospital, and this in Edinburgh meant the Royal Infirmary. Such wards would form the basis of a psychiatric clinique in connexion with the medical school and would be of great advantage to the student. Sir John Sibbald evidently thought that nervous cases other than mental ones might also be included, but this part of his statement was wanting in clearness. He was followed by Dr. Macpherson, one of the Commissioners in Lunacy, who supported Sir John Sibbald's proposals. Dr. T. S. Clouston referred to the teaching of psychiatry in Edinburgh; how it had commenced at the Morningside Asylum, where the university instituted a lectureship in insanity and where now the course was compulsory. He entirely approved of hospital wards for the early cases and the establishment of a hospital clinique, and he suggested that an arrangement might be made between the infirmary and the county council whereby certain early and acute cases might in the first place pass through a special ward in the infirmary. After some further remarks a committee was appointed to consider the matter in detail.

### *The Morison Lectures.*

These lectures are delivered this year by Dr. G. A. Gibson in the Royal College of Physicians of Edinburgh. The subject chosen by the lecturer is "The Nervous Affections of the Heart." The first lecture was delivered on Jan. 20th, before a good audience. The part of the subject dealt with was "The Clinical Features of Sensory Disturbances." The three lectures of the present session he intended to devote to sensory affections. He dealt with the history of his subject, showing that the modern scientific aspect had its first formal presentation by Heberden in 1768, but that Edward Jenner and John Hunter had associated heart pain with changes in the nutrient arteries of the heart. He next proceeded to describe the general features of painful disorders of the heart, showing that the different symptoms were accompanied by objective phenomena, such as skin tenderness in the area of pain; and discussing alterations in the movements and sound of the heart, in the pulse, in the respiratory movements, and so forth. He then considered classification, condemning the division into true and false, but adhering to two groups, organic and inorganic. In the former were placed all the varieties depending upon obvious changes in the heart and great vessels within the chest, while in the latter were placed all those in which there were no definite structural changes, including toxic and neurotic.

### *Memorial to the late Professor Henry Alleyne Nicholson.*

A movement has been initiated with the view of commemorating the late Professor Nicholson by the erection of a bronze tablet in the museum at Marischal College. Professor J. Arthur Thomson, Zoological Department, Aberdeen University, and Mr. John E. Marr, F.R.S., lecturer in geology in Cambridge University, have undertaken the preliminary steps and are prepared to receive subscriptions from "those who were friends, colleagues, collaborateurs or old students. It has been suggested that the memorial should take the form of a simple bronze tablet with an appropriate freize, including, for instance, symbolic representation of some graptolites and tabulate corals. We are convinced that the fittest memorial of our friend should be simple and spontaneous, and we invite suggestions if you are disposed to assist in the commemoration." The proposal has already met with warm approval, and it is hoped that those who had the honour and the pleasure of being instructed by one who has shed such lustre on the University of Aberdeen will send in their subscriptions to either of the honorary secretaries as soon as possible. It has been suggested that should funds be sufficient a Nicholson prize in zoology might be instituted.

### *Aberdeen University "At Home."*

The Aberdeen University Association of Lecturers and Assistants gave an "At Home" at Marischal College on Jan. 18th. The guests numbered about 200

### *Aberdeen Students' Representative Council.*

At a meeting of the above council at Marischal College on Jan. 18th it was decided unanimously to give the sum of five guineas from the funds to the students' fund in connexion with the University extension scheme. This fund now amounts to £250 The council agreed to become patrons of the bazaar of the University Athletic Association to be held in October, 1902, for the purpose of aiding the funds of the association. Delegates to the Scottish Inter-University Conference in Glasgow were appointed.

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## BERLIN.

(FROM OUR OWN CORRESPONDENT.)

### *Accident to Professor Virchow.*

PROFESSOR VIRCHOW, whose eightieth birthday was the occasion of great celebrations a few months ago, has unfortunately met with an accident which may possibly have serious consequences. While travelling in an electric tram-car he jumped off before the car had completely stopped and fell on the asphalte roadway. After being carried home he was attended by Professor Körte who discovered a fracture of the femur. This unfortunate occurrence has evoked great sympathy in every class of the population. The Emperor sent a representative to Professor Virchow's residence to inquire as to the condition of the distinguished patient, and many public bodies and associations—political and non-political—did likewise. The Berlin Medical Society when appointing officers for the current year at the first meeting in January unanimously re-elected Professor Virchow as president, and sent him a telegram of sympathy.

### *Dues payable to the Medical Chambers.*

A recent law requires the qualified medical men of a district to pay every year to the treasurer of the medical chamber of the district a sum proportionate to their incomes. The money is used for the expenses of the chamber and for a fund to support distressed members of the profession. At the last meeting of the Berlin Medical Chamber a petition was read on behalf of a certain number of professors, *privat-docents*, assistants, &c., who although duly qualified are not engaged in medical practice and some of whom have never practised. These medical men hold appointments in the physiological, pathological, anatomical, and other scientific departments of the university, or in the municipal hospitals. They pointed out that being exclusively occupied with scientific questions they were not in the least concerned with the topics bearing on the interests of medical practice which were exclusively discussed and decided in the Medical Chamber; their position differed entirely from that of the medical practitioner, and the medical chamber had never given any attention to their special interests. In the discussion which ensued Professor von Bergmann said that the petition was altogether ill-advised; that theoretical medicine must always have a connexion with medical practice, and that the representatives of the former should never forget that they had a good deal to do with practical medicine as members of examining boards and in other capacities. The petition was unanimously rejected; it was then stated that the petitioners had always paid their contributions to the medical chambers without any objection, and that they had even used their right to vote at the elections for the chamber. At the same meeting the chamber agreed to a motion that it was desirable when plague was prevalent in a district to cremate the bodies of the deceased instead of burying them.

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## NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

### *Mental Soundness of Eddyites.*

THE Surrogate's Court of New York County holds in *re* Brush's will that, however the teachings of "Christian Science" may be opposed to the beliefs and notions of many, being founded on the religious conviction of those professing them, the court cannot say that those persons holding them are mentally unsound, as the truth or falsity of a religious belief is beyond the scope of judicial inquiry. The court also says that it has often been urged to pass an opinion upon the falsity of spiritualism and to hold that a follower of that faith, like Eddyism, as holding beliefs contrary to those of most men, was of necessity labouring under an insane delusion, but that it has uniformly refused to declare or to hold this opinion. The question for the court to decide in determining the testamentary capacity of a "Christian Scientist" is as to the effect of the belief upon his or her mind, the belief itself not being an evidence of insanity. The question which arises is whether this belief has displaced judgment, dethroned reason, and so made the person incapable of making a will. If the effect of this belief has been to fill the mind with insane delusions resulting in the testator's will then the document must certainly be set aside. In the case before the court it was decided that the testator was of sound mind.

### *The Liability of Physicians in Local-Option Territory.*

The Court of Criminal Appeals of Texas says in McLain *v.* the State that the legislature, as it holds that it had a right to do, has decided that for medicinal purposes intoxicants can only be sold upon a prescription certifying that a regular physician signing the prescription has personally examined the party to whom the prescription is given and that he is actually sick, and that that physician must testify to this upon his honour. These are the requisitions of the legislature. There is no kind of prescription authorising the sale except that provided by the statute, and even that is no prescription until the law has been complied with. In the event of a sale an illegal prescription is no protection to the seller or to the physician, because in that case the latter makes himself a party to the sale by giving an illegal prescription by means of which the law is evaded. As in misdemeanours all are principals, so an illegal prescription given by a physician involves him equally with the seller; both are liable, for each is required to know the law; and to bring about the sale each is obliged to comply with the requirements of the law, and failing in this one is as liable as the other for the punishment ordered for illegal sales. The court further states that it is not now dealing with a physician who gives a false certificate though in the exact terms of the law. In this particular case the court holds that a prescription was properly excluded because it was not in conformity with law, as it had omitted the expression "personally examined" and the certificate upon honour required by the statute.

### *A Year's Immigration.*

The annual report of Commissioner Powderly of the Immigration Bureau shows the total steerage arrivals in the United States in the year to have been 487,918, an increase over the preceding year of 39,346, or approximately 9 per cent Of this increase 2020 came from Canadian ports and the remainder through United States ports. There were also 74,950 other alien passengers who came as cabin passengers, making a total for the year of 562,868. The ratio of increase of Italian immigrants as compared with that of last year from that country is approximately 36 per cent., or more than threefold the ratio of increase from all Europe, and the increase numerically from all other countries of Europe aggregates scarcely one-fourth of that from Italy. The total steerage immigration was distributed as to sex between 331,055 males and 156,863 females, and as to age between 62,562 under 14 years, 396,516 from 14 to 45 years, and 28,840 over 45 years. It is shown that 117,587 were unable to read or write, 3058 could read but not write, and that 294,860 brought each less than $30, and 56,312 had more than $30 each. During the past year 363 persons have been returned to their respective countries, having become public charges within one year after landing. The number not allowed to land was 3516, against 4246 last year. The report shows that the character of the immigrants was decidedly superior to that of last year, the rejections being 730 less though the arrivals were 39,346 more. The principal countries from which the steerage arrivals come are as follows: Italy, Sicily, and Sardinia, 135,996; Austria-Hungary, 113,390; the Russian Empire and Finland, 85,275; Ireland, 30,651; Sweden, 23,331; the German Empire, 21,561; Norway, 12,248; and England, 12,414 In discussing the general subject of immigration the Commissioner-General says that to deal with the problem successfully it seems indispensable to remove as far as possible those conditions which conflict with the incorporation of the alien element into the social system of America, in order that by actual experience the former may learn as soon as possible that the basis and foundation of the American polity are a respect and affection for, and a willing obedience to, the laws and customs of the land, because the maintenance of these laws is the best safeguard of personal liberty. It is therefore recommended that Congress should enact suitable legislation, either with, or if necessary without, the coöperation of the States, for the purpose of distributing the alien population with some reference to the industrial law of supply and demand.

### *An Appeal from the Ruling which Bars out Consumptives.*

An assistant-secretary of the Treasury Department will

# PARIS.

(FROM OUR OWN CORRESPONDENT.)

### *Ship Surgeons and Shipping Companies.*

A SPECIAL diploma for ship surgeons (*diplôme de médecins sanitaires maritimes*) was introduced some years ago. Provided with this qualification a medical man could fulfil the duties of surgeon on board a merchant vessel or transport, but the new diploma left him in the position of a mere servant of the shipping companies, although his duties included the carrying out of sanitary measures. It has often been suggested that ship surgeons should have the status of Government officials, but no steps have been taken in this direction, and men whose duty it is to act in the interest of public health remain the paid servants of employers upon the adequacy of whose arrangements they may have to express an opinion. Under these conditions disputes were inevitable The ship surgeons founded a society and believed that in it they had a right to discuss questions of hygiene and to criticise the measures adopted by the companies for the prevention of disease. These measures are not so good as they might be, the fact being that the shipping companies, although in receipt of considerable bonuses from the Government, trouble themselves very little about the welfare of their passengers, as has been recently shown in the case of the *Senegal.* The criticisms uttered in the society of ship surgeons gave offence and the president of the society has been discharged by the company in whose service he was. Painful examples are not wanting of the scanty consideration entertained by the shipping companies for the surgeons on board their vessels A surgeon became seriously ill while passing through the Red Sea and arrived at Marseilles in a delirious condition. The company who employed him set him on shore, refusing to have anything more to do with him, and the police commissary of the Quartier de la Jolette had to order an ambulance and to procure his admission into one of the general wards of the Hôpital de la Conception. Under these circumstances the only advice that can be given to the ship surgeons is that they should form an association and should bring the shipping companies to understand, even by means of a strike if necessary, that they are entitled to better treatment.

### *Diphtheria in Paris.*

Diphtheria being increasingly prevalent in Paris, the Municipal Health Committee at its last meeting discussed the sick- and death-rates occasioned by this disease in Paris last year. The committee recommended that copies of the official instructions relative to diphtheria should be sent to the families who have children absent from school from this cause; that these instructions should also be sent to the medical men of the districts in question; that local health committees and medical societies should be asked to discuss the prophylaxis of diphtheria at their meetings; that the committee on insanitary dwellings should be informed of the addresses at which cases occur; and that public and private schools should be medically inspected.

### *Infant Feeding and Infant Mortality.*

The Academy of Medicine, on Jan. 14th, acquiesced in the conclusions presented to it in a report made by M. Porak at the instance of the Committee upon the Hygiene of Infancy. The conclusions were brief and succinct. The milk of the mother, or, failing the mother of some other nursing woman, is the best method of feeding the infant. If human milk cannot be obtained, animal milk—cow's, goat's, or ass's milk—ought to be given. Feeding-bottles with tubes ought to be interdicted by law, as being responsible for great infant mortality M. Porak refers to a report of the Academy stating that only children nursed *à domicile* are submitted to the legal inspection provided under the Roussel Act, and proposes to open an inquiry into the working of this Act which he considers unsatisfactory and partial The Academy has decided that the control of home-nursing ought to be more thorough. As the possible causes of death to the infant are most numerous during the first month of life the Academy recommends that the visits of the *médecin inspecteur* should be weekly during that period, fortnightly for the next four months, and monthly during the sixth and seventh months. Lastly, to obviate one of the reasons, trifling in appearance but really of the first importance, preventing nursing women from applying whenever necessary to the *médecin inspecteur,* the Academy suggests that such women should be admitted to the benefits of the Assistance Médicale, and that foster-mothers should have legal help in any process against the parents for the recovery of their wages.

### *Parasites in the Blood of Epileptic Patients.*

M. Bra has taken specimens of blood from the veins of the forearms of 70 epileptic patients under the care of M. Magnan in the Hospital of St. Anne, and also under the care of M. Marandon de Montyel at the Asylum of Ville-Evrard. All these patients were suffering from the form of epilepsy which is called idiopathic, and M. Bra has been able at certain periods of the affection to demonstrate the unvarying presence of a micro-organism. During the lengthened period which intervened between the paroxysms, examination very often gave a negative result, but when the blood was examined just before the attack, or during or immediately after an epileptic crisis, small, feebly refracting points could be seen in the plasma. They were 1μ and under in length, and were seen either alone or as diplococci. They moved very rapidly sometimes, either singly or united together in greater or less numbers, and while thus united they presented the appearance of little worms of a length equal or superior to the diameter of a red blood corpuscle. Generally, six or eight of these bodies were seen together. They presented various forms, but the most typical was that of a chain terminated at each extremity by a larger body somewhat resembling a chain-shot. They moved about with serpentine movements and tumbled the one over the other. Very often they became rolled up into balls, so that it was impossible to be certain of their real form, and sometimes they were seen adhering by one extremity to a red blood corpuscle. Apparently they are some form of streptococcus which, owing to its morphological and biological characters, constitutes a very special variety, and one which M. Bra has never found except in epileptics.

### *The Consumption of Various Drugs by the Paris Hospitals.*

*Médecine Moderne* has got together some remarkable extracts from a report presented to the Municipal Council by M. Houdé upon the Central Hospital Dispensary. Here are some of the figures for 1901: The total expenses were 1,981,820 francs, of which 142,420 francs went for general expenses, being an increase of nearly 500,000 francs over the figures for 1890. Passing on to expenses for drugs properly so-called, in 1899 61,000 francs were expended in drugs, as against 34,000 in 1890, and another 80,000 francs for vegetable drugs (*herboristerie*), as against 44,000 francs in 1890. Various chemicals cost 321,000 francs, as against 220,000 francs. The quantity of coffee remains almost the same, that is to say, 39,000 francs as against 38,000 francs, but the consumption of sugar has gone up very remarkably—viz., 216,000 francs, as against 157,000 in 1890 Leeches are a small item. There were only 250 francs worth used in 1899 and 224 in 1890. The consumption of glycerine has, however, increased very much, the figures being 79,000 francs, as against 43,000. 63,000 kilogrammes were used at the various hospitals, and of this total the Lariboisière Hospital alone used 7621 kilogrammes, or as much as the Hôtel Dieu and the St. Louis Hospital together. It is a remarkable thing that no enemata are given at this hospital, but it seems to be particularly profuse in the use of medicines. The total consumption of iodine at the various hospitals was 11 kilogrammes, and of this quantity the Lariboisière Hospital used 60 per cent., and out of a total quantity of 5625 grammes of tincture of musk 3060 grammes, or 54 per cent., were used by the Lariboisière Hospital. The report is in utter despair about the consumption of alcohol. In 1890 pure alcohol cost 86,000 francs. In 1899 the expenses had gone up to 219,723 francs. As regards rum, the expense is almost doubled, and again the Lariboisière Hospital comes out at the top. The total quantity of rum for the various hospitals amounted to 35,527 litres, and of this quantity the Lariboisière Hospital took 6428 litres. As a rule, the rum is used up in making "Todd's drink" and "*thé au rhum.*" The report considers that 36,000 litres of camphorated alcohol, which has apparently been used, has not been employed in a proper manner. This preparation, it appears, is not only used in the hospitals to rub patients with, but it is used very extensively for cleaning windows. Camphorated alcohol appears to be an admirable thing to add to whitening. When windows are cleaned with this mixture the alcohol evaporates and the camphor which is left behind seems to have a wonderful effect in making the glass highly polished and bright.

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fan. The meat would in this way be protected completely from contamination by the hundred-and-one forms of filth which are blown about in every large town, while the appeal to the customer's eye would still be as strong as it is now, and far more pleasing would be his reflections." Dr. Mason also indicts the system under which milk is supplied to the consumer. He says: "There is, unfortunately, not the slightest room for questioning the truth of many of the statements which have been made in reference to dirty milk. It cannot be otherwise when one considers the slipshod methods in use by the retailer as well as by the buyer of the milk. It would be unfair to a great number of milk-vendors to say that all are dirty, but the fact remains that not a few of them take little or no trouble to profess the virtue of cleanliness, even if they have it. The cans are not bright, the carts are often dirty, and the clothing of the dispenser not infrequently shows unmistakeable evidence of a rubbing acquaintance with cows and cow-bails. Then again the customer aids and abets the vendor by providing an open vessel like a jug to receive the dust and dirt as well as the milk. It seems marvellous that no company has seen its way to undertake the retailing of milk in the tasteful, cleanly way in which one sees it done on the continent and in some parts of London—bright clean carts, clean polished pans, Pasteurised milk from guaranteed herds, and, above all, clean, tidy servants, dressed in spotless linen—and success, I feel sure, would be attained." The report deals exhaustively with the question of phthisis, and concludes with a reference to the educative work in sanitary matters carried on by Dr. Pomare, native health officer, among the Maori population.

Dec. 18th, 1901.

## Obituary.

### WILLIAM NASH, M.D. EDIN., M.R.C.S. ENG.,

SURGEON-GENERAL, A.M.S. (RETIRED).

ON the early morning of Jan. 19th Surgeon-General W. Nash unfortunately succumbed to pneumonia (the result of a chill caught during the previous week) to the deep sorrow of his numerous friends, and these will include all who have ever had the honour of his acquaintance, for no officer possessed in a greater degree the innate quality of attracting the affection of his equals and subordinates. He was educated at King's College Hospital and at Edinburgh University, and on entering the army was in the 72nd Seaforth Highlanders. He served for 38 years in the medical service of the army. His war services included the Kurram campaign under Lord, then Sir Frederick, Roberts, where he was present at the battle of the Peiwar and the occupation of the Shuturgurdan (despatches, medal, and clasp), and the Egyptian campaign under Viscount Wolseley (medal and bronze star). His last office was that of principal medical officer of Netley, during which time he twice had the honour of receiving her late Majesty at the hospital. During his whole career Surgeon-General Nash's qualities were such as to make him beloved by all officers and men who came into contact with him. Ever ready to help any brother officers, he yet knew how to exercise firm discipline when necessary.

### WILLIAM SMITH LUNAN, M.B., C.M. ABERD.

INTIMATION was received early this week of the death, on Dec. 27th last, of Dr. William Smith Lunan, son of Mr. William Lunan, C.A., Aberdeen Deceased was a native of Aberdeen and studied at Marischal College, where he graduated M.B., C.M. He then proceeded to Fort Beaufort, South Africa, and entered into partnership there with Dr. Pearson. He subsequently acted as a surgeon in the Matabele War and was surgeon-captain in the British South African Police. About a year ago he transferred his services to the Globe and Phœnix Mine, Rhodesia, which post he occupied at the time of his death. Dr. Lunan was about 40 years of age. He married Miss Quin whose father was a member of the Cape Parliament. His family numbers four. In Aberdeen the news of his death has been received with much regret.

### WALTER LAWRANCE, M.R.C.S. ENG.,

FLEET SURGEON, R.N.

A WIDE circle of friends will hear with deep regret the news of the death of Fleet-Surgeon Walter Lawrance, R.N. (retired), which took place on Saturday, Jan. 18th, at his residence, 5, East Craibstone-street, Aberdeen. A native of Aberdeen, Fleet-Surgeon Lawrance was educated at the Grammar School and Marischal College. He entered the Royal Navy in October, 1841, and was made surgeon in 1852. Two years later he was promoted staff-surgeon and subsequently attained the rank of Fleet-surgeon. For a considerable period he was stationed on the West coast of Africa and also at New Zealand. The last three or four years of his service were spent on H.M.S. *Clyde*, but he retired nearly 30 years ago. Fleet-Surgeon Lawrance took no part in public affairs. In private life he was one of the most genial and kind-hearted of men. He is survived by a widow.

## Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—In January the following candidates passed in the subjects indicated:—

*Surgery*—J. W. W. Adamson (Section II.), St. George's Hospital; A. G. H. Anthonisz (Section II.), University College Hospital, A. H. Bell, Cork and Guy's Hospital; H. E. Darlington, Birmingham; A. Dewar, McGill and Westminster Hospital; and F. M. Payne (Section II.), Royal Free Hospital.

*Medicine.*—J. W. W. Adamson (Section II.), St. George's Hospital; A. A. E. Baptist, Calcutta; F. G. Bennett (Section I.), Cambridge and University College Hospital; E. C. Curtis, Aberdeen and Charing-cross Hospital; C. J. Francis, Guy's Hospital; J. Hunter (Sections I. and II.), McGill and Westminster Hospital; W. Miles, Middlesex Hospital; R. Rees (Sections I. and II.), Cambridge and St. Mary's Hospital; and H. Salomon, Manchester.

*Forensic Medicine.*—J. Hunter, McGill and Westminster Hospital; T. G. Miles, Guy's Hospital; R. Rees, Cambridge and St. Mary's Hospital; G. Roper, Cambridge; and H. Salomon, Manchester.

*Midwifery.*—J. J. Anning, Leeds; F. G. H. Cooke, University College Hospital; F. I. M. Jupe, Cambridge; F. H. Maberly, Birmingham; and E J. Miller, King's College Hospital.

The qualifying diploma of the Society in medicine, surgery, and midwifery was granted to the following candidates: J. W. W. Adamson, A. G. H. Anthonisz, A. A. E. Baptist, A. Dewar, C. J. Francis, F. M. Payne, and R. Rees.

UNIVERSITY OF CAMBRIDGE.—The following degrees in medicine and surgery were conferred on Jan. 16th:—

*Bachelor of Medicine.*—J. W. Rob, St. John's; K. R. Hay, Caius; and E. G. Wales, Downing.

*Bachelor of Surgery.*—A. G. Bate and E. I. Claxton, King's; A. H. Greg, Trinity; J. W. Rob and J. Wharton, St. John's; R Rolfe, Clare; H. M. Wilson, Trinity Hall; C. de Lisle Carey, Emmanuel; E. G. Wales and T. E. Wood, Downing; and F. H. M. A. Beckett, Selwyn.

Dr. Barclay-Smith has been appointed Senior Demonstrator of Anatomy for a further period of five years. An additional examination for Part I. of the Third M.B. will be held early in June under the new regulations to suit the convenience of students who desire to proceed to their work for the final examination.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Gustav de Ruyter, *privat-docent* of Surgery and joint author with Dr. E. Kirchhoff of a surgical compendium, has been granted the title of Professor, as have also the following distinguished medical men who are not connected with the teaching staff of the University: Dr. Theodor Sommerfeld, a Berlin physician who has written a good deal on the subject of tuberculosis; Dr. George Meyer, who has made a special study of sanitary and ambulance organisation in England and elsewhere; and Dr. Julius Schwalbe, one of the editors of the *Deutsche Medicinische Wochenschrift*.—*Bonn:* Dr. Karl Hubert Vogel, one of the surgeons of the Johannes Hospital, has been recognised as *privat-docent* of Surgery.—Dr. Bleibtreu, Assistant in the Physiological Institute, has been granted the title of Professor.—*Breslau:* Dr. E. Storch has been recognised as *privat-docent* of Psychiatry.—*Copenhagen:* Dr. F. C. C. Hansen has been appointed to the chair of Anatomy in place of the late Professor Chievitz.—*Erlangen:* Dr. Max von Kryger has been promoted to be extraordinary professor of Surgery.—*Königsberg:* Dr. Heinrich Jäger, *privat-docent* of Hygiene, who has made some valuable bacteriological researches, has been granted the title of professor.—*Rio de Janeiro:* Dr. Miguel Conro has been promoted to the professorship of Medical Diagnosis.

VACCINATION GRANT.—Mr. S. H. Rentzsch, Week St. Mary, Cornwall, has received the Government grant for the second time in succession for successful vaccination.

appeal from the ruling of the Marine Hospital Service published last spring which placed tuberculosis among the infectious and loathsome diseases which are barred out from admission into the United States under the existing immigration laws. A circular letter was recently sent to the immigration commissioners at all the American ports for special reports as to the number of aliens affected with consumption who had arrived since July. An examination of the official replies revealed to the authorities that less than 50 immigrants had been debarred from admission on account of tuberculosis. At the port of New York only 34 cases had been reported, at Baltimore two, and at Philadelphia three. Of these latter one young woman died before she could be deported. *It is* understood that the assistant-secretary has come to the conclusion that the number of immigrants coming to this country with tuberculosis is not sufficient to require other than the exercise of the powers of the city board of health to guard against its spread and to care for the afflicted. He argues that if other nations desired to adopt retaliatory methods, with regard to which there has been some discussion, the United States would be a great sufferer.

### *Dinner to Dr. T. Gaillard Thomas.*

A banquet was given recently to Dr. T. Gaillard Thomas by his medical brethren, the occasion being the anniversary of his seventieth birthday. The dinner in his honour took place at Sherry's Restaurant, and was attended by nearly 300 members of the New York medical profession with the addition of a few from other cities. Dr. James W. McLane of the College of Physicians and Surgeons presided. Among the speakers were Dr. Weir Mitchell of Philadelphia, Judge Howland, Dr. William Welch of Johns Hopkins University, and Dr. Shattuck of Boston. A eulogistic sketch of Dr. Thomas's career was given by the President of the New York College of Physicians and Surgeons at which school Dr. Thomas had passed a portion of his life as a teacher of medicine. Dr. Thomas himself, who is known as one of the best orators in the American medical profession, made a speech which well upheld his reputation. Dr. Thomas is a native of South Carolina; he studied first at Bellevue Hospital School, after which he took courses in midwifery at the Rotunda Hospital, Dublin, and then spent some time in Paris, finally settling in New York. From 1855 to 1860 he was a lecturer on obstetrics at New York University, but after the Civil War the College of Physicians and Surgeons prevailed upon him to join its teaching faculty. Dr. Thomas's specialty has been the diseases of women, in which he has made himself a world-wide fame; he is the author of a standard treatise on that subject.

### *Tetanus in St. Louis.*

A commission which was appointed to investigate the tetanus poisoning in St. Louis subsequently to the use of antitoxin prepared by the Board of Health has reported that the diphtheria antitoxin so prepared was issued before it was possible to have obtained results from the usual necessary tests; and that had these tests been made the animal experiments would have proved the presence of tetanus germs and that the fatalities would have been avoided. The disastrous occurrences in St. Louis have given rise not unnaturally to a considerable amount of animus against the practice of boards of health manufacturing and distributing antitoxins. It is pointed out that antitoxic serums supplied by private manufacturers are prepared in almost all instances by trained bacteriologists who know the technique *necessary to protect* the serum from contamination, so that it is almost impossible that any serious impurities should gain an entrance into it. It would seem from the accident in St. Louis that marked carelessness prevailed both in the manufacture of the serum and in its distribution. The antitoxin which caused so many deaths in St. Louis was prepared at a municipal laboratory conducted upon an economical basis, not in a commercial laboratory run upon strictly business principles. In institutions of the former class politics are liable to enter and the help is rather likely to be chosen from among political favourites than from among those who are especially adapted for the work in question. The moral of the unfortunate events at St. Louis would seem to be that work of such scientific accuracy should be placed in the hands of those who can afford to engage the best possible assistance and who are able to choose their men entirely irrespectively of any outside influence or coercion.

Jan. 7th.

## NEW ZEALAND.

(FROM OUR OWN CORRESPONDENT.)

### *The Public Health Department.*

THE first report of the Public Health Department, which was presented to Parliament by the Minister of Public Health last month, naturally contains a good deal that is interesting generally, as well as much that is instructive. Dr. J. Mason—the chief health officer—prefaces his report with the statement that the Public Health Act of 1900 puts this colony in the van as regards the conservation of the public health. He indicates briefly what has been already done and the plans for the future. The colony has been apportioned into six divisions of much the same area and description as the old provincial districts. Each district will be under the charge of a district health officer, who must be a qualified medical practitioner and possess a special qualification in public health or sanitary science, or have special knowledge of sanitary and bacteriological work. He will be required, among other things, to inform himself as far as practicable respecting all influences affecting, or threatening to affect, injuriously the public health within the district; to inquire into and *to ascertain the causes, origin,* and distribution of diseases within the district and to ascertain to what extent they depend on conditions capable of removal or mitigation; to keep himself informed of the conditions injurious to health existing in the district; to be prepared to advise the various local bodies on all matters affecting the health of the district and on all sanitary points involved in the framing and subsequent working of such by-laws and regulations as they may have power to make; and to direct or superintend the work of inspectors of nuisances within his district. Under this system it is fairly expected that ere long many, if not all, of the conditions which militate against the health and well-being of the community *will be removed. The precautions adopted against the* occurrence of plague in the colony are outlined. Special regulations have been drawn up for the guidance of all who have to deal with cases of dangerous infectious diseases, providing for the isolation of persons, disinfection of persons and things, disposal of the dead, &c. "Our danger," Dr. Mason states, "lies not so much in the landing on our shores of a case of plague, but in the thousand-and-one insanitary conditions which exist all over the colony—conditions which make for the depreciation of the individual's power of resistance to disease, and at the same time form a happy hunting-ground for that most energetic of colonisers—the rat. Not from plague have we most to fear. Let but one case of small-pox escape the grasp of the inspecting officer, and within a few months there will be raised to that reaper who plies his sickle without note of season, a harvest before which the number of victims of plague would pale in insignificance. The responsibilities of the opponents of vaccination are great and 'conscientious objectors' are many, but it will be found if ever that scourge comes amongst us that assuredly the one will not be allowed to forget what he has sown though the other may disappear." Dr. Mason deplores the pollution of our rivers and streams by sewage and by refuse from factories and devotes some space to urging the importance of proper drainage of our towns. As regards the effect of the new drainage system in Wellington he says: "Previous to the completion of the present sewage system enteric fever used to occupy a not insignificant position both in the hospital records as well as the death-rate. At the present time, even although the house connexions are far from complete, this disease, which is one of the best barometers, so to speak, as to the sanitary condition of a community, has in a great measure disappeared." A phase of the meat-supply question is thus dealt with: "Were the retailers of any other article of diet to expose their wares in the way in which the butchers, large as well as small, do, there would be at once a great outcry. Take any of the best shops that we see in our large towns. The meat is exposed to every wind which blows, and to every particle of dust which is carried by that wind. *There is no question* whatever that disease can be carried and spread in that way. To remedy this should not be a difficult problem. The meat could be inclosed between two layers of glass, which space could be properly aerated by means of a

**New Isolation Hospital.**—At a meeting of the Stratton and Bude (Cornwall) District Councils held on Jan. 14th it was decided to erect an isolation hospital available for both districts.

**Vaccination at Exeter.**—At the meeting of the St. Thomas's (Exeter) Board of Guardians held on Jan. 17th it was decided to send out notices to the different parishes calling the attention of residents to vaccination and explaining that they could be vaccinated free of charge.

**Cottage Homes.**—A series of cottage homes has been built during the past year at Barnstaple on a site opposite to the main entrance to the workhouse, and on Jan. 17th the workhouse children went to reside in them. The homes are very neat buildings, the accommodation being admirable, and they are in charge of several foster mothers.—The Local Government Board has approved the plans for the erection, by the Bristol Board of Guardians, of cottage homes at Downend at an estimated cost of £16,920.

**West Cornwall Infirmary, Penzance.**—The annual meeting of the subscribers of this institution was held on Jan. 15th, under the presidency of Prebendary Hedgeland. The medical report stated that the in-patients numbered 135, and that 1710 out-patients were treated, showing in both instances a considerable increase as compared with 1900. The financial statement showed that the income amounted to £937, including £219 received from the Hospital Sunday Fund. The expenditure was £869.

**Valuable Collection of Antiquities.**—The valuable collection of antiquarian and natural history objects brought together by himself and the late Mr. Richard Walter, his father, has just been presented by Mr. Walter Winter Walter, M.R.C.S Eng., L S.A , of Stoke-under-Ham, Somerset, to the County Museum at Taunton. The collection, which has taken 60 years to accumulate, comprises, amongst other interesting objects, a unique series of pre-historic, Celtic, Roman, and Saxon remains from Ham Hill, Somerset, said to be the largest ancient encampment in the kingdom The collection, which will take some months to arrange, will occupy a room by itself in the museum and will bear the name of the donor. Lord Avebury has been invited formally to open the room.

**Donations and Bequests.**—By his will the late Mr. W. J. Ford of Edinburgh leaves to the Edinburgh Royal Infirmary £4000, to the Leith Hospital £4000, to the Royal Hospital for Sick Children £1000, and to the Queen Victoria Public Institute for Nurses, Scottish branch, £1000.—Lady Grimthorpe bequeathed £100 to King's College Hospital.—The Goldsmiths' Company has granted a sum of £50 to the Samaritan Free Hospital and £200 to the funds of the Metropolitan Convalescent Institution.—By the will of Miss Catherine Holgate, of South-parade, Burnley, who died recently, and also of the legacies which now become operative under the will of her sister who died in 1894, £400 are left to the Northern Counties Hospital for Incurables, £500 to the Burnley Victoria Hospital, and £200 each to St. Mary's Hospital and the Manchester and Salford Lying-in Hospital —A sum of £200 has been bequeathed under the will of the late Mr. A. Thorne, J.P., to the City of London Hospital for Diseases of the Chest, and the same amount to the National Hospital for Consumption at Ventnor and to the Royal Free Hospital respectively.

# Parliamentary Intelligence.

## NOTES ON CURRENT TOPICS.

### *Prospective Legislation.*

The Session of Parliament was opened by His Majesty the King with a speech in which seven subjects of prospective legislation were mentioned. Only two of these subjects have any special interest for the medical profession, one the London water-supply and the other the amendment of the lunacy laws. It is probably safe to assume that the Bill dealing with the latter subject will follow the lines of the legislation proposed by the Government in former sessions. As for the London Water Bill its scope has been indicated by the title given to it by Mr. Long, the Minister who will take charge of it in the House of Commons, namely, "a Bill for establishing a Water Board to manage the supply of water within London and certain adjoining districts; for transferring to the Water Board the undertakings of the Metropolitan Water Companies; and for other purposes connected therewith."

### *The Midwives Question.*

The Bill "to secure the better training of midwives and to regulate their practice" comes before the House of Commons this session, backed by Lord Cecil Manners, Mr. Tatton Egerton, Mr. Schwann, Mr. Parker Smith, Sir John Batty Tuke, Sir Savile Crossley, Mr. Eugene Wason, Mr. Tennant, and Mr. Heywood Johnstone. These gentlemen were fortunate in the ballot and have secured for the second reading of the measure the first place on Wednesday, Feb. 26th. The only risk of the Bill not being discussed on that day is that the Government may appropriate the sitting for its own business. This is a somewhat remote contingency, and therefore it behoves critics and opponents of the measure to bestir themselves.

### *Medical Acts (Extension) Bill.*

General LAURIE has introduced again in the House of Commons his Bill bearing this title. Its general purpose is to extend the benefits of registration in this country to qualified medical practitioners in the colonies. The hon. and gallant Member was prompted to introduce the measure in the first instance by the refusal of the War Office to accept the services of Canadian rgeons for other troops in South Africa than those sent from t ominion. The Bill has never been discussed in the House and the spect of its being discussed during the present session is but slight.

### *The Pure Beer Bill.*

This measure, with which the name of Sir CUTHBERT QUILTER has been long identified, is once more before the House of Commons. Its promoters secured a good place in the ballot and the second reading of the Bill stands as the first order for Wednesday, April 23rd.

### *Cremation.*

Lord MONKSWELL has introduced into the House of Lords a Bill for the regulation of the burning of human remains and to enable burial authorities to establish crematoria.

## HOUSE OF COMMONS.

### FRIDAY, JAN. 17TH.

### *Preservatives and Colouring Matters in Food.*

Mr. CHANNING asked the President of the Local Government Board what steps he proposed to take in pursuance of the report of the Committee on Preservatives and Colouring Matters in Food.—Mr. LONG replied that he had not yet arrived at any decision with regard to this report; he was still considering it.

### *The Housing of the Working-classes.*

At this sitting of the House there was a long debate on the question of the housing of the working-classes. It was raised in connexion with the Address to the King in acknowledgment of the Speech from the Throne at the opening of the session. Dr. MACNAMARA moved an amendment to add these words to the Address—viz., "And we humbly represent to your Majesty that the greatest hardships are inflicted upon many of your working-class subjects by reason of the lack of proper housing accommodation, and that immediate Parliamentary attention to this evil is one of the most pressing of the necessities of domestic policy."—Mr. WALTER LONG, President of the Local Government Board, made the reply on behalf of the Government. He assured the House that this question was receiving the most serious attention of his department, and with regard to the case of the metropolis he reminded Members that already two large schemes under the Act of 1900 had been embarked on in London. He did not suggest that all the blame for what had been left undone rested with the local authorities, for he knew that in many cases they were striving with all their might to deal with this great problem; but some of them had been endeavouring to provide dwellings on land of such a value that it was impossible to let them at a rent within the reach of the people whom it was sought to benefit. In Hull admirable work had been done. There the local authority had cleared the slum area and had constructed a fine thoroughfare leading into the less populous parts of the town, and the private individual had come forward and put up suitable buildings on the property adjoining, the corporation doing the lighting, draining, and so forth. He ventured to think that that was the best solution of the problem where it was possible. On the subject of the proposed extension of the period for the repayment of loans Mr. Long announced that it was the intention of the Government to ask for the appointment this session of a committee of inquiry. He hoped that he would be able during the session to deal with the borough funds question, which did, no doubt, put difficulties in the way of some municipalities, and there were one or two other small matters which impeded local authorities in their usefulness, and which, he hoped, might be amended also this session. The House had been told that sometimes when a local authority put into force the powers it undoubtedly possessed and succeeded in closing an insanitary area it had to pay a great deal more for the land than it ought. There was insanitary property and insanitary property. In some cases a property became insanitary through the gross neglect of the owner, and clearly in such cases the owner ought to get no more than the actual value of the land. But a great deal of property became undesirable for habitation through no fault of the owner. There was often a confusion between these different classes of property; and he did not think that the majority of the House would ever consent to the confiscation of property solely because it was desired to make provision for the working-classes who wanted better houses. He had been engaged in the examination of this question, and he would look further into it: and he could assure the House that if he found, either with regard to the question of valuation or to any other part of the administration of the Act, that he required the assistance of a committee he would not hesitate to ask the House to consent to its appointment. He agreed with the suggestion that the whole of the administration of the Housing Acts should be in the hands of one central authority. A

**National Hospital for the Paralysed and Epileptic** —The following is the result of the poll for election to the board of management of the above hospital which was demanded at the meeting held on Jan 9th and was declared on Jan 23rd —

| Elected | Votes | Elected—continued | Votes |
|---|---|---|---|
| Rev Prebendary H Wace | 243 | J Wigan | 191 |
| E de la Rue | 234 | J D Power | 190 |
| E Speyer | 202 | | |
| F O Macmillan | 202 | Not Elected | |
| Sir J R Paget | 193 | J Pearman | 169 |
| Melvill Green | 192 | F C Capel | 168 |
| Sir A Mackenzie | 191 | | |
| A Royle | 191 | | |

**Newton Abbot Joint Isolation Hospital** —The committee of this hospital has decided to erect a corrugated iron hospital to contain 12 beds to be used, if required for small pox cases It will be placed in the grounds of the present hospital and will be worked from the main building The estimated cost is about £400 The Local Government Board refused to allow the present building to be used for small pox cases

**The Queen Victoria Jubilee Convalescent Home Durdham Down Bristol** —The sum of £4115 being the amount of the collections in Bristol on behalf of the ' Queen Victoria Memorial Fund has been handed to the committee of this convalescent home This will allow the governors to make free two additional beds and to reduce the charge for paying patients from 12s to 10s per week Quite recently Mr Vaughan has followed up his previous generous contributions by a donation of £10 000 which will be devoted to the endowment of 10 free beds This will permit 14 patients being admitted without payment The convalescent home is much appreciated locally, for during 1901 1017 patients were received in the institution

**Vaccination Expenditure** —At the meeting of the Warminster Board of Guardians held on Jan 13th it was reported that the fees for vaccination for the past quarter amounted to £165 which was an increase of £153 as compared with the corresponding quarter of 1900 A short time ago a few cases of small pox occurred at Warminster —At the meeting of the St Germans (Cornwall) Board of Guardians held on Jan 16th it was decided that no action should be taken as suggested by the Cardigan Board of Guardians in the reduction of vaccination fees one of the guardians remarking that several people considered the public vaccinators were not so well paid as formerly because they now had to make extra visits

**Society of Medical Phonographers** — This society will hold its next annual shorthand examination early in May Two prizes will be offered each of the value of £5 one for first year students and one for students of more than one year's standing The competition will be open without entrance fee to any registered medical student in the United Kingdom who has not taken a first prize at one of the society's previous examinations It will be held simultaneously in London Edinburgh Dublin and at any provincial medical centre in the United Kingdom at which not fewer than three candidates shall offer themselves Intending candidates should send in their names as early as possible to Dr P G Griffith Bonhams Farnborough Hants who will furnish them in return with a detailed prospectus of the examination The latest date for receiving entries will be April 15th

**Freemasonry** —The St Luke's Medical Lodge of Instruction held its first meeting on Monday Jan 20th at the Criterion Restaurant This Lodge of Instruction is the result of the work done by a committee representing the various medical lodges of the metropolis which was appointed last session to consider the subject Bro Ernest Clarke W M of the Æsculapius Lodge occupied the chair and was supported by Bro W Duncan and A. P Luff, of the Middlesex Hospital and Sancta Maria Lodges respectively and some 40 influential and representative members of the various medical lodges The principal business of the evening was the passing of the by laws at the conclusion of which a vote of thanks to Bro G Rowell the secretary of the original committee upon whom has fallen the brunt of the work in connexion with the preliminary organisation of the Lodge was received with acclamation and ordered to be entered on the minutes Bro A L Achard was temporarily appointed Preceptor The St Luke's Medical Lodge of Instruction proposes to meet on each Monday in the month from October to May inclusive with the exception of Mondays falling in the Christmas vacation Easter Monday, and Whit Monday The secretary is Bro J Eyre of Embankment-chambers, Villiers street W C

**Small pox Hospital at Barry** —The Barry (South Wales) District Council has resolved to erect a temporary small pox hospital at an estimated cost of about £1000.

**Health of Cardiff** —Dr E Walford, the medical officer of health of Cardiff reports that 5206 births were registered during 1901 corresponding to a rate of 31·4 per 1000 the deaths numbered 2596 being at the rate of 15·7 per 1000 Of the deaths small pox caused 1, measles, 3, whooping cough 86, diphtheria, 78, scarlet fever 29, and enteric fever 11 The birth rates and death rates were calculated on an estimated population of 165 308 inhabitants

**Eastern Dispensary, Bath** — The annual meeting of the subscribers of this institution was held on Jan 16th under the presidency of the mayor The medical report stated that 5026 patients had been treated during 1901 exclusively of 912 who had been attended at their homes The financial statement showed that the year commenced with an unfavourable balance of £61 and closed with a deficit of £19.

**Adulteration in Cornwall** —At the meeting of the General Purposes Committee of the Cornwall County Council held on Jan 14th it was stated that during the past five years 246 samples of milk were examined of which 57 were adulterated equal to a percentage of 20 7, in the United Kingdom the corresponding percentage was 10 5 The general percentage of adulteration in Cornwall was 11, against 9 1 in the country generally

**The Royal Institution** —The first Friday evening meeting at the Royal Institution in the current year was held on Jan 17th when Lord Rayleigh delivered an address on the Interference of Sound At the outset he said that his experiments and demonstrations would be made with very short sound waves even so short as to be inappreciable by the human ear because the limited space of a room was unfavourable for experiments with long waves He then proceeded to show a method of very easily measuring the length of very short sound waves When progressive sound waves met a flat surface they were reflected back and formed stationary waves consisting of 'loops' where there was to and fro motion of the air but no variation of pressure and nodes where there was variation of pressure but no motion At the loops a sensitive flame flared but at the nodes it was quiescent, at the loops sound was not perceptible to the ear, but at the nodes it was perceptible The distance between an adjoining loop and node was evidently half a wave length As the surface reflecting the sound was gradually withdrawn from the sensitive flame the latter alternately flared and was silent and when by the continued withdrawal of the reflector these alternations were repeated about ten times it was easy to calculate the wave length with an error of less that 1 per cent In this way the wave length produced by the bird call used to excite the flame in these experiments was shown to be two centimetres It excited the flame powerfully, but its sound was quite inaudible in the room, though when listened to close at hand it could be heard intermittently the sound being like the distant and faint squeak of a mouse or a bat A piece of steel which emitted a high note when struck was similarly tested and the wave length produced was shown to measure three centimetres Numerous experiments were shown illustrating the interference of the marginal and central portions of sound waves passing through circular apertures the best shape of foghorns for use at sea and the analogies of the interference of light and sound After the lecture the Duke of Northumberland as President of the institution unveiled a bust by the late Mr Onslow Ford of Sir Frederick Bramwell formerly secretary of the institution Sir James Crichton Browne as treasurer of the institution accepted the bust on behalf of the members and Sir Frederick Bramwell who said that he was well into his eighty fourth year expressed his acknowledgments

COUNTY ASYLUM, Chester.—Third Assistant Medical Officer, unmarried. Salary £160 per annum, with board, lodging, and washing.

COUNTY ASYLUM, Rainhill, near Liverpool.—Assistant Medical Officer, unmarried. Salary £150 per annum, with increase, and apartments, board, attendance, and washing.

DEVONSHIRE HOSPITAL, Buxton, Derbyshire.—House Surgeon and Assistant House Surgeon. Salary, House Surgeon £100 per annum, Assistant £50 per annum, with apartments, board, and lodging.

DURHAM COUNTY ASYLUM.—Junior Assistant Medical Officer. Salary £140, rising to £160, with board, laundry, and attendance.

EAST SUFFOLK AND IPSWICH HOSPITAL.—Second House Surgeon. Salary £80 per annum, with board, lodging, and washing.

ESSEX AND COLCHESTER HOSPITAL, Colchester.—Assistant House Surgeon (unmarried). Salary at rate of £50 per annum, with board, lodging, and washing.

FISHERTON ASYLUM.—Assistant Medical Officer, unmarried. Salary £150 per annum, with board, lodging, and washing.

GENERAL HOSPITAL, Wolverhampton —Assistant House Physician, also Assistant House Surgeon, both for six months, with honorarium at rate of £70 per annum, and board, lodging, and washing.

HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL. -House Surgeon, unmarried. Salary £75 per annum, with residence, board, and washing.

HOSPITAL FOR WOMEN, Soho-square (The London School of Gynæcology).—Clinical Assistantships

HUNTINGDON COUNTY HOSPITAL.—House Surgeon. Salary £60 per annum.

KENT COUNTY ASYLUM, Barming Heath, Maidstone.—Fourth Assistant Medical Officer and Pathologist, unmarried. Salary £175 per annum, rising to £200, with quarters, attendance, &c.

LINCOLN COUNTY HOSPITAL.—Junior Male House Surgeon for six months, eligible for re-election. Honorarium of £25 for each period of six months, with board, residence, and washing.

LONDON HOSPITAL, Whitechapel, E.—Assistant Director of the Pathological Institute. Salary £200 per annum.

MONSALL FEVER HOSPITAL, Manchester.—Third Medical Assistant. Salary £100 per annum, with board and lodgings.

NEW HOSPITAL FOR WOMEN, 144, Euston-road, N.W.—Resident Medical Officer (female) for six months.

NORTH DEVON INFIRMARY, Barnstaple.—House Surgeon. Salary £80 per annum, with board, residence, and washing.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, N.E.—House Surgeon for six months. Salary at rate of £80 per annum, with board, residence, and laundry.

PADDINGTON GREEN CHILDREN'S HOSPITAL, London, W.—Surgeon to the Throat and Ear Department.

POPLAR HOSPITAL FOR ACCIDENTS, Poplar, E.—Resident House Surgeon. Salary £135 per annum, with board and residence.

QUEEN ADELAIDE'S DISPENSARY, Pollard-row, Bethnal Green-road, E.—Honorary Surgeon Dentist.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House Surgeon for six months. Salary £50 per annum, with board, lodging, and washing.

ROYAL HALIFAX INFIRMARY.—House Surgeon, unmarried. Salary £120 per annum, with residence, board, and washing.

ST. MARY'S HOSPITAL, Paddington, W.—Casualty Physician. Salary £75 per annum.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston-road.—Resident Medical Officer, unmarried. Salary £105, with residence and attendance.

SALFORD UNION INFIRMARY, Hope, near Eccles.—Resident Medical Officer. Salary £150 per annum, with apartments and attendance.

SEAMEN'S HOSPITAL SOCIETY (Branch Hospital, Royal Victoria and Albert Docks, E ).—House Surgeon. Salary £50 per annum, with board and residence.

STROUD GENERAL HOSPITAL —House Surgeon. Salary £80 per annum, with board, lodging, and washing.

VICTORIA CHILDREN'S HOSPITAL, Park-street, Hull.—Lady Assistant House Surgeon. Salary £40 per annum, with board and laundry.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Junior House Surgeon. Salary £50 per annum, with board, lodging, washing, and attendance.

WESTERN GENERAL DISPENSARY, Marylebone-road.—Honorary Surgeon.

WESTMINSTER GENERAL DISPENSARY.—Resident Medical Officer. Salary at rate of £120 per annum, with rooms, gas, coal, and attendance. Also Honorary Surgeon.

WREXHAM INFIRMARY.—House Surgeon. Salary £100 per annum, with board, washing, &c.

# Births, Marriages, and Deaths.

## MARRIAGES.

HARTLEY—WIMSHURST.—On Jan. 16th, at St. Mary's Church, Waterloo, Liverpool, John Hartley, M.B., Ch.B. Vict., to Edith Blanche, daughter of the late H. W. Wimshurst.

ROCHE—CRASKE.—On Jan. 22nd, at Borstal St. Matthew, Rochester, by the Rev. A. Cooper Marsden, B.D., Alfred R. Roche, B.A.Cantab., M.R.C.S., L.R.C.P., third son of Dr. William B. Roche, London, to Mary Louisa, eldest daughter of W. R. Craske, Esq., The Manor, Borstal, Rochester.

## DEATHS.

HILLS.—On Jan. 18th, at the Chantry, Norwich, suddenly, William Charles Hills, M.D. Aberd., aged 73.

WINGATE.—At Easington, co. Durham, suddenly, aged 38 years, Donald Wingate, M.B., C.M., Medical Officer for Easington Union. Friends please accept this intimation.

*N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

# Notes, Short Comments, and Answers to Correspondents.

## ARTIFICIALLY MATURED (?) WHISKY.

*To the Editors of* THE LANCET.

SIRS,—Is not your whisky expert in THE LANCET of Jan. 11th, 1902, p. 109, just a little pessimistic—"cocksure" that "what is is best" in whisky? Discouraging, and therefore deterrent, to the patient experimenters who spend laborious hours (and sometimes brains) in trying to assist and hasten nature, by nature's own means, in improving whisky? Or does he hold a brief for the anxious whisky makers, who "carry stocks" of millions of gallons of this popular stimulant, and for whom "time means money" and quick maturation ruin? His facts are correct, but partial, and marshalled against progress. If German chemists had listened to similar warnings by interested parties the splendid success of artificial indigo production would not have been. But now it is the planters of nature's indigo who have the blue look-out. The blind supporters of time storage for maturing whisky may take a warning. Your author is right when he says that "countless attempts have been made," but wrong when he states that no real success has been attained (comparable with age) in improving and mellowing whisky. I admit that whisky would cease to be whisky if "fusel oil" (that bogie!), furfurol, and "probably other aldehydes" (his vague words) were removed. It is probable that the resultant spirit would be "wholesome," but no Scotchman would drink it. I admit that "those very products, raw, harsh, and disagreeable in young whisky," cause the seductive aroma, "gout," bouquet, "pleasing flavour," &c., which charm the appreciative drinker of old whisky. But I assert that it is not "time, and time alone," which works this happy change. Your author will, of course, know—what I merely state now for the benefit of those of "common and erroneous belief"—that whisky hermetically sealed in glass vessels is *not* changed, altered, improved, or spoilt by any lapse of "time, and time alone." This proves that *it is not time alone*, but some natural agency working through the wooden cask in time, which improves whisky and opens up a field full of promise for the inventive chemist. I have talked with the biggest producers and holders of Scotch whisky. They all frankly admit that a successful system of speedy maturation would be disastrous to them and sincerely wish failure to the inventor of any such process. It is obvious that to the holder of bonded whisky, staggering (financially) under the heavy stock he is carrying, any such successful system would spell ruin, or at least heavy loss. Good whisky does good to millions, and perhaps harm to a few. Bad whisky does nothing but harm to every poor wretch, black or white, who is fool enough to drink it. It is reasonable, therefore, that our Government should decide on a standard of quality before whisky is allowed to reach the public. But "time alone" should not be the test. The rich man can afford to pay the high price necessary for old whisky which has been nursed for years in expensive storage with all the consequent cost and loss. The poor man who likes whisky will be the *immediate* direct gainer by any successful system of speedy maturation. In Switzerland and Russia this is already accepted and practised. Their chemical and expert tests are very stringent, but "time" is not insisted upon nor any special process. Results alone are approved and passed, and the public safeguarded. Machines and processes are now in use in France, Russia, and Switzerland by distillers whose name is their most valued asset, and which quite satisfy the Government requirements. This does not please *our* whisky holders who press "time and time alone" on our Government as a safeguard, but it encourages diligent inquirers and inventors. o up-to date whisky chemist proposes to "eliminate" or "chemically abstract" the "raw bodies" which make the whisky, but even your author will surely allow him to assist nature's agencies *if* the result passes the judgment of the gourmet, the connoisseur, and the chemist This is simply making *old whisky* in a short time, and this can be, and is being, done, as your author may see if he communicates with me. The last sentence of your article seems peculiarly unfortunate. When one recalls the vast strides made in recent years by original thinkers, inventors, and chemists (names are needless) in surgery and medicine, it seems ungraceful to smite the humble experimenter in whisky who is working for the good of his fellow men and a living. He might shrewdly retaliate without being so arrogant as your writer who says: "Such artificial preparation can *never* be looked upon as fit to replace the spirit mellowed by age, and *any attempt to substitute it is to be deplored* and *certainly on medical grounds to be discountenanced strongly*." The italics are mine. I inclose my card.

I am, Sirs, yours faithfully,

Jan. 15th, 1902. $H_2O$.

*** We adhere to our opinion. Nothing will convince us that "old whisky" can be made "in a short time."—ED. L.

## A CHANGE OF UNIFORM.

MEMBERS of the Greenwich Union Board of Guardians have been, according to their various senses of humour, amused or shocked of late by the reported appearance of nurses in kilts at a fancy dress ball. Some members of the body declared that the wearing of kilts merely change in this direction would be useful, inasmuch as it would keep all matters of administration in one department. It was quite clear, too, that there was room for an amendment of the law which would enable local authorities in carrying out their re-housing schemes to build shops and clubrooms as part of, or attached to, the buildings which they proposed to erect. The suggestion had been frequently urged by local authorities, and he thought that its adoption would be of some benefit to them.

At the close of the debate a division was taken in which Dr. MACNAMARA's amendment was rejected by 30 votes.

### MONDAY, JAN. 20TH.

#### *The Small-pox Hospital Ships in the Thames.*

Lieutenant-Colonel TUFNELL asked the President of the Local Government Board whether his attention had been called to the continued increase of small-pox on the Essex coast near Purfleet; and would he state what steps the Government proposed to take to cause the immediate removal of the small-pox hospital ships now moored there.—Mr. J. A. PEASE asked the right hon. gentleman whether he was aware that the medical officer of health for the county had reported that the recent outbreak of small-pox was attributable to the presence of these vessels, and had recommended that they should be withdrawn from the precincts of the Essex coast.—Mr. LONG replied: I am not aware of that fact, but there is no dispute as to the fact that the presence of the small-pox hospital ships must cause some infection. In answer to my hon and gallant friend I have to say that I am aware of the occurrence of small-pox on the Essex coast, and have caused a medical inspector to communicate with the local authorities in the districts concerned. As regards the second part of the question, the managers of the Metropolitan Asylums District are doing everything in their power to provide the hospital accommodation necessary for the reception of small-pox cases from the metropolis; but, looking to the large number of these cases, I do not in the present circumstances propose to interfere with the discretion of the managers as to the use of the ships to which my hon. and gallant friend refers, and which have been moored in the Thames since 1885. It is impossible to select a place either for ships or hospitals on land which would not be in some degree exposed to the same drawbacks. But the managers are doing their utmost to deal with the serious epidemic and I cannot, in the present circumstances, recommend that the ships should be removed.—Mr. D. J. MORGAN asked whether the ships could not be moved further down the river to a point where there was practically no population on either side.—Mr. LONG: I cannot answer that question definitely, but I can say that every possible trouble has been taken to find another mooring place. As my hon. friend knows it is necessary that there should be communication with the shore so that patients may be easily taken to the vessels, and at present we have not been able to suggest any new place. I will, however, take into consideration any definite suggestion my hon. friend may like to make.—Mr. BARTLEY: Do the Government contemplate any legislation in view of this epidemic?—Mr. LONG: No, sir; no legislation is necessary, that I am aware of, of any kind.

### TUESDAY, JAN. 21ST.

#### *Vaccination Proceedings.*

Mr. LOGAN asked the Secretary of State for the Home Department if his attention had been directed to proceedings in the North London Police court on Jan. 11th, when an application was made for a certificate of exemption under the Vaccination Act, 1898, and refused, apparently on the ground that the applicant declined to enter into a discussion with the presiding magistrate; and whether he proposed to take any action in the matter.—Mr. RITCHIE replied: I have seen a newspaper cutting which the hon. Member has been good enough to send me. The law is that a person is not entitled to exemption unless he satisfies the magistrate that he conscientiously believes that vaccination would be prejudicial to the health of the child in question. I gather from the newspaper cutting that the applicant in this case did not so satisfy the magistrate. There are no steps which I can take in the matter.—Mr. LOGAN: Is it not enough for the applicant to say that he conscientiously objects to vaccination?—Mr. RITCHIE: I cannot enter into the mind of the magistrate. It is the magistrate who is to be satisfied, not I.

#### *The Government and the Early Closing of Shops.*

Mr. BALFOUR, in reply to a question addressed to him by Sir CHARLES DILKE, said that the subject of the early closing of shops had been under the consideration of the Government, but having regard to the other work which would come before the House they could not hold out any hope of legislation with reference to it during the present session.

## BOOKS, ETC., RECEIVED.

ARNOLD, EDWIN, 37, Bedford street, Strand, W.C.

Human Embryology and Morphology. By Arthur Keith, M.D. Aberd., F.R.C.S. Eng. Price 12s. 6d. net.

Manual of Alcoholic Fermentation and the Allied Industries. By Charles G. Matthews, F.I.C., F.C.S., &c. Price 7s. 6d. net.

DOIN, OCTAVE, 8, Place de l'Odéon, Paris.

Leçons sur les Maladies du Système Nerveux (année 1897-1898). Par F. Raymond, Professeur de Clinique des Maladies Nerveuses à la Faculté de Médecine de Paris. Recueillies et publiées par le Dr. E. Ricklin. Quatrième série. Price 15 francs. Ditto, année 1898-1899, cinquième série, price 16 francs.

EVERETT, E. A., AND CO., 42, Essex-street, Strand, W.C.

A Bee among the Bankers. By Henry Warren. Price 3s. 6d. net.

F. A. DAVIS COMPANY, Philadelphia.

A Brief Manual of Prescription Writing in Latin or English. For the Use of Physicians, Pharmacists, and Medical and Pharmaceutical Students. By M. L. Neff, A.M., M.D. Price, extra cloth, 75 cents, net, delivered.

A Practical Treatise on Materia Medica and Therapeutics, with especial reference to the Clinical Application of Drugs. By John V. Shoemaker, M.D., LL.D. Fifth edition. Thoroughly revised. Price not stated.

NAUD, C., 3, Rue Racine, Paris.

Maladies de la Voix. Par le Dr. André Castex, Chargé du Cours de Laryngologie à la Faculté de Médecine de Paris. Price 7 francs.

PHILIP, GEORGE, AND SON, 32, Fleet-street, E.C. (PHILIP, SON, AND NEPHEW, Liverpool).

Mosquito Brigades and How to Organise Them. By Ronald Ross, F.R.C.S., D.P.H., F.R.S. Price 3s. net.

REDMAN, Limited, 129, Shaftesbury-avenue, W.C.

The Medical Treatment of Gall-stones. By J. H. Keay, M.A., M.D. Price 3s. net.

SCIENTIFIC PRESS, Limited, 28 & 29, Southampton-street, Strand, W.C.

Poison Romance and Poison Mysteries. By C. J. S. Thompson, F.R.Hist.S. New and revised edition. Price 2s. 6d.

SMITH, ELDER AND CO., 15, Waterloo-place, S.W.

On the Principles and Exact Conditions to be Observed in the Artificial Feeding of Infants; the Properties of Artificial Foods and the Diseases which Arise from Faults of Diet in Early Life. By W. B. Cheadle, M.A., M.D. Cantab., F.R.C.P. Fifth edition. Edited and revised by F. J. Poynton, M.D., M.R.C.P. Price 6s.

SWAN, SONNENSCHEIN, AND CO., Limited, London.

Failures of Vegetarianism. By Eustace H. Miles, M.A. Price 3s

Recent Object lessons in Penal Science, with a Biographical Introduction. By A. R. Whiteway, M.A., Barrister-at-law. Third series. Price 3s. 6d. net.

WHITAKER, J., AND SONS, LIMITED, 12, Warwick-lane, Paternoster-row, E.C.

Whitaker's Peerage for the Year 1902. Price 2s. 6d.

## Appointments.

*Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to* THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

BANNISTER, W. J., has been appointed Junior House Surgeon to the Macclesfield Infirmary.

BEDFORD, G. H., L.S.A., has been appointed Medical Officer of the Rothbury Union.

DENT, HOWARD, M.B. Durh., F.R.C.S. Eng., has been appointed Assistant Surgeon to the Wolverhampton and Staffordshire General Hospital.

ERSKINE, A. M'C., M.B., B.Ch. R.U.I., has been appointed Medical Officer to the Goole Urban Council and Superintendent of the Fever Hospital at Goole.

GOVER, J. MAXWELL, M.B., B.S. Durh., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer to the Gosforth District of the Castle Ward Union, Newcastle-upon-Tyne.

GREENWOOD, C. H., M.B., Ch.B. Vict., has been appointed Resident Casualty Officer to the Leeds General Infirmary.

JACKSON, ARTHUR M., M.D. Oxon., M.R.C.S., has been appointed Medical Superintendent of the Notts County Lunatic Asylum.

LITTLEWOOD, J. O., M.R.C.S., L.R.C.P. Lond., D.P.H., has been appointed Visiting Medical Officer to the Nottingham and Nottinghamshire Sanatorium for the Treatment of Consumption, Sherwood Forest, Mansfield.

O'CONNOR, J. E., M.B., B.S. R.U.I., has been appointed Medical Officer of Health for the Urban District of Wigston.

THOMPSON, WM. ATKIN, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Surgeon to the Rochdale Infirmary.

WALLIS, C. EDWARD, M.R.C.S., L.R.C.P. Lond., has been appointed Dental Surgeon to Rochester House Asylum under the Metropolitan Asylums Board.

## Vacancies.

*For further information regarding each vacancy reference should be made to the advertisement (see Index).*

BOLTON INFIRMARY AND DISPENSARY.—Junior House Surgeon. Salary £80 per annum, with apartments, board, and attendance.

BRADFORD ROYAL INFIRMARY.—Dispensary Surgeon, single. Salary £100 per annum, with board and residence.

BRECON INFIRMARY.—Resident House Surgeon, unmarried. Salary £100 per annum, with apartments, board, attendance, fire, and gas.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn-road.—House Surgeon. Salary at rate of £50 per annum, with board and residence.

CORPORATION OF LONDON.—Female Sanitary Inspector. Salary £125 per annum, rising to £150.

was to be tied round the patient's neck and the intestines of the sheep attached to the soles of the feet. This was done: in a couple of hours no trace of the fever remained. The charm and the intestines were then burned." Of course, with no definite knowledge of the nature of the charm we cannot discuss this therapeutic triumph. At first sight it would seem simpler to place the intestines round the neck and the charm somewhere else. We are inclined to believe that the effect would have been much the same.

### A HOME WANTED.

*To the Editors of* The Lancet.

Sirs,—Can any medical man in the country recommend a respectable couple in a quiet secluded village who would be willing to take care of a gentleman, aged 42 years? The patient has a chronic skin disease (no discharge) and his faculties are much blunted, but though feeble minded he is rational and amenable. He was formerly in good circumstances and was decidedly a *bon vivant*, but is now reduced to penury. His friends would, however, be able to pay a moderate charge for his board and lodging, say, £1 a week. He is not a fit case for hospital or asylum, and his friends desire that he should be far away from London, where he is exposed to undesirable influences. Devonshire or Cornwall would be preferred, but any suitable place not less than 100 miles from London would do.

I am, Sirs, yours faithfully,

Jan. 22nd, 1902. *L.R.C.P. & S. Ed.*

### A QUERY IN ETHICS.

*To the Editors of* The Lancet.

Sirs,—Will you kindly let me know in your columns next week whether there is any ethical objection to a medical man writing to secretaries of assurance companies offering to act as medical referee?

I am, Sirs, yours faithfully,

Jan. 17th, 1902. Young Practitioner.

*** Yes, there is every objection.—Ed. L.

### THE OPEN-AIR TREATMENT OF TUBERCULOSIS.

*To the Editors of* The Lancet.

Sirs,—Is there any place where by giving an annual subscription a City Company could obtain two or three letters of admission per annum? Perhaps some of your readers could help me. Ventnor and Bournemouth both ask for payment from the patients in addition to a letter of recommendation. I am, Sirs, yours faithfully,

Jan. 20th, 1902. Thane.

### A RASH RESEMBLING THAT OF VARIOLA PRODUCED BY THYROID EXTRACT.

*To the Editors of* The Lancet.

Sirs,—Thyroid tabloids may, and do at times, produce a papular rash, which may possibly be mistaken for the early rash of variola, and more especially so if any backache or elevation of temperature is present. The rash is generally accompanied by much itching and lasts for about six weeks after the remedy is discontinued; it again reappears on resuming the remedy.

I am, Sirs, yours faithfully,

Putney, S.W., Jan. 15th, 1902. Albert S. Morton, M.D. Durh.

### ADMINISTRATION OF ANÆSTHETICS DURING LABOUR.

*To the Editors of* The Lancet.

Sirs,—Would some of your correspondents favour me with their views as to the best way of administering chloroform during labour when one is single-handed? This subject is one which receives little attention in text-books and I have not been able to obtain much information on the subject from this source.—I am, Sirs, yours faithfully,

Jan. 17th, 1902. M.D.

*** Our correspondent is referred to the report of the proceedings of the Leeds and West Riding Medico-Chirurgical Society (p. 230), where he will find a description of an instrument which was shown to the society by Mr. C. J. Wright.—Ed. L.

### MOTOR-CARS FOR MEDICAL MEN.

*To the Editors of* The Lancet.

Sirs,—Now that our profession is beginning to recognise that the motor-car is bound to supersede the horse for making our daily visits, especially in those cases where long country rounds are made, perhaps a few words of advice from one who has used a car ever since the Act of 1896 came into force may be of some service to intending purchasers. I have tried all kinds of cars and motor cycles, but for absolute reliability, quietness, and appearance I can recommend the "genuine geared Benz," either the 4½ or 7 horse-power; the former is quite sufficient where fairly level, the latter in hilly districts. A great point in favour of these cars is the very small amount of fuel they consume; my car, a 4½, runs from 60 to 70 miles on two gallons of petrol at a cost of 2*s.* 4*d.* The high speed vertical engine with its row of dirty lubricators is of no practical use to a medical man; besides, its appearance is against it. The inclined wheel steering may be very nice for touring, but a great disadvantage to a man who has to be getting continually in and out. A hood also is most comfortable, and should be on every car. To sum up, I give the Benz car the first place for:—(1) its reliability; (2) its slow-running engine; (3) its good appearance; (4) the small amount of petrol consumed; (5) its extreme quietness; (6) its comparative cheapness; and (7) the easy starting. The engine can easily be started without turning a hand or pulling at the flywheel by a very simple device. Any medical man contemplating buying a car who cares to drop me a line shall have any assistance I can give him with pleasure.

I am, Sirs, yours faithfully,

St. Albans, Jan. 20th, 1902. T. Prichard Roberts.

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*Oppressed.*—A district medical officer must attend a sick person on receiving the usual order to do so, even when the sick person does not seem to him to be a proper person for such relief; as, for example, in the case of a hired servant, a member of a club, or a person in receipt of other relief. He can, and indeed should, bring before the notice of the guardians on the earliest possible occasion—that is to say, at their next meeting—any circumstances that, in his opinion, disentitle the patient in question to medical relief; and it is the duty of the guardians not to order medical relief or any other form of parish relief in cases not properly the subject of such relief.

## Medical Diary for the ensuing Week.

### OPERATIONS.

#### METROPOLITAN HOSPITALS.

**MONDAY** (27th).—London (2 p.m.), St. Bartholomew's (1.30 p.m.) St. Thomas's (3.30 p.m.), St. George's (2 p.m.), St. Mary's (2.30 p.m.), Middlesex (1.30 p.m.), Westminster (2 p.m.), Chelsea (2 p.m.), Samaritan (Gynæcological, by Physicians, 2 p.m.), Soho-square (2 p.m.), Royal Orthopædic (2 p.m.), City Orthopædic (4 p.m.), Gt. Northern Central (2.30 p.m.) West London (2.30 p.m.), London Throat (2 p.m.).

**TUESDAY** (28th).—London (2 p.m.), St. Bartholomew's (1.30 p.m.), St. Thomas's (3.30 p.m.), Guy's (1.30 p.m.), Middlesex (1.30 p.m.), Westminster (2 p.m.), West London (2.30 p.m.), University College (2 p.m.), St. George's (1 p.m.), St. Mary's (1 p.m.), St. Mark's (2.30 p.m.), Cancer (2 p.m.), Metropolitan (2.30 p.m.), London Throat (2 p.m. and 6 p.m.), Royal Ear (3 p.m.), Samaritan (9.30 a.m. and 2.30 p.m.), Throat, Golden-square (9.30 a.m.).

**WEDNESDAY** (29th).—St. Bartholomew's (1.30 p.m.), University College (2 p.m.), Royal Free (2 p.m.), Middlesex (1.30 p.m.), Charing-cross (3 p.m.), St. Thomas's (2 p.m.), London (2 p.m.), King's College (2 p.m.), St. George's (Ophthalmic, 1 p.m.), St. Mary's (2 p.m.), National Orthopædic (10 a.m.), St. Peter's (2 p.m.), Samaritan (9.30 a.m. and 2.30 p.m.), Gt. Ormond-street (9.30 a.m.), Gt. Northern Central (2.30 p.m.), Westminster (2 p.m.), Metropolitan (2.30 p.m.), London Throat (2 p.m.), Cancer (2 p.m.), Throat, Golden-square (9.30 a.m.).

**THURSDAY** (30th).—St. Bartholomew's (1.30 p.m.), St. Thomas's (3.30 p.m.), University College (2 p.m.), Charing-cross (3 p.m.), St. George's (1 p.m.), London (2 p.m.), King's College (2 p.m.), Middlesex (1.30 p.m.), St. Mary's (2.30 p.m.), Soho-square (2 p.m.), North-West London (2 p.m.), Chelsea (2 p.m.), Gt. Northern Central (Gynæcological, 2.30 p.m.), Metropolitan (2.30 p.m.), London Throat (2 p.m.), St. Mark's (2 p.m.), Samaritan (9.30 a.m. and 2.30 p.m.), Throat, Golden-square (9.30 a.m.).

**FRIDAY** (31st).—London (2 p.m.), St. Bartholomew's (1.30 p.m.), St. Thomas's (3.30 p.m.), Guy's (1.30 p.m.), Middlesex (1.30 p.m.), Charing-cross (3 p.m.), St. George's (1 p.m.), King's College (2 p.m.), St. Mary's (2 p.m.), Ophthalmic (10 a.m.), Cancer (2 p.m.), Chelsea (2 p.m.), Gt. Northern Central (2.30 p.m.). West London (2.30 p.m.), London Throat (2 p.m. and 6 p.m.), Samaritan (9.30 a.m. and 2.30 p.m.), Throat, Golden-square, (9.30 a.m.), City Orthopædic (2.30 p.m.).

**SATURDAY** (1st).—Royal Free (9 a.m. and 2 p.m.), London (2 p.m.), Middlesex (1.30 p.m.), St. Thomas's (2 p.m.), University College (9.15 a.m.), Charing-cross (2 p.m.), St. George's (1 p.m.), St. Mary's (10 p.m.), London Throat (2 p.m.), Throat, Golden-square (9.30 a.m.).

At the Royal Eye Hospital (2 p.m.), the Royal London Ophthalmic (10 a.m.), the Royal Westminster Ophthalmic (1.30 p.m.), and the Central London Ophthalmic Hospitals operations are performed daily.

### SOCIETIES.

**MONDAY** (27th).—Society of Arts.—8 p.m. Dr. S. Rideal: The Purification and Sterilisation of Water. (Cantor Lecture.)

Medical Society of London (11, Chandos-street, Cavendish-square, W.).—8.30 p.m. Discussion on The Nature and Treatment of Obesity (opened by Sir T. Lauder Brunton). (Council Meeting Night.)

Odontological Society of Great Britain (20, Hanover-square, W.).—7 p.m. Council. 8 p.m. Communications:—Mr. E. B. Dowsett: Sections of a Human Tooth showing Plici-Dentine (?).—Mr. C. W. Glassington: A *Composite Odontome.*—Mr. F. W. Collingwood: A Slight Modification of Patterson's Prolongation Apparatus.—Mr. E. Lloyd-Williams: A Fatal Case of Alveolar Abscess.—Dr. E. A. Peters: Suprarenal Extract in Dental Surgery.

**TUESDAY** (28th).—Royal Medical and Chirurgical Society (20, Hanover-square, W.).—8.30 p.m. Adjourned Discussion on Dr. S. M. Copeman's paper on Modern Methods of Vaccination and their Scientific Basis. Dr. *Greenwood,* Dr. S. *Coupland,* Dr. L. Parkes, Dr. Eddowes, Mr. H. A. Stonham, Dr. A. T. Cope, and Dr. J. Loane will take part in the discussion.

**WEDNESDAY** (29th).—British Balneological and Climatological Society (20, Hanover-square, W.).—8.30 p.m. Dr. I. Murray: Note on Hayling Island. Paper:—Mr. W. Armstrong: Adjuncts to Spa Treatment.

showed what a strong hold Scotch sentiment had, while the chairman, Mr. Donald McCall—whose name certainly suggests a kilty sympathy—gravely declared that he was not prepared to admit that the wearing of kilts was an act of indecency. It certainly is a novel theme—the indictment of women for wearing a skirt. Prudery has shrunk from a Scottish piper, but we always imagined that even Mrs Grundy would tolerate a female under similar circumstances and garments The matter eventually dropped—perhaps with the hope that to some extent the kilts would do likewise.

## POOR-LAW MEDICAL OFFICERS' SUPERANNUATION.

*To the Editors of* THE LANCET.

SIRS,—As a subscriber to THE LANCET for 38 years I shall feel extremely obliged if you will kindly give me some information in the following matter. I have been medical officer of a district of a union for 31 years. My age limit will be up in June which will make the service nearly 32 years. My subscription to the Poor-law Officers' Superannuation Fund has been deducted every quarter from my salary since the formation of the fund What I should like to know is, is the pension reckoned on the salary only and how much percentage, or on the emoluments altogether, such as salary and vaccination and lunacy fees combined ?

I am, Sirs, yours faithfully,

Jan 20th, 1902. G. P.

*** The superannuation is reckoned on the "salary or wages and emoluments" "Emoluments" are defined as "all fees, poundage, and other payments made to an officer as such; also the money value *of any apartments, rations, or other allowances in kind appertaining* to his office" Vaccination fees are not due to our correspondent as a district medical officer. They are paid to him as a public vaccinator under a contract which is not necessarily connected with his position as a district medical officer. For this reason vaccination fees have been considered not to be emoluments, and the superannuation deduction has not been made from them They will therefore not be included when the calculation of the superannuation amount is made. "G. P." having had more than 15 years' service at the time of the passing of the Act would be charged 3 per cent. on his salary and emoluments. In the latter lunacy fees and extra-medical fees certainly should be included.—ED L

## MEDICAL AID ASSOCIATIONS AND THE GENERAL MEDICAL COUNCIL.

*To the Editors of* THE LANCET.

SIRS,—I am glad that your correspondent Mr. Harry Clough in THE LANCET of Jan. 18th, p 207, appreciates my kindness and recognises my rapidity of perception and lucidity of expression. Such an appreciation tempts me to epitomise and to criticise further his arguments. I quite believe that he did not wish to provoke *argument with me, for I believe he was unaware of my existence,* but he must not take exception to my pleading a different opinion to himself *re* the action of the General Medical Council and giving expression to it If his letter did not invite criticism, why, then, did he take the trouble to have it inserted? I fail to see the application of the argument *re* a works club. A club of this description is a very different thing to a medical aid association, as I will endeavour to point out Workpeople may be taken to mean persons who are able-bodied or it is presumed they would not be at work. This means less attendance and more time *for* each individual case The fact that they are able to work is a certain guarantee as to health. Works clubs are usually composed of men and there is the chance of private attendance on their families In a medical aid association there is smaller remuneration, members and families are admitted without any guarantee as to health, they sweep in all and sundry, people who are able to pay and people afflicted with chronic illness or at least in doubtful health. Anyone who has had charge of a large works club, say, of 1000 members and a similar number of medical aid patients knows the relative amount of attendance demanded by each. Again, the money collected from the workpeople is deducted from their wages at the pay office and remitted to the medical officer with in some instances a small deduction for collection—in the case *of the medical aid association a large company prostitutes the services* of professional men for its own gain and as a bait for insurance of a questionable kind. In the one case there is canvassing from door to door, but this is not so with a works club Now, I ask, is it common sense to allow the profession to be cheated out of a large portion of its legitimate earnings to support such an organisation? I assert that the unqualified assistant has not been replaced by the unqualified medical student—the fully-qualified medical man has taken his place except in rare instances. I hold all collective physicking to be dishonourable and degrading, both to the profession and to the public. I classify as humbug the professing to do an impossibility—and it is a physical impossibility to do more than a given number of cases in a given time; that is, to do them properly. There may be many deserving cases in the medical aid association, but there is also a large proportion of cases that are not. Is the medical man to suffer for the luxury of these people and provide them with medicine and attendance at a penny and a halfpenny a week when they can pay from eighteenpence to 4*s* a week for organs, pianos, bicycles, phonographs, and other articles not strictly necessary to their well being? There is no wage-limit. Is it common sense to hold a club of this description? As to the General Medical Council, if your correspondent will take the trouble he will see that the general practitioner is very well represented for two reasons. There are Direct Representatives who are, or have been, general practitioners. There are University Representatives who will keep up the status of the profession in order to make it more attractive and so induce more men to enter. I maintain that the Council has acted in the best interests of the profession and the public in prohibiting the association of medical men with insurance clubs Medical men are notoriously unbusinesslike, and I do not suppose that any other body of men would tamely submit to having their services exploited as we have done The care of the poor is in the hands of the State and should not be in the hands of self-interested lay associations who practise cheap philanthropy at the expense of the profession. Organisation is necessary all along the line and there is ample room for improvement in every direction If the General Medical Council makes its measures drastic the quicker will the reform be and the nearer the ideal. In days gone by men (and young ones at that) used to strive for ideals and revolutions were accomplished. Nowadays we are satisfied with any makeshift. I venture to predict that the Council will carry out its implied intentions and I know that the young practitioner will benefit amongst others. It is by organisation that we will accomplish reforms and not by submitting to the lay exploitation of our services and unfair competition. I will leave it to time to prove the truth of my remarks to Mr. Harry Clough. And I shall be glad if he will be good enough to write me 10 years hence, and then give me his opinion of medical aid associations formed on his experience in the interval. Apologising for having taken up so much of your valuable space,

I am, Sirs, yours faithfully,

Leicester, Jan 18th, 1902 JOHN MACCORMAC.

## EXCISION OF GASTRIC ULCER.

*To the Editors of* THE LANCET.

SIRS,—Can you inform me, through the medium of your "Answers to Correspondents," if there has been published in THE LANCET or elsewhere an article similar to that on page 86 of your issue of Jan. 11th, 1902, only in regard to perforating gastric ulcer, where the ulcer has been excised.

I am, Sirs, yours faithfully,

Jan 20th, 1902. E. N. B.

*** A paper by Mr. R F. Jowers, which appeared in THE LANCET of March 2nd, 1895 (p 544), narrated a case under his own care and gave a table of cases under the care of other operators Since the date of this paper numerous instances have been recorded —ED L.

## FEES FOR INSURANCE EXAMINATIONS.

*To the Editors of* THE LANCET.

SIRS,—I am not fond of controversy in print at any time and least of all with an opponent who skilfully and wisely conceals his identity behind a *nom de plume;* but as some of your readers may be misled by *the latest contribution on* this subject, I *venture to ask space for* a brief reply, promising that I shall not trouble you further. If "Vigilans" has 'sometimes" had fees of any kind from this company, he must hold a letter of appointment which stipulates that the minimum fee payable for an examination is 10*s* 6*d*., but even if it had been true that he had 'sometimes received 5*s*," that would at least involve complicity on his part in the arrangement, and therefore he would have had no right to complain To slightly paraphrase your correspondent's own words, "It does seem strange that while holding a company's appointment and receiving its fees, he should be conspicuous (as far as a *nom de plume* will admit of this) in endeavouring to injure it." The fee that I have already discussed has related to sickness insurance alone, and is of course, often exceeded. Some annual premiums are as low as £1 2*s*. 10*d*. per annum, and there are no large premiums as in life assurance to equalise matters. Our critics, I think, should in common fairness compare the fee we offer with that paid by friendly societies whose business also is sickness insurance. Comparison, I apprehend would not be unfavourable to us.

I am, Sirs, yours faithfully,

HENRY BROWN,

Jan. 22nd, 1902 Manager, Century Insurance Company, Limited.

## *HONOURS TO EDWARD JENNER A HUNDRED YEARS AGO.*

*Bonner and Middleton's Bristol Journal*, afterwards the *Bristol Mirror*, of Jan. 16th, 1802, contains the following:—

> "The Royal Economical Society of Madrid has admitted into its bosom, with the title of Associates of Merit, Count Rumford and Dr. Jenner, the inventor of vaccine inoculation."
>
> "A subscription has been commenced in Gloucestershire, patronised by many noblemen and respectable gentlemen of that county, for presenting Dr Jenner with a piece of plate for his discovery of vaccine inoculation The subscription already exceeds £300."

## A RAPID RECOVERY.

FROM a letter in the *Daily Dispatch* we gather some details of a "cure" as remarkable in its method and prompt results as we fear it is unlikely to be available in genuine cases of typhoid fever. "A young lady in a west-country town was ill with typhoid fever—so ill that hope of recovery had been abandoned by the doctor. Her father consulted an old woman in a village five miles distant with a reputation for cures She gave him a charm and told him to obtain certain portions of the intestines of a newly slaughtered sheep The charm

## Communications, Letters, &c., have been received from—

**A.**—Docteur J. Albarran, Paris; Apollinaris Co., Lond.; Messrs. Allen and Hanburys, Lond.; Aktien Gesellchaft Bad Salzschrift; Mr. F. W. Axham, Lond.; A. E G. P.; Aspatria Agricultural College, Principal of; A. W.; A. D. La T.

**B.**—Monsieur O. Berthier, Paris; Messrs. J. H. Booty and Son, Lond.; Mr. W. H. Best, Ilford; Mr. J. Kingston Barton, Lond.; Rev. S. Barber, Ipswich; Messrs. Baillière, Tindall and Cox, Lond.; T. B. Browne, Ltd., Lond.; Mr. G. H. J. [illegible], Haswell; Dr. E. T. [illegible], Belfast; Mr. W. G. Burcombe, Lincoln; Berkfeld Filter Co., Lond.

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**Y.**—Yost Typewriting Co., Lond.; Young Practitioner; Mr. P. W. Young, Ealing.

## Letters, each with enclosure, are also acknowledged from—

**A.**—Dr. T. B. Adam, Brechin; Professor C. Addison, Lond.; A. A. W.; A. G.

**B.**—Mr. E. Baker, Birmingham; Mr. C. L. Bedford, Birmingham; Messrs. J. Bell and Co., Lond.; Mr. W. Burns, Middlewich; Mr. F. Bedford, Sheffield; Dr. B.; Mr. C. E. S. Brettingham, Ilchester; Dr. J. Bourke, Mallow; Bayer Co., Lond.; Mr. H. R. H. Bigg, Lond.; Bourne Castle Sanatorium, Worcestershire; Mr. G. P. Butcher, Plymouth; Mr E. Blatchley, Lond.

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**T.**—Mr. D. Trimmer, Oxford; Dr. C. Bell Taylor, Nottingham; Dr. W. E Tresidder, Nottingham; Dr. W. D. T. Thompson, St. Heliers; T. H. A.; Messrs. J. Turner and Co., Queensferry.

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**Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière, Asnières, Paris.**

**THURSDAY** (30th).—OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos street, Cavendish-square, W.).—Cases and Specimens by Mr. Keeling, Mr. Hickman, Mr. Roll, Mr. Ormond, Mr. Parsons, and Mr. Taylor. Papers:—Dr. C. O Hawthorne: On Intra cranial Thrombosis as the Cause of Double Optic Neuritis in Cases of Chlorosis —Dr G. A Berry: (1) On so called Muscular Asthenopia, (2) Note on the Treatment of Cystoid Cicatrix following Cataract Extraction —Mr S Snell: (1) Tumour of Orbit occasioning a peculiar Varicosity of Vessels on the Surface of the Eyeball; (2) Ringworm of the Eyelids in an Adult due to a Large-spored Tricophyton —Dr F W. Edridge Green. Some Observations on the Visual Purple

## LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

**MONDAY** (27th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C )—4 P.M. Dr. G. Little: Clinique (Skin.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W ).—5 P.M. Mr. Baldwin: Surgical Emergencies.

**TUESDAY** (28th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.)—4 P.M. Dr. J. Taylor: Clinique. (Medical.)

POST GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Bidwell: Plaster of Paris Splints

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury)—3 30 P.M. Dr. Tooth: Paralysis of the Cranial Nerves.

**WEDNESDAY** (29th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C ).—4 P.M. Mr. J. Berry: Clinique (Surgical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. McAdam Eccles: Lantern Demonstrations in Hernia.

**THURSDAY** (30th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W C )—4 P.M. Mr. J. Hutchinson, jun.: Clinique. (Surgical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M Mr. Edwards: Rectal Fistula

CHARING-CROSS HOSPITAL.—4 P.M. Mr. S. Boyd: Surgical Cases. (Post-Graduate Course.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond street, W.C.).—4 P.M. Dr. Kellock: Tortocollis.

**FRIDAY** (31st).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W C )—4 P.M. Dr. D Grant: Clinique. (Ear.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Shuter: Preparation of Patients before an Anæsthetic

## EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff It is urgently necessary that attention be given to this notice.

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*It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.*

*Lectures, original articles, and reports should be written on one side of the paper only.* AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

*Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.*

*We cannot prescribe or recommend practitioners.*

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## MANAGER'S NOTICES.

### THE INDEX TO THE LANCET.

THE Index to Vol II of 1901, which was completed with the issue of Dec. 28th, and the Title-page to the Volume, were given in THE LANCET of Jan 4th.

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## METEOROLOGICAL READINGS.

*(Taken daily at 8.30 a.m. by Steward's Instruments.)*

THE LANCET Office, Jan. 23rd, 1902.

| Date | Barometer reduced to Sea Level and 32° F | Direction of Wind | Rain fall | Solar Radia in Vacuo | Maximum Temp Shade | Min. Temp | Wet Bulb | Dry Bulb | Remarks at 8.30 a.m. |
|---|---|---|---|---|---|---|---|---|---|
| Jan. 17 | 30·52 | W.N.W. | ... | 50 | 48 | 42 | 43 | 44 | Overcast |
| " 18 | 30·33 | N.E. | ... | 58 | 45 | 42 | 40 | 43 | Overcast |
| " 19 | 30·31 | S.W. | ... | 63 | 46 | 33 | 33 | 33 | Fine |
| " 20 | 30·23 | S.W. | ... | 61 | 52 | 33 | 43 | 46 | Cloudy |
| " 21 | 30·30 | S.W. | ... | 71 | 53 | 46 | 46 | 45 | Cloudy |
| " 22 | 30·31 | S.W. | ... | 61 | 54 | 48 | 48 | 50 | Overcast |
| " 23 | 30·20 | S.W. | ... | 52 | 49 | 45 | 44 | 45 | Overcast |

**During the week marked copies of the following newspapers have been received:**—*Heraldo de Madrid, Meath Herald, Folkestone Telegraph, Hartlepool Mail, Brighton Gazette, Kent Examiner, Suffolk Chronicle, Sheffield and Rotherham Independent, Surrey Advertiser, Local Government Journal, Bristol Mercury, Dublin Express, Darlington Star, Citizen, Scotsman, Times of India, Pioneer Mail, Huddersfield Examiner, Sanitary Record, Local Government Chronicle, Mining Journal, Merthyr Express, Hertfordshire Mercury, Burton Chronicle, Glasgow Herald, [illegible] Advertiser, West Sussex Gazette, Lincolnshire Advertiser, Dorking Advertiser, Bolton Chronicle, Liverpool Mercury, Manchester Evening Mail, Kent Messenger, Middlesbrough Gazette, Birmingham Post, Aberdeen Free Press, Yorkshire Post, Cardiff Mail, Sheffield Independent, Sussex Daily News, [illegible] Gazette, Wiltshire Herald, Bradford Observer, Morning Post, Essex Herald, Birmingham Argus, Newcastle Journal, Cambria Leader, Hereford Mercury, Exeter Times, Penrith Observer, Daily Graphic, Cambridge Chronicle.*

the sternum, and in the fifth space the hepatic dulness alters the note, but in the fourth space the dulness of the right auricle is present for about one finger-breadth in an adult and rather less in the child. When the auricle is dilated it may extend to two finger-breadths in the fourth space and from a half to one finger-breadth in the third. When the dilatation is very great it may amount to three finger-breadths in the fourth space, one and a half in the third, and may even be detected in the second. The accurate determination of the size of the right auricle is a matter of the greatest importance and often indicates at once the necessity for leeches to relieve distension. Yet there is no part of physical examination which is so universally and systematically neglected and the patient is too often allowed to suffer cardiac distress when he might be relieved in a few minutes. The suffering due to a distended bladder a medical man would promptly relieve, but that due to a distended right heart is allowed to remain because his percussion is not accurate and bleeding is out of fashion. Recently when I advised a practitioner in charge of a case of pneumonia to try the effect of a few leeches he replied that he would "see if they could be obtained in the neighbourhood." Evidently the distended right hearts of this gentleman's patients got no relief.

You have now determined the most important facts about the heart, its size and strength, and your stethoscope is still in your pocket But by this time you and the child are on good terms and you may quietly produce it without alarming him. It should be flexible and binaural; the rigidity of the old wooden instrument makes its use difficult in the child and you are apt to press too heavily with it. Avoid the cumbersome instruments with a spring; all that you want is a small and simple ivory cup as a chest-piece with two rubber tubes from it to two ivory ear-pieces. If these fit the ears properly there is no need for any spring. This more simple instrument is better for your purpose, for it makes no artificial noises of its own and it is less alarming to the child. If the latter shows any sign of fear it may be well to let him have it in his hands for a minute or two and look upon it as a new kind of toy before he is made the subject of its scientific application.

In auscultating the heart of a child be on the look-out for murmurs due to congenital malformation. Very peculiar some of them are, and sometimes very puzzling. The most frequent, I think, is a systolic murmur, often very loud, which is loudest at, or just below, the junction of the left fourth costal cartilage with the sternum; it is probably often due to an incomplete cardiac septum. The next most common, perhaps, is a systolic murmur over the pulmonary artery, loudest at the second left cartilage and conducted towards the clavicle, often audible in one or both supra-scapular fossæ. This indicates a congenital obstruction of the pulmonary artery. It is often impossible to diagnose the exact condition of a malformed heart by physical examination, and in some cases there may be no murmur at all. A patent foramen ovale, unassociated with any other malformation, is probably of little importance and is a doubtful cause of murmur. Congenital murmurs are systolic in time; a presystolic or diastolic congenital murmur is exceedingly rare. Congenital malformations of the heart mainly affect its right side, which has the predominance in activity during intra-uterine life. After birth this side has much less proneness to disease than the left, though the tricuspid valve does not always entirely escape in rheumatism. But the most important affection of the right heart clinically is secondary to acute or extensive chronic disease of the lungs or to disease of the left heart. In all such conditions a careful watch should be kept on the amount of distension of the right auricle Think of the tremendous strain on the right heart which a pneumonia causes even within two or three days. The thin-walled auricle becomes greatly distended and the stronger ventricle shares to a less extent in the distension. If the auricle did not act as a reservoir the ventricle would soon be over-distended and its action brought to a standstill. To some extent, then, the dilatation of the auricle is conservative. but if it exceed a certain amount the border-line which separates safety from danger is easily crossed. Distress and dyspnœa are experienced, and the right ventricle has greater and greater difficulty in expelling its blood. If at the same time its muscular structure is poisoned by pneumococcal toxins we can easily understand that, even in a child with healthy heart, liver, and kidneys, a pneumonia is a process dangerous to life. It is true that the child has a much better chance than the adult of weathering the storm, yet its violence may be much diminished and the patient often very obviously relieved by applying a few leeches over his liver. Not only are the distress and dyspnœa diminished, but the patient is enabled to sleep. When the right heart is over-distended sleep is much disturbed and may be impossible. Relieve the over-distension by a few leeches and the patient falls asleep without any hypnotics Within a short time after the bleeding you will find on careful percussion that the dulness in the fourth right space has diminished, often by as much as a finger-breadth. The relief will almost certainly last for two days, perhaps longer. But do not forget to percuss out the auricular dulness every day. If the pneumonia continues to increase it may be necessary to repeat the leeches in two or three days; in a few cases of exceptional severity (and pneumonia in children under two years of age is not infrequently fatal) it may be advisable to use them even a third time. And in considering the question of bleeding in pneumonia remember that pallor of face and smallness of pulse are not necessarily contra-indications, for after the right side has been relieved the pulse will be stronger and the colour of the cheeks improved. You will observe this if you watch carefully the effect of the application of leeches in such a condition.

What has been said about the importance of carefully ascertaining the amount of distension of the right auricle in pneumonia applies also to certain other pulmonary affections. In acute bronchitis, in chronic bronchitis with an acute exacerbation, in whooping-cough with its mixture of collapse, broncho-pneumonia, and emphysema, and in an asthmatic attack it is important to notice the amount of distension of the right auricle. It is true that the determination may be difficult if the anterior base of the right lung is emphysematous or consolidated, and it may sometimes be impossible when there is fluid in the right pleural cavity, but in the great majority of cases of pulmonary disease it can be accomplished. In all cases of disease of the left heart, especially when it has been injured by rheumatism, it is extremely important to note carefully the amount of distension of the right auricle. It is not usually possible to detect in a primary rheumatic attack an acute dilatation of the right heart, such as seems to occur invariably in the left ventricle. Nor is it dilated in a first attack of chorea, while the left ventricle almost always is. Even when the rheumatic process has damaged the left ventricle sufficiently to interfere with its suction-action, and thus to raise the tension in the pulmonary artery, the only physical sign which reveals this is the accentuation of the pulmonary second sound. For a considerable time the right ventricle will succeed in overcoming the increased tension without affording any clinical evidence of hypertrophy or dilatation; but if the primary rheumatic attack has been very severe, or if a relapse occurs (and to this rheumatic children are exceedingly liable, especially when they are deprived of salicylates), and there is evidence of pericarditis or of great dilatation of the left ventricle, then expect to find a gradual increase in the size of the right auricle. Watch it carefully. If the dilatation of this structure is rapid dyspnœa and cardiac distress will probably be present, but a more gradual increase will only be revealed by percussion. As time passes the heart accommodates itself as well as it can to its difficulties, and if the rheumatism does not recur a condition of comparative comfort may be attained in which the right auricle is distinctly dilated but not yet grievously hampered by distension. The dulness in the fourth right space may amount to one and a half or two finger-breadths, and yet there is no call for relief by leeches. It is, however, a condition of unstable equilibrium. A fresh rheumatic attack or a little over-exertion may turn the scale. Increased dyspnœa reveals the greater strain; the auricle dilates further and its dulness may amount to two and a half or even three finger-breadths in the fourth right space, one and a half in the third, and half a finger-breadth in the second Before this the liver has become considerably enlarged. If you find it down to the umbilicus or even lower and the amount of urine passed be decreasing there is no time to be lost. The condition is a dangerous one, but relief may be given by prompt venesection or leeching. The auricular dulness will then be found to diminish; the liver also will be smaller, and the digitalis, which was producing little or no effect before, will manifest its action. Hypodermic strychnine will assist in restoring compensation. It is surprising to see how much relief may be given in the later stages of rheumatic heart disease by

# A Presidential Address

ON

# THE HEART OF THE CHILD.

*Delivered before the Harveian Society of London on Jan. 16th, 1902,*

BY D. B. LEES, M.A., M.D. CANTAB., F.R.C.P. LOND.,

SENIOR PHYSICIAN TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND STREET; PHYSICIAN TO ST. MARY'S HOSPITAL; EXAMINER IN MEDICINE, UNIVERSITY OF CAMBRIDGE.

GENTLEMEN,—The laws of the Harveian Society of London require that at the conclusion of his year of office the President shall deliver an address. I ask your attention, therefore, for a few moments to a short study of a subject too much neglected—the heart of the child.

"The child's heart," said Dr. Sturges, in the Lumleian Lectures for 1894,[1] "*holds as many secrets as the man's* and is even more deceiving" If this be so it needs the more careful study and (even more than the heart of the adult) demands accurate investigation and patient observation. Yet who thinks it worth while to spend much time in examining the heart of a child? Does every medical man investigate the condition of this organ in each child patient as carefully as he does in an adult? In how many instances does he even recognise that it is his duty to examine it? Doubtless he feels the child's pulse, but does he bestow much care upon the investigation of the heart itself? Does he always remember that heart disease is frequent in early life, that its beginnings may easily be overlooked unless he is careful, and that his neglect to ascertain the exact condition may be disastrous to the whole of the child's future? Think of the amount of work which the child's heart will have to undertake. Calculating at the rate of one beat per second, which is below the truth, it will have to contract no less than 31,536,000 times every year. If it survive for 50 years it will have performed the enormous number of 1,576,000,000 of beats And if we adopt the estimate of Dr. Leonard Hill in the second volume of Schäfer's "Physiology," that the human heart performs work to the amount of 1000 kilogramme-metres every hour, we find that in a year its total work will be 8,760,000 kilogramme-metres, and in 50 years 438,000,000 kilogramme-metres. Translating this into English measures we find that during these 50 years the heart will have to lift 1,500,000 tons to a height of one foot. That is the work which lies before the child's heart if it survive through a life of 50 years. How can it possibly accomplish the task unless it is thoroughly sound and well? Remember, also, that the child's heart is an organ incompletely developed. It has to grow to its full size and to minister to a growing body. Any disease, therefore, which damages it not only hinders its future work but impedes its development and the development of the whole organism. From this point of view the integrity of the child's heart is even more important than that of the man's.

The child's heart can be examined by the same methods as are employed for that of an adult. In some respects it is even more accessible, for in the child there is no excess of adipose tissue, no great muscular development, no large pendulous breasts, and rarely any emphysema. If the practitioner is rough and awkward he may make difficulties for himself by exciting the child's fears, but anyone who knows how to deal with children can usually examine the heart of even the most "spoiled" child with accuracy. Impatient words, an ungenial aspect, hasty measures, or cold hands may make a young child cry and resist with all its might, but pleasant speech, a kindly manner, gentle ways, and warm hands will usually calm the most nervous child and allow of a complete examination, provided that the undressing is done by the mother or the nurse and that she stands by the bed while the examination is made.

The chest being thus exposed to view we notice at once whether there is any thoracic deformity or any prominence of the præcordial region and the position of any visible cardiac impulse. Having noted this, the first idea of most practitioners is to pull out a terrible-looking instrument called a stethoscope, which probably appears to the child a sort of pistol, and doubtless is going to hurt him not a little. This early recourse to the stethoscope is a great mistake for more reasons than one. Keep it in your pocket to the last. A child is accustomed to being handled; you may use your hands to examine him as much as you like if they are only warm and gentle. He will not object at all to percussion if it be done very lightly and with the fingers only, but he will not tolerate the forcible hammering which some medical men call percussion, and those illusory instruments known as pleximeters will certainly make him cry. Fortunately, what the child allows is exactly what the physician ought to use, the lightest possible percussion. It is this, and not the heavy thumping, which is to tell you the precise size of his heart. But first warm your hand and lay it gently over the præcordial region that you may feel the cardiac impulse and ascertain its strength and whether it is localised or diffused. This gives you information as to the strength of the left ventricle. Then shift your hand gently to the epigastrium and notice whether any impulse of the right ventricle is to be felt there; if so, either there is some congenital malformation or there is some disease of the lungs or left heart. Slide the hand further to the hepatic region and see whether it meets the resistance of an enlarged liver, and try very gently to feel its edge A single gentle tap on a finger below the costal margin will confirm or correct your observation.

Next proceed to percussion, but begin with a clear idea of the object of this measure and the way in which it is to be carried out. What is the object of percussion of the heart? To ascertain the superficial cardiac dulness, say the text-books. But what is the value of this result when you have obtained it? Almost nothing, from the cardiac point of view, though it may give valuable information about the left lung. What we really want to know and what can quite easily be ascertained is the exact size of the heart. We can, indeed, determine little or nothing by physical examination about the size of the left auricle, and we can form only an approximate opinion of the size of the right ventricle But the size of the left ventricle and that of the right auricle can usually be ascertained with very considerable accuracy. Let your pleximeter be the terminal phalanx of a finger of your left hand. Let this phalanx be pressed somewhat firmly, yet very gently, on the spot to be percussed, and let no other part of your hand touch the chest-wall. So you will avoid the conduction of resonance from elsewhere which is a fruitful source of fallacy. First select a spot in the mid-axilla and percuss here with the lightest possible stroke; then gradually shift your percussed finger towards the sternum and you will easily recognise the change of note when the border of the heart is reached. For though the *left lung partly overlaps the heart it is only by a thin layer*, and the margin of the heart is thick and airless and does not require what is called "deep" or heavy percussion to recognise it. Indeed, such percussion often defeats itself, for it introduces pulmonary and gastric resonance from a distance, especially if the whole of the percussed finger be applied to the chest-wall. Expect to find the cardiac margin a little to the left of the position of the impulse, for though it is usual to speak of the "apex-beat," it is not the extremity of the heart which strikes the chest-wall, but a spot *on the right ventricle at some little distance from that extremity*. The left border of the cardiac dulness in health extends a little to the left of the position of the impulse; when the heart is dilated this difference may amount to a finger-breadth or even more. (If anyone objects to the term "finger-breadth" as unscientific he may say instead "two centimetres," but he does not thereby make the measure more accurate, he only introduces a false idea of mathematical precision.) Next determine whether the dulness extends to the left of the nipple itself, and if so to what amount in *the nipple-acromial* line. Two points on the border of the left ventricle having been thus determined the line connecting them should correspond to this border, and this can easily be verified by holding the percussed finger parallel to this line. The difference in tone to the left and to the right of this line will then be obvious at once. Next determine the size of the right auricle. Very few percussors pay the least attention to this structure and many seem to be unaware of the fact that the dulness due to it may always be detected, even in the normal heart, in the fourth right intercostal space. The third space ought to be resonant quite up to which recovers completely, but evidence is accumulating to prove that there is usually very much more than this—that actual inflammation of the muscular substance and fibrous structures of the heart exists, and that this is caused by the local presence of a diplococcal micro-organism. Dr. Poynton and Dr. A. Paine have demonstrated such organisms in the cardiac valves (with intact epithelium) and in the muscular wall. The same investigators have proved that pericardial fluid from a rheumatic child when injected intravenously into rabbits can cause in these animals all the most characteristic effects of rheumatism in the child. They have also obtained from a rheumatic nodule in a child, carefully excised with aseptic precautions, a most abundant growth of the typical diplococci in pure culture. In rheumatism, then, we are dealing with an inflammation of the child's most important organ caused by the local presence of a pernicious micro-organism.

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[1] THE LANCET, March 10th (p. [illegible]), 17th (p. 653), and 24th (p. 733), 1894.

The question of treatment at once divides itself into two problems: Can we by the administration of drugs directly destroy these microbes or arrest their growth and increase, without damage to the child? and have we any means of directly repressing the cardiac inflammation?

To the first question I reply that in sodium salicylate, in adequate doses, we have a drug which seems to be definitely antagonistic to the rheumatic process. The theory that it merely relieves pain is only possible when adults are the subjects of the disease; in the child it is at once seen to be absurd. The best proof of the genuine efficacy of salicylate in arresting rheumatism is found in the great tendency to relapse when the drug is being administered in doses which are too small, and especially when it is too soon given up. There is a widespread impression that salicylate of soda is "depressing to the heart." What is really depressing to the heart is the rheumatic microbe, its works and ways, and some of its pernicious effects have been attributed to the salicylate. Children bear salicylate well and it rarely causes in them the unpleasant aural symptoms which are common in the adult. It seems to be almost as necessary to a rheumatic child as mercury is to a syphilitic infant, and some children with great tendency to rheumatic relapse ought to take a small quantity of the drug daily for a long time. Sodium bicarbonate is another drug which seems to be certainly useful in rheumatism. It may be given in double the dose of the salicylate and along with it. My impression is that the acute dilatation of the left ventricle subsides more rapidly when the bicarbonate has been freely given than when the salicylate has been administered alone.

The question whether we have any means of repressing the cardiac inflammation may also be answered with confidence. Leeches will diminish the congestion of the cardiac vessels, even when applied over the liver, by lessening the pressure in the right auricle and thus aiding the escape of the blood in the coronary sinus and the intra-cardiac venules, and the local application of an ice-bag most certainly represses the cardiac inflammation These two remedies are of the greatest possible service to the rheumatic heart. Ice is undoubtedly depressing to the normal heart, but when preceded by leeches and used with care it is the reverse of depressing to the rheumatic heart. It relieves the depression caused by the rheumatism, and under its use I have often watched the dilated ventricle diminish and the feeble diffused impulse become changed into a steady, heaving, local thrust. Digitalis is of little service in the treatment of rheumatic cardiac inflammation in the child; its opportunity is later, when the inflammation has subsided and the mechanical effects of the cardiac lesions manifest themselves. Then it will work wonders. When we pass from inflammatory conditions of the heart to the ventricular dilatation and enfeeblement caused by toxæmia we see that leeches and ice are inapplicable. Digitalis is sometimes of service, but the hypodermic injection of strychnine is of still greater utility. Iron is of value in anæmic debility, but in diphtheria I rely mainly upon subcutaneous injection of atropine when danger threatens. I first employed belladonna in diphtherial paralysis more than 20 years ago on physiological grounds. It has subsequently been continually employed at the Hospital for Sick Children and I believe I have seen it save many lives. In cases of less urgency the drug may be given by the mouth, but where the dulness of the left ventricle extends more than one finger-breadth to the left of the nipple line it should be given subcutaneously, with a frequency regulated by the imminence of the danger.

It only remains for me to thank you, gentlemen, for the honour which you bestowed on me a year ago by electing me your president and for your kindness to me during my year of office. The election of that distinguished surgeon, Mr. W. Watson Cheyne, to be president for the next year is a most happy augury for a prosperous session.

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# NOTES CONCERNING A NATIVE REMEDY FOR BLACKWATER FEVER.

By D. R. O'SULLIVAN-BEARE, M.B., B.Ch. Dub.,
HIS BRITANNIC MAJESTY'S VICE-CONSUL, PEMBA, EAST AFRICA;
HONORARY MEDICAL OFFICER, H.H. THE SULTAN OF
ZANZIBAR'S GOVERNMENT.

*With Note by* Mr. E. M. Holmes, F.L.S.

It needs no apology on my part for submitting to the notice of the medical profession some particulars concerning a native remedy which appears to be of real value in the treatment of hæmoglobinuric or blackwater fever—that most deadly of the maladies which attack Europeans in tropical Africa, and the one which is responsible for more deaths and for more invaliding amongst them than all the other diseases together. The remedy in question is indigenous to tropical East Africa, and the "wa-ganga," or native medicine men, claim for it that it is a true specific for blackwater fever. But before proceeding to set forth details concerning the remedy I may be permitted to offer a few remarks with regard to the fell disease for which it is said to be a cure.

The principal symptoms characteristic of an attack of blackwater fever are four in number—namely, heightened temperature, vomiting, jaundice, and dark-coloured urine. The dark hue of the urine, which in many cases is as black as porter, is due to the presence therein of hæmoglobin, or possibly methæmoglobin, and it is so striking a symptom that it has determined the popular name for the disease The starting-point of an attack of blackwater fever is a condition of general toxæmia. The toxin present in the system exerts a destructive action upon the red corpuscles, and the circulation in the blood plasma of the hæmoglobin thus set free is responsible for all the symptoms which characterise an attack of the disease. In the early stage of the condition of hæmoglobinæmia the liver deals with the free hæmoglobin, which it converts into bile pigments. But there is a limit to the capacity of the liver for thus acting, and when that limit has been reached any excess of free hæmoglobin is eliminated through the kidneys. The symptom of hæmoglobinuria is indicative, therefore, of a wholesale destruction of red corpuscles. The passage of the free hæmoglobin through the kidneys sets up a true nephritis, indicated by the fact that the urine soon becomes loaded with albumin, and in many cases the nephritis thus produced gives rise to suppression of urine, partial or complete, with resulting uræmia. Thus a person attacked by blackwater fever suffers at the same time from violent hæmorrhage and from profound depression of the nervous system, due to heightened temperature and to uncontrollable nausea and vomiting; superadded to which is the very grave condition of nephritis. It is obvious, therefore, that blackwater fever is one of the most formidable of all known diseases.

As to the primary cause of blackwater fever we are entirely in ignorance. The predisposing cause of the disease is undoubtedly that anæmic state of the system produced by repeated attacks of ordinary malaria which is known as malarial cachexia. With regard to the theory enunciated by Professor Koch, that the administration of quinine is the chief exciting or determining cause of an attack of blackwater fever, I would point out that the disease undoubtedly attacks native Africans who have never taken a dose of that drug; two such instances have come under my notice. Again, in Zanzibar and Pemba, where Europeans and natives alike suffer from all varieties of malaria and are habitually treated with quinine, blackwater fever is unknown, save in the case of those persons who have resided in or have visited districts on the mainland where the disease occurs.

Personally I hold that blackwater fever is not a complication of ordinary malaria, but an entirely distinct disease which at present is endemic in certain districts only; that it attacks persons exposed to its influence whose vital powers of resistance have become weakened from the effects of chill, insolation, bad or insufficient diet, over-fatigue, or possibly treatment of this kind and how long life may be preserved *even when the condition of the heart is such that the child* is incapable of exertion. But the fatal susceptibility to renewed attacks of rheumatism, incapacitating the heart still more, at last defeats the physician.

Before leaving the right side of the heart I must call your attention to a systolic murmur over the tricuspid region which is not very uncommon in healthy children. It is a low, soft, short murmur, best heard about halfway between the left edge of the sternum and the nipple line, and usually becoming inaudible at a short distance to the left of this line. It is sometimes accompanied by slight irregularity of the heart's action. Its site of maximum audibility is lower than that of the congenital murmur already described and to the right of that of a mitral murmur. It does not indicate any organic disease.

Let us now study the left side of the heart. The left auricle is inaccessible, but enlargement of the left ventricle (in which enlargement the right ventricle probably shares to some extent) can be easily determined by careful percussion, and the strength of the ventricular muscle can be fairly estimated by observing the force and localisation of the impulse.

Dilatation of the left ventricle being very common in children who are out of health it is important to start with a clear idea of the position of the left border of the cardiac dulness in a normal child Dr. F. J. Poynton determined *this carefully in 35 healthy public-school boys between the* ages of 12 and 14 years In 21 out of the 35 boys the left limit was about one inch internal to the nipple, in seven it reached a vertical line through the inner margin of the areola, in five it extended as far as the vertical nipple line, and in two it passed this line by three quarters of an inch and by one inch respectively. One of these two boys, however, was living in the medical attendant's house because he was delicate, the other had recently suffered from influenza Thus we may conclude that in healthy boys of from 12 to 14 years of age the left border of the cardiac dulness is found at about one finger-breadth internal to the nipple line. In a few it appears to reach this line, and this seems the more common in the younger children, especially before seven years of age. In 45 cases of children under 12 years old in the surgical wards of the Hospital for Sick Children Dr. Poynton found the left limit internal to the nipple in 19, in the nipple line in 18, and external to the nipple in eight. But of course these were not perfectly healthy children, for they were all inmates of surgical wards. We may conclude that in normal children the left border of the cardiac dulness is usually distinctly internal to the nipple line, that it may sometimes reach it, but that it rarely goes beyond it. This must be carefully remembered when we investigate the cardiac dulness in a child who is suffering from disease, for it is so common to find the left limit from a half to one finger-breadth external to the nipple line that we may be led to consider it as normal, and its discovery to be of no importance. But this inference would be false in fact as well as in logic; its commonness only proves that its causes are many. The cardiac muscle of the child is perhaps specially susceptible to the deleterious influence of toxins and poisonous products circulating in the blood.

The most characteristic instance of this is diphtheria, *which is much more fatal in children than in adults, sudden* death being by no means very rare after a severe attack of diphtheria in a child. The fatal issue is usually caused by extensive fatty degeneration and destruction of the cardiac muscular fibres, such as Dr Sidney Martin found to be caused in animals by injection of the diphtherial albumoses. In and after an attack of diphtheria in a child there is usually enlargement of the left ventricle, the impulse becomes diffused and weak, and the first sound is short and feeble. If the dilatation amounts to two finger-breadths to the left of the nipple line the danger of death is great and the case should be very closely watched. And if the limit of the dulness of the left ventricle is only one finger-breadth outside the nipple line it must be remembered that a rapid increase in the dilatation may occur, even six or eight weeks after the diphtherial attack, and may cause sudden and entirely unexpected death at a time when the practitioner is looking for convalescence and has given a hopeful prognosis. Influenza, *also, may produce a rapid dilatation of* the left ventricle which may be dangerous to life, but in this disease the susceptibility of the child seems to be less than that of the adult.

The pneumococcal toxin appears to affect the left ventricle *less than that of influenza, and though there is usually* some enlargement of the cardiac dulness to the left in pneumonia it is much less than the enlargement of the right auricle, and one is often doubtful whether the enlargement to the left may not be due to dilatation of the right ventricle pushing the border of the heart further to the left. The rapid recovery which often follows the crisis in pneumonia suggests that the poisonous influence of the toxin of the pneumococcus on the left ventricle cannot be very great

In typhoid fever a gradual enlargement of the left ventricle is usually to be detected, along with diffusion and weakening of the impulse: the first sound also becomes weak and short. The increase in size often reaches one finger-breadth outside the nipple-line and may amount to two finger-breadths. During convalescence the ventricle gradually returns to its normal size and its strength increases. In tuberculosis the left ventricle is frequently moderately dilated. How far this is due to a tuberculous toxin and how far merely to general debility and anæmia it is impossible to say. Even in debility and in anæmia there may be poisonous products of perverted metabolism circulating in the blood, and in renal disease it is quite likely that some of the increase of the dulness of the left heart may be due to toxæmia as well as to the influence on the ventricle of the raised arterial tension.

In acute and subacute rheumatism an enlargement of the left ventricle with enfeeblement seems to be invariable. *It is the first indication of the effect of rheumatism on the* heart, and may be detected when there is no evidence of endocarditis or pericarditis. The left border of the cardiac dulness almost always extends beyond the nipple-line, even in the most subacute attack; usually it reaches one finger-breadth to the left of this line, and it may be even two finger-breadths to the left in a first attack of rheumatism in which there is neither rub nor murmur. The impulse is diffused, and both it and the first sound are weakened. As the attack subsides the dulness tends to return to the normal limit. It may do so completely, but in many instances, especially when a murmur becomes audible the left ventricle remains more or less dilated. A second attack—and to this a rheumatic child is extremely liable—dilates it further, and an accompaniment of endocarditis is only too probable Pericarditis may occur in a first attack, but is usually a later phenomenon. When it occurs it is always accompanied by great enlargement of the heart, causing an extensive increase in cardiac dulness, usually ascribed wholly to pericardial effusion. After repeated rheumatic attacks the child's heart may reach a size which is almost incredible to anyone who has not observed it in the wards and post-mortem room. Clinically, it may extend four finger-breadths to the left of the nipple line and to three finger-breadths in the fourth right intercostal space. In the larger rheumatic hearts there is usually a systolic apex murmur and frequently a presystolic or mid-diastolic also. Evidence of pericardial friction, more or less extensive, is common. Occasionally a diastolic murmur at the base gives proof of aortic regurgitation. It has long been known that in children the cardiac manifestations of rheumatism often are far more pronounced than any other indications of the disease. There may be little or no arthritis, no soreness of throat, no eruption or only a very small patch of erythema, no subcutaneous nodules, no chorea or only slight nervous twitching, yet the cardiac rheumatism may be nothing less than deadly. If all who have to do with children would constantly bear this in mind much suffering would be avoided and many lives would be saved. The slightest suspicion of rheumatism should lead to a most careful examination of the child's heart by palpation and percussion; the practitioner who in this matter relies solely upon auscultation betrays a carelessness which is almost criminal, and shows himself unfit to be entrusted with the vital interests of the child.

In chorea an enlargement of the left ventricle, with or without murmur, is present in the great majority of cases The left border of the dulness almost always extends from a half to one finger-breadth outside the nipple line This seems to be an additional confirmation of the essentially rheumatic nature of nearly all cases of chorea—one extra link in the chain of proof.

The extreme tendency to cardiac disease in rheumatism and in chorea seems to be not merely the result of the poisonous influence of a toxæmia This, no doubt, is a part of the deleterious action produced by rheumatism, and it may perhaps sometimes be the sole cause in a slight attack made a good recovery within one week from the time that I first began to treat him. I see no reason to doubt that the good results in his case, as well as in those of the other four patients, were due to the action of the native remedy, which was the only drug administered.

I have obtained very encouraging results also from the native remedy in cases of bilious remittent fever where the administration of quinine appeared to do more harm than good. Such cases, which are not uncommon in East Africa, begin with general malaise. The patient next complains of frontal headache and of a dull aching pain across the loins; the muscles all over the body feel sore and bruised, as though they had been beaten with a stick; the tongue gets heavily furred; and nausea and bilious vomit declare themselves. The bowels are generally constipated, but in some cases there is bilious diarrhœa. The temperature rises at the commencement of the attack, frequently reaches 105° F., and varies between that and about 101° F. Often there occur clammy sweats which do not appear to have much effect in lowering the temperature. A sour, disagreeable odour, very characteristic of the disease, emanates from the person of the patient and clings to the bedding. The conjunctiva becomes yellowish in hue and there is considerable jaundice of the whole skin. The urine is usually high-coloured, turbid, and offensive in odour. I recollect the case of a European lady in Zanzibar who suffered from such an attack. Although she was literally saturated with quinine—administered by the mouth, per rectum, and hypodermically—yet her temperature remained persistently high for over a month. There was little or no amelioration of the general symptoms, and eventually it was found necessary to send her home.

The *cassia* remedy has proved of much value in several cases of that nature in which I have used it. I may cite the case of a Mission lady who had been suffering for two months when I saw her from bilious remittent fever with nausea and frequent vomiting, headache, and heavily furred tongue. Her temperature, it appeared, had never fallen to normal during all that period and had frequently risen as high as 105° F. She had taken large doses of quinine, sometimes as much as 20 grains daily of the sulphate for many days consecutively. I ordered teaspoonful doses of the liquid extract of the *cassia* root to be taken every four hours. I saw her again after three days; her temperature was then normal, her tongue was quite clean, she had no headache, and she had begun to feel hungry. She told me that from the time when she took the first dose of the medicine she had had no nausea or vomiting, and that she had begun to mend in every way.

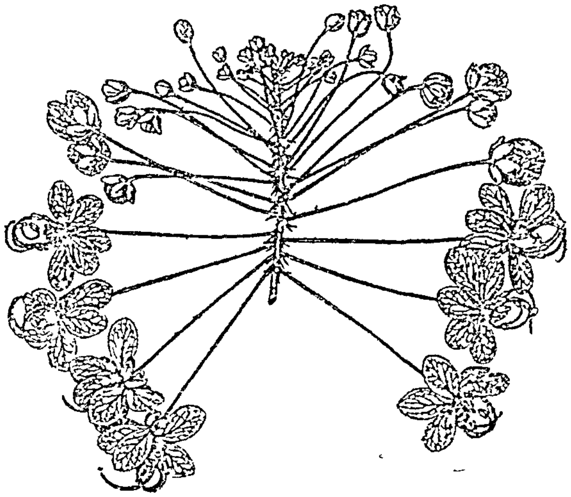
Some of the Fathers of the Roman Catholic Mission in East Africa have made trial of the native remedy, both in the form of the decoction and also of the fluid extract with which I supplied them, in the treatment of blackwater fever. They are, unfortunately, only too familiar with that fell disease, which for years past has claimed a heavy toll of victims from amongst the members of the Mission at their various stations on the mainland. The following is an extract from a letter which I received from one of the Fathers, Père O——, as to his experience with the remedy:—

> With pleasure I give you particulars of my experience concerning the efficacy of the native remedy for blackwater fever. ...... I had occasion to try it in the case of one of my *confrères*—a missionary suffering from a violent attack of blackwater fever, as diagnosed by a German doctor of medicine. The valued patient recovered from the attack, thanks to the decoction of the root. Fifteen days afterwards I had a similar experience in the case of a German *non-commissioned officer* who had been ill with blackwater fever for a period of 10 days and who was in the last extremity. Without omitting to administer a good emetic of ipecacuanha I caused him to drink every hour a cupful of the decoction, and 48 hours later the patient, who is to-day on the active list of the colonial army, was out of danger. The hæmoglobinuria had ceased within barely 18 hours from the first administration of the remedy. I have also proved its efficacy against blackwater fever in the case of another of my *confrères* and likewise in the case of a German Captain who is [illegible] active service. I had a like happy result in the case of anoth[illegible] sergeant. As regards its efficacy against the hæmaturi[illegible]e, from which the blacks suffer I have proved it in[illegible] anæmic [illegible] cutaneous [illegible] on ac[illegible] em[illegible] paraly[illegible] German s[illegible] ordinarily simple [illegible] han 30 instances.

Père E——, who has resi[illegible] for over 37 years [illegible]ded in various parts of tropical East Africa [illegible] and who probably has seen more cases of b[illegible]ackwater fever du[illegible]ring that period than any other man now li[illegible]ing, wrote to me as follows:—

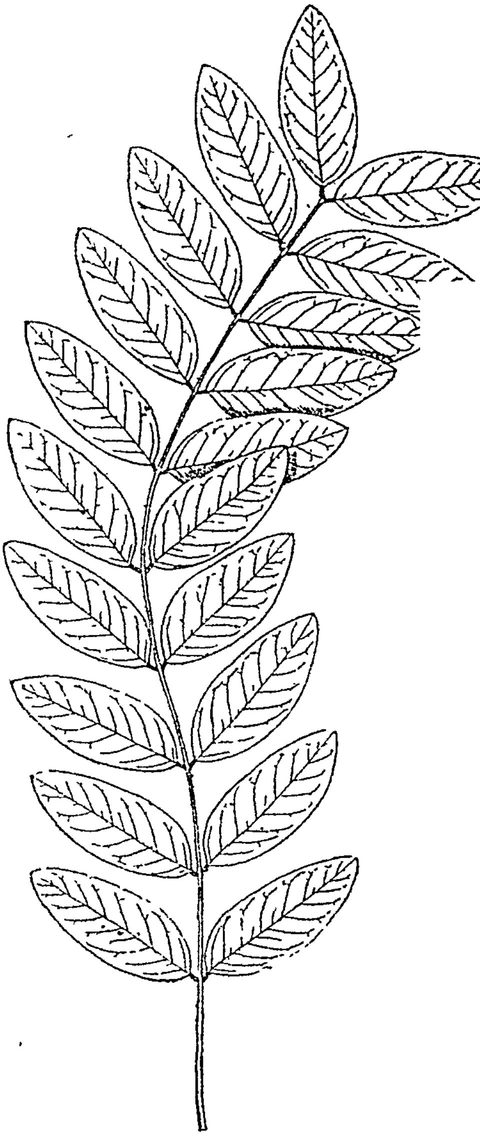
> I have had occasion to employ very freq[illegible]uently the native remedy, in the form of a decoc[illegible]tion, in cases of blac[illegible]water fever, and I have had in every instance [illegible]ery good results from [illegible] it. I did not lose one patient of those whom I treated with that re[illegible]medy. ...... Since I received from you the fluid extract I have had occasion to employ it in two cases and each time with the best results. The first case was that of Brother A—— who doubtless has told you how I cured him within a few hours. The second case was this:—some two months ago I arrived at Bagamoyo and there I found Sister M—— *in extremis* as the result of a very bad attack of blackwater fever; the last rites of religion had been administered to her and her death was expected from

FIG. 1.



Upper part of inflorescence of Cassia Beareana, one-sixth natural size.

FIG. 2.



Cassia Beareana, n. sp. Leaf one-quarter the natural size.

from the abuse of quinine; but that it finds its most favourable nidus for development in the system of those persons who have become debilitated by repeated attacks of malaria.

As regards the treatment of blackwater fever it must be confessed that medical science has hitherto been completely baffled. Quinine, in one or other of its forms, is the drug which has been most generally employed in the treatment of the disease in question. Its selection was based upon the belief that blackwater fever was a complication of ordinary malaria, and it was assumed that the drug, being undoubtedly possessed of remedial virtues in connexion with what was supposed to be the primary disease, would yield good results in the complication also The test of practical experiment has demonstrated the unsoundness of such reasoning, and it is now the opinion of most medical men who have had considerable experience of blackwater fever that the exhibition of quinine in cases of that disease aggravates the symptoms and is distinctly harmful. Such is also my own personal opinion. Indeed, it might have been inferred *a priori* that quinine, which acts simply as a parasiticide and not as an antitoxin, would fail to yield good results in hæmoglobinuric fever, since the destruction of the blood corpuscles which takes place in that disease is due, not to the direct action of individual parasites, but to the influence of the toxin present in the system The aggravation of the symptoms produced by the administration of quinine is explained by the discovery made by Professor Koch that the drug in question exerts a toxic influence upon diseased blood corpuscles, which it destroys There is only one legitimate rôle for quinine in connexion with blackwater fever—namely, that of a prophylactic against ordinary malaria. By guarding the system against attacks of that disease it will at the same time guard in great measure against attacks of the more formidable malady also

Various drugs other than quinine have been tried from time to time in the treatment of hæmoglobinuric fever. I may cite, for example, ergot, tannin, and perchloride of iron. No satisfactory results have been obtained from their administration, and, indeed, it is difficult to understand by what process of reasoning the employment of such drugs can be justified. Boric acid also has been tried in the hope that it might prove efficacious by reason of its antiseptic properties, but so far as I know the results of that method of treatment have not been encouraging. In a word, amongst officinal preparations there appear to be none upon which, employed either singly or in combination, any reliance can be placed for the treatment of blackwater fever.

I come now to a consideration of the native remedy for the disease in question. I first heard about it some years ago, during my sojourn in East Africa, from a very intelligent Arab who had travelled much between the coast and the great central lakes, and who in the course of his journeys had seen the remedy used by some of the tribes in the interior, amongst whom blackwater fever would appear to be endemic. The remedy in question consists of a decoction made from the roots of a *cassia* which grows in equatorial East Africa from sea level up to an altitude of some 2000 feet The tree attains a height of from 20 to 30 feet; the inflorescence is bright yellow in colour, and the ripe seed pod is about two and a half feet in length The botanical characteristics of the tree in question have been described and figured by Mr. E. M. Holmes, F L S, curator of the museum of the Pharmaceutical Society of Great Britain, in the *Pharmaceutical Journal* of Nov. 30th, 1901, and of Jan 18th, 1902 Mr. Holmes is of opinion that the tree is a new species and he has named it *Cassia Beareana*. The native method of preparing and administering the decoction is as follows: they chop a portion of the root into pieces, each about one inch in length, and of those pieces they boil about one dozen in a gallon of water for half an hour or so The result is a red-coloured fluid of which the patient suffering from blackwater fever is given to drink, either hot or cold, as often as he feels thirsty. Apparently it is non-poisonous in its action and may be consumed in unlimited quantity. In cases where the patient does not suffer from marked thirst the decoction is administered in doses of about a teacupful every couple of hours The natives employ the same remedy, and they claim for it specific virtues also in the treatment of that simple form of hæmaturia—i e., unaccompanied by febrile symptoms—which is so prevalent amongst the negroes of East Africa. The only portion of the tree, other than the roots, employed medicinally by the natives is the bark, which they powder and apply as a dressing to ulcers, apparently with good results.

I succeeded in procuring a supply of the roots of the tree in question and I sent some of them to Messrs. Christy and Co. of London for the purpose of having made therefrom a preparation which would approximate as closely as possible to the decoction used by the natives. Messrs. Christy and Co. accordingly made for me a fluid extract of the root, by maceration and percolation, with distilled water evaporated at a low temperature, 25 per cent. of alcohol of 90° being added to preserve it. The action of the fluid extract thus prepared would seem to be identical with that of the simple decoction. I have treated five cases of blackwater fever with the native remedy. Of the five patients two were Africans, two were Arabs, and one was a native of Beloochistan. In the case of the two Africans and of one of the Arabs the attack in each instance was of moderate severity and had not long declared itself when I began the treatment. In the case of the other Arab and of the Beloochi the attack in both instances was severe and had declared itself several days before I saw the patients. The negroes assured me that they had neither of them ever had a dose of quinine; that statement was doubtless correct, as they came from the interior and had never been brought into contact with Europeans. Both of the Arabs and the Beloochi had apparently been treated with quinine at various times for attacks of ordinary malaria, but each of them assured me that he had had no quinine for at least two months prior to the attack of blackwater fever All five patients had suffered considerably on and off from attacks of ordinary malaria. The Beloochi, from his account, appeared to have suffered at least once before from blackwater fever, but in the case of the other four patients the attack of that disease for which I treated them would seem to have been the first of that nature from which they had suffered. The two Africans I treated with the decoction of the *cassia* root prepared in the native manner. I gave about a teacupful as a dose every two hours during the first 12 hours, and afterwards a similar quantity every three or four hours. Both patients made a speedy recovery; the temperature fell gradually from 103° F. to nearly normal within 24 hours, and the urine, which had been scanty in quantity and very dark in colour in each case when I first saw the patient, became more abundant and almost clear in colour within the same period. The nausea and bilious vomit which had distressed the patients at first quickly subsided and on the second day they were able to retain a fair quantity of liquid nourishment On the third day the temperature was normal, the urine was almost quite clear, the nausea and vomiting had ceased, and the tongue had begun to clean. Within six days the patient in each case was convalescent, but I continued to administer a dose of the decoction three times daily for a few days after all the symptoms had disappeared. There was no relapse in either of the two cases within a period of two and of two and a half months respectively, during which periods I had an opportunity of seeing the patients from time to time The two Arabs and the Beloochi I treated with the liquid extract. For a dose I gave one fluid drachm well diluted with water every two hours at first, and afterwards at longer intervals Those three patients also made a rapid recovery. The case of the Beloochi was particularly striking. When I first saw the man he had been suffering for three days. He was deeply jaundiced, the tint of his skin being a greenish bronze; he suffered acutely from gastralgia, with nausea and continual vomiting; his urine was scanty and nearly black in colour, and his temperature was over 104° F. In a word, his was a typical case of a severe attack of hæmoglobinuric fever. The administration of the first dose of the fluid extract was followed by an attack of vomiting after an interval of but a very few minutes. I waited for some five minutes and then administered about a teaspoonful of the mixture; this was retained and no vomiting ensued for nearly half an hour. After an interval of 15 minutes from the cessation of the vomiting I gave the patient an ounce of the mixture; this also he retained and he slept for nearly an hour. Again he vomited, and again after an interval of 15 minutes I gave him an ounce of the mixture. The nausea and vomiting gradually diminished, he took and retained a couple of ounces of the mixture every few hours and within 24 hours the nausea and vomiting had practically ceased. As in the case of the other four patients his urine became more abundant and clearer within 24 hours from the first administration of the remedy, his temperature fell steadily, he got a fair amount of sleep after the first 12 hours of treatment, and he was able to retain some nourishment. He measurements of the light was an electrical one, Mr. Leslie Miller, A.M.I.E.E., gave me his skilled assistance, and I am also indebted to him for various suggestions that are embodied in the paper.

At the commencement I recognised the fact that the only way that would decide whether the attempt to improve the apparatus for the light treatment of skin disease was successful or not would be to give it a fairly lengthy trial on patients suffering from that disease. No experiments such as those of Dr. Strebel on cultures of the bacillus prodigiosus inclosed in glass cells with quartz lids would give any certain knowledge of what would happen to other species of bacilli in the human skin, and therefore we felt it would be useless from a medical point of view to bestow extreme care and much time on carrying out quantitative experiments on bacteria. I therefore confined myself to proving that the apparatus hereinafter described gave out the necessary ultra-violet radiation for practical trials in the treatment of lupus in the electrical department of St. Bartholomew's Hospital.

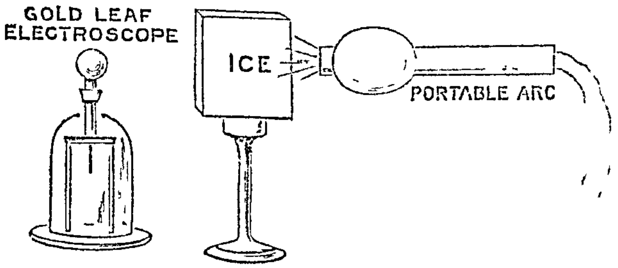
In the first place, it is necessary to regard light used for bactericidal purposes from the mental standpoint of a man born blind. White light is then electrical vibrations or waves in the ether and is merely the octave to which our retina responds in a whole series of ether vibrations. This is not the place to go into the subject of the measurement of wave lengths. It will therefore suffice to point out that when white light is resolved into its component parts of red, green, violet, &c., the wave lengths are as follows: where $\lambda$ = the wave length and $\mu\mu$ the millionth of a millimetre, red to green from 698 $\mu\mu$ to 500 $\mu\mu$; green to blue, 500 $\mu\mu$ to 457 $\mu\mu$; blue to violet, 457 $\mu\mu$ to 392 $\mu\mu$; and ultra-violet, below 392 $\mu\mu$. According to Dr. Strebel the spark of an induction-coil between the following metal points gives waves of which the shortest wave lengths are as stated: aluminium, 185 $\mu\mu$; zinc, 202 $\mu\mu$; cadmium, 214 $\mu\mu$; and carbon, 229 $\mu\mu$. He also says that water 8·5 millimetres thick inclosed between two quartz plates 1·3 millimetres cuts off all lines below 214 $\mu\mu$, but this appears to be rather overstated, probably owing to an almost invisible film of foreign matter on the quartz nearest the arc.

Now, it has been proved by numerous investigators that the bactericidal rays are those that correspond to the blue, violet, and ultra-violet region of the spectrum, and by Dr. Strebel that the shorter waves beyond the violet, called the ultra-violet, will kill bacteria when the visible rays have been altogether shut off. Up to the present time, however, no one has proved what wave length is the most effective, and this is a point much needing investigation. On the one hand, we have the fact that Professor Finsen by means of his earlier form of lamp through which few ultra-violet rays could pass, undoubtedly cured lupus, although slowly; on the other hand, we have the investigations of Dr. Strebel who destroyed the cultures of the bacillus prodigiosus under quartz by means of the ultra-violet rays alone. Even when concentrated by means of lenses sunlight has been found by Professor Finsen not to be so effective as arc light. This is probably due to the fact that the extreme ultra-violet rays of sunlight are absorbed in our atmosphere, and it is due to their presence in the arc that the latter is superior to sunlight.

P. Lenard[1] has shown that the extreme ultra-violet rays generated by an electric arc are absorbed by a layer of air two centimetres in thickness, and he is of opinion that these rays are contained in sunlight but only in the higher regions of the atmosphere. Spectroscopic observations showed the wave length of these rays to be shorter than those hitherto mapped, ranging as they do from 160 $\mu\mu$ to 190 $\mu\mu$. It is easy to satisfy oneself of the absorption of the violet end of the spectrum by the spectroscopic examination of the sun when on the meridian and when near the horizon. It is only necessary to take photographs of the spectrum at these times to see the great amount of absorption which takes place in the violet and ultra-violet regions of the spectrum when the sun is on the horizon. Of course, the light from the setting sun has a much longer column of air to pass through than when on the meridian.

This paper is concerned merely with proving that a certain source of light gives out an abundance of extreme ultra-violet, with a fair proportion of rays of lower refrangibility. To prove this three methods were available: (1) by photography (chemical action); (2) by changing the short waves into longer by letting them fall on to some substance that will become fluorescent and thus render them visible; and (3) by an electrical method—viz., letting the rays impinge on a piece of bright metal (zinc or aluminium) connected with the leaves of a gold-leaf electroscope charged with negative electricity. By photography it was easy to prove that the source of light gave off rays far beyond the visible violet of the spectrum, but it was not at all easy to compare the negatives so as to judge the intensity of the source of light. For instance, one candle will give a spectrum as long as 20 candles, but some easy way of knowing that the source was 20 times as powerful in the second case as in the first was wanted and this involved equal exposures and the same development. In addition to this dry plates are not equally sensitive to waves of all wave lengths and not sensitive at all to very short waves, simply because, as proved later, they will not penetrate the gelatin of the films. By means of a spectroscope fitted with a quartz prism and quartz lenses a number of photographs of the spectrum were taken, but finally photography was given up and the spectrum observed after the light had passed through the quartz prism and lenses on to an ordinary platino-barium screen and on papers which had received washes of solutions of esculine, fluoresceine, and sulphate of quinine. This method is much quicker but not altogether satisfactory, as the visibility of the ultra-violet portion of the spectrum depends largely on the successful darkening of the room. Another and fatal objection to this method of observation was this—the total thickness of the quartz train (lenses and prisms) was upwards of an inch, and this must offer a considerable obstruction to short waves. Finally, the electrical method mentioned above was adopted, with the view not only of measuring the power of the very short rays (about 200 $\mu\mu$) that alone affected the gold leaves, but because it was found that these rays always seemed to bear the same proportion to those that caused fluorescence, and the latter could only be roughly measured by the eye. Waves of different length have different degrees of penetration for the same substance, and a given wave does not penetrate various materials equally well. In the general way the shorter the wave length the less the penetration. Ultra-violet rays of short wave length reach the tops of mountains but not the valleys, and still less penetrate glass windows. As the micro-organisms of lupus (tubercle bacilli) are mostly situated in the deeper layers of the skin it is absolutely necessary that the rays should have sufficient penetration to reach them. If a small antrum lamp be placed in the mouth in a dark room the light penetrates the skin and bone easily enough, but these rays would not kill the bacilli as they are mostly those towards the red end of the spectrum. The wave length is, however, so easily lengthened or shortened by impinging on various bodies that it would not be wise to dogmatise on this point. A ready means of testing the penetrating power of the extreme ultra-violet rays of the metal arc was wanted, and this was found in the gold leaf electroscope. The action of this instrument depends on a property possessed by the waves, chiefly those of shorter wave length than about 200 $\mu\mu$, to render gases through which they pass conductive. If the rays are directed against the ball or plate of a gold-leaf electroscope charged negatively the leaves fall together with a rapidity depending on the power of the light falling on them. The general arrangement is shown in the illustration (Fig. 1).

Fig. 1.



The leaves are charged till they diverge a certain distance, then the rays of the lamp are directed on to the ball or plate and the time taken that elapses before the leaves fall together. In this way the following facts were demonstrated:—1. Two pieces of quartz about 2·2 millimetres thick and separated from one another by a space of 10 millimetres, stopped 60 per cent.

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[1] Annalen der Physik, March, 1900.

hour to hour. I immediately gave her some of the fluid extract, 150 drops in two tumblers of water, which she drank in sips; it was with much difficulty that she could swallow even a little water. After some hours the attack was checked and the urine became clear. She remained for some time very weak as the result of the attack, but she has completely recovered and is now doing her work like the other Sisters.

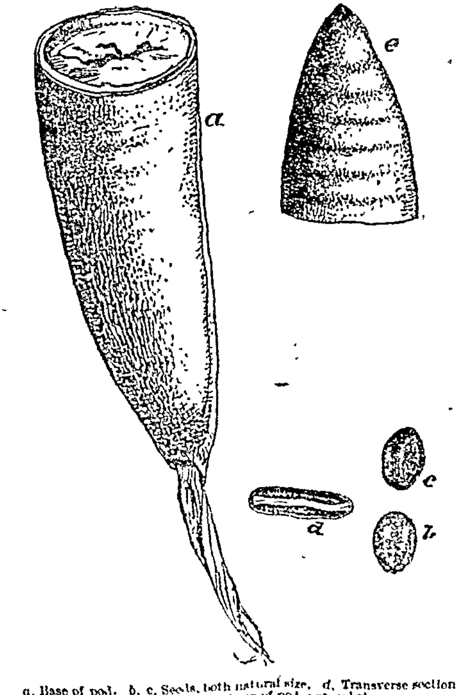
Such, then, is a *résumé* of the results obtained by the Mission Fathers and by myself from the employment of the native remedy in question Those results appear to me to be very encouraging, so far as they go, and I venture, therefore, to propose to my colleagues in the medical profession that they also shall make trial of the *cassia* preparation, and that they shall record their experience of its action, so that the question of the therapeutic value of the preparation may be determined. It is not an exaggeration to say that the discovery of a reliable remedy for blackwater fever is a matter of vital importance for the welfare of our colonies in tropical Africa.

I have sent a supply of the root of *Cassia Beareana* to Messrs. Christy and Co of 4, Old Swan-lane, Upper Thames-street, E.C., who will furnish gratuitously samples of the fluid extract of same to medical men and others desirous of testing the remedy.

### NOTE BY E M HOLMES, F.L.S.

The plant affording the root used by Dr. O'Sullivan-Beare as a remedy for blackwater fever is a small tree, from 20 to 30 feet high, having a trunk about six inches in diameter when fully grown and the habit or form of an apple tree. It belongs to a small group of trees in the genus *Cassia* (Nat Ord. *Leguminosæ*) of which *Cassia fistula* is the type. The trees of this group have long, hard, cylindrical or compressed pods, attaining from one to two feet in length, and divided internally into numerous cells by transverse partitions, each cell containing a seed transversely placed. The leaves have numerous pairs of leaflets about one inch or more in length. The species differ chiefly in the colour and markings of the flowers, the persistent or fugacious character of the bracts, and the shape of the pods and seeds, and by the presence or absence of a swelling in the middle of the longest stamens. The particular species which yields the blackwater fever remedy is very closely related to *Cassia abbreviata*, Oliv., to which, until I had seen the pod and seeds, I supposed it to belong; but although it has yellow flowers beautifully reticulated with reddish-brown veins and persistent bracts like that species, it differs from it in having a compressed, smooth, not hairy pod and oval seeds, and in having the swelling in the middle of the long stamens very pronounced. As it differs in essential characters from any species hitherto described I have named it in honour of its discoverer, *Cassia Beareana*, n. sp, and have given the following description of it in the *Pharmaceutical Journal*, Jan 18th, 1902, p. 42

FIG. 3.



a, Base of pod. b, c, Seeds, both natural size. d, Transverse section of seed enlarged. e, Apex of pod, natural size.

*Cassia Beareana, n. sp.*—A small tree attaining 20 to 30 feet, the young leaves not seen, but the inflorescence is shortly pubescent, especially on the rachis. The leaves are about eight to 10 inches long, and the leaflets in eight to 10 pairs, elliptical, obtuse, rounded, or very broadly cuneate at the base, glabrous, with reticulate venation. The leaflets are one and a quarter to one and a half inches long, and three-fifths to nearly an inch wide in the centre, petiolules about one line long, slightly rugose, the common petiole without glands. Racemes on (terminal and (?)) lateral shoots, rather short and subcorymbose, the rachis about three inches long, shortly pubescent, with persistent recurved bracts and bractlets, about one quarter to one-third of an inch long, linear, acuminate, and minutely glandular pubescent. Pedicels ascending, straight, slender, furrowed, faintly pubescent, or nearly glabrous, two and a half inches long. Petals obovate oblong, scarcely tapering to the base, three-fifths to three-quarters of an inch long, canary yellow, beautifully veined with dark red or chestnut veins. The longer stamens exceed the petals; the filaments are distinctly dilated near the middle. The young ovary is covered with appressed whitish hairs. Legume about 30 inches long, one inch broad, and half an inch thick, compressed, with the sutures not at all prominent, glabrous, or not visibly hairy, with the dissepiments showing on the surface as transverse lines about quarter of an inch apart. The seeds are blackish, brown, oval, about seven-sixteenths of an inch in length, and five sixteenths of an inch in width, and nearly one eighth of an inch in thickness, with a central longitudinal linear depression, and do not appear to be surrounded with pulp.

Pemba.

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# ON THE ULTRA-VIOLET LIGHT FROM A RAPID OSCILLATION HIGH-TENSION ARC, FOR THE TREATMENT OF SKIN DISEASES.

By HUGH WALSHAM, M.A., M.D CANTAB.,
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CHEST HOSPITAL, VICTORIA PARK.

IT is now established quite beyond question that sunlight and the light given off by the electric arc have the power of retarding the growth, or even of killing outright, various kinds of micro-organisms exposed to their influence. The credit of first having pointed out this action of light on bacteria undoubtedly belongs to Downes and Blunt who, as long ago as 1878, communicated a paper to the Royal Society on the *Influence of Light on Protoplasm*. The subject appears to have been quite lost sight of until 1892, when Professor Marshall Ward communicated a paper, also to the Royal Society, entitled, "Experiments on the Action of Light on the Bacillus Anthracis." Professor Ward says: "The results are as startling as they are important, for if the explanation given of the phenomena observed in the following experiments turns out to be the correct one we stand face to face with the fact that by far the most potent factor in the purification of air and rivers of bacteria is sunlight." Professor Ward treated the subject from a purely scientific point of view, and probably had no idea of the importance of his experiments in relation to the treatment of disease. The credit of having applied the knowledge of the bactericidal action of light therapeutically belongs without doubt to Professor Finsen He made use of both sunlight and the electric arc, but found the latter more efficacious. The next important communication on the subject is from the pen of Dr. Strebel of Munich to which reference will be made later.

Before giving any account of the experiments which form the subject of this paper I must explain that as soon as it became apparent that the best method of making

Angabe einer Methode zur besseren Ausnutzung der Bakteriziden Kraft des Voltabogenlichtes, von Dr. H. Strebel, in Munchen, Deutsche Medicinische Wochenschrift, No. 5 und No. 6, S. 69. und 86, 1901.

Harley street, W.

# TWO CASES OF UTERINE CANCER SUCCESSFULLY TREATED WITH CANCROIN.

BY PROFESSOR ALBERT ADAMKIEWICZ.

(*Translated for* THE LANCET.)

NOT long ago I published[1] a case of uterine cancer which had been treated by my method with cancroin and had been cured of very severe symptoms of the disease. The change for the better which speedily followed the use of cancroin and the complete recovery of the patient from a condition of terrible suffering—a recovery coincident with the prolonged administration of the remedy—must remove any doubt as to the connexion between the progress of the case and the effect of my treatment.

In June, 1900, this patient suffered from cancer which filled almost the whole of the true pelvis (*nahezu das ganze kleine Becken entfullenden*); in May, 1901, she was freed from it by injections of cancroin, and in the beginning of October, 1901, she called on me to thank me not only for her recovery but for its permanence. In June, 1900, the case was given up as hopeless by an eminent surgeon, but the excellent health which the patient enjoyed in October, 1901, was conclusively proved by the fact that a medical man who called on her found her engaged in scrubbing the floor in the house where she lived. This condition of the patient is a testimony to the efficacy of my method, and it also shows that the continued observation of a patient restored to health by cancroin is a public duty, in order that the merits of an excellent method of treating cancer, now at last discovered after thousands of years, may not, to the detriment of suffering humanity, be nullified by inadequate knowledge.

It is in all cases necessary to make certain beforehand of the presence of the conditions which must be combined in order that the success of my method of treating cancer may be assured; the frequency with which this occurs fills me with the hope that by systematic and at the same time strictly correct application of my method such cases will soon be no longer rarities but will be the rule, and I am encouraged in this by the fact that in the case now to be described improvement and recovery were brought about in a surprisingly short time by careful utilisation of all the experience that had been gained with my system of treatment.

The following description of the case was placed at my disposal by the medical man in attendance on the patient and will speak for itself.

## PREVIOUS HISTORY OF THE CASE.

"The patient, a married woman, 36 years of age, residing in Vienna, fell ill with severe hæmorrhage in February, 1901. Several gynæcological specialists who were consulted agreed in diagnosing cancer of the cervix uteri. Hofrath Dr. Chrobak raised the question of total extirpation of the affected uterus, but this was not carried out, only the cervix being scraped in the Sanatorium Furth on March 13th. Microscopical examination showed the disease to be cancer. Immediately after the operation Hofrath Chrobak declared that the case was one of those in which operation offered not the slightest prospect of success, and he gave a relative of the patient a description of the well-known stages through which the disease would pass and of the distressing manner in which it usually terminated, winding up his observations with the remark that it would be better for the patient if she did not awaken from the anæsthetic. This dismal picture of what was in store for the sufferer very soon received a melancholy confirmation, for the most dreadful pains were the immediate sequel of the operation and continued as a permanent symptom, alternating with hæmorrhages. The disease became worse and worse, and the patient was soon unable either to leave her bed, to sit up in bed, or to lie on her side Even her power of taking food suffered, for she vomited what she ate. Her bowels never acted without the help of medicine, defecation was extremely painful, and her urine had to be drawn off with a catheter. Repeated consultations with Hofrath Chrobak and Dr Herzfeld led to no result. Both of them pronounced the disease to be inoperable carcinoma; they said that the case was hopeless, and they could only sympathise with the patient and with me the medical attendant. Examination of the patient showed that in the position of the portio vaginalis there was now a dense-walled, easily bleeding, cup-shaped excavation, and above the sphincter and on the anterior wall of the rectum a tumour could be felt, very painful when touched, and of the size and shape of a pear. The abdomen was extraordinarily painful and palpation through its walls was impossible.

I was in despair and unable to offer any suggestion. In this extremity I applied to Professor Adamkiewicz in the middle of June. After he had seen the patient and examined her he pronounced the case to be too far advanced and declined to recommend any treatment, but on my earnest entreaty he reconsidered his decision. He gave the first injections of cancroin himself, prescribed the manner in which they were to be continued, and then left me to give them in accordance with a system adapted to their action and effects.

This treatment was a brilliant success. The hæmorrhage and abdominal pains disappeared promptly. On the second day of the injections the patient sat up in bed free from pain and quite at ease, and took her breakfast with relish. She soon had an excellent appetite and all kinds of food agreed with her. Fæces and urine were passed without pain; her strength increased; her condition improved manifestly; and a feeling of tranquillity and of confidence in her recovery did the rest. Repeated local examinations made at a subsequent period showed that the tumour which had formed above the sphincter and on the anterior wall of the rectum had entirely disappeared, and its former position was no longer indicated even by a sensation of resistance. The excavation in the cervix had become smaller and was smooth-walled. The patient, who four weeks previously could not move herself in bed, had now left her bed, walked freely about the house, and intended one of these days to go into the country quite cured.

I have to express my heartfelt thanks to Professor Adamkiewicz for saving my patient who had been given up by all the medical men previously called in consultation.

DR. KARL STOCK.

Vienna, VII. Burggasse 70, July 31st, 1901."

To the foregoing narrative, written by the medical man in attendance on the patient, I have to add what follows.

When I saw the patient for the first time in the middle of June, 1901, she had an earthy complexion and lay in bed shivering, lamenting, and dreading every movement. There was a cooling application on her abdomen which was distended, painful, and unable to bear the slightest touch. In the end of July—namely, after only six weeks' treatment with cancroin—I found her handsomely dressed, walking freely about the house, conversing cheerfully, free from pain, full of happiness and enjoyment of life. She was not only saved from impending death, she was restored to health. In the meantime I directed as a measure of precaution that the injections should be continued in a modified form in the country place to which she was going for the completion of her convalescence, but the carrying out of these orders was interrupted by an incident which was no less remarkable than unexpected, for certain females in whose care she was placed induced her to make a will in their favour and then persuaded her that it would be better for her not to allow the injections to be continued.

In the middle of August she complained of dysuria and tenesmus, and examination showed the existence of a doughy and very painful swelling of the uterus. It was immediately obvious to me that colonies of cancer coccidia, survivals from the previous illness, had subsequently attained further development and that the inflammation of the uterus must be due to them. I immediately gave most positive directions that the injections of cancroin should be resumed, but for the reasons already mentioned these orders were disregarded, and so the metritis had time to assume dimensions which threatened the patient's life. The pain which she suffered caused her to scream and almost drove her out of her mind; when she had an attack of it she could not stand or lie down or sit, and of the rays that affected the instrument. 2. When the space between the two discs was filled with water, from 10 to 15 per cent. of the remainder were stopped. 3. A film of transparent gelatin 0·04 millimetre thick stopped the whole of the rays. (This is in practical agreement with Dr. Strebel's result, that gelatin 0·5 millimetre thick stopped all rays below 257 $\mu\mu$.) 4. A block of ice six inches thick offered scarcely any more obstruction than the same column of air. 5. When the arc was formed between iron points the effect was double that due to zinc. The iron arc, however, was visibly the larger of the two. 6. The least film of iron oxide on the surface of the quartz stopped the effect almost entirely. Unfortunately, iron oxide is given off rather freely, and on this account it is not advisable to work with the quartz too close to the arc. On the whole iron seemed the most practical of various metals tried. According to some particulars recently published[2] of Dr. Bang's new arc lamp with water-cooled carbons, after carbon he prefers silver and some kinds of iron. The bactericidal power of this lamp is said to be 19 times that of an ordinary arc. In a more recent account of this lamp Dr. Bang[3] claims 60 times the efficiency.

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[1] Berliner Klinische Wochenschrift, 1901 No. 23.

The extraordinary transparency of ice to the rays seems a fact of much importance. Professor Finsen has proved that blood offers the chief obstruction to short waves. If therefore the part to be treated can be rendered anæmic by pressure, the ultra-violet rays have a greater chance of exerting their destructive action on the bacilli. Hitherto pressure has been the only means resorted to, but there seems to be no reason why cold should not be employed in addition. Since the heat from the high oscillation arc is at the most one-tenth that of an ordinary 10-ampère arc, a disc of ice one inch in thickness in front of the arc will last long enough for one exposure. Ice thus fulfils the double object of rendering the part anæmic and allowing sufficient compression to be applied.

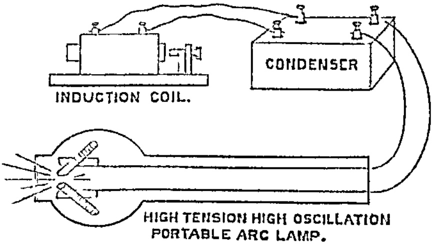
A few comparisons were made of the action of one of the ordinary 10-ampère lupus arc lamps now used, with the quick oscillation arc. In the lupus lamp the usual carbons were employed. The metal shield was fitted with a compressor consisting of two discs of quartz together equal to about five millimetres in thickness, with a layer of water between of about 13 millimetres. The gold-leaf electroscope was not appreciably affected and the fluorescent effect was only just visible. When the naked arc without any quartz or water was used there was just about the same effect on the gold leaves as with the quick oscillation arc, also naked. The fluorescent effect appeared to be about the same, but the eye cannot be depended upon when the general illumination is quite different.

Another comparison was made between the effects of a step-up transformer worked from the street alternating main and a 12-inch induction coil worked from eight cells of an accumulator battery (16 volts). The pressure of the transformer had been adjusted so that the arc formed was about that suitable for treatment. Speaking generally under these conditions no difference could be perceived. This result is surprising, but the number of oscillations of the current influences the light-giving powers of the arc to an extent that cannot be predicted. With the coil, at most 16 volts and five ampères = 90 watts were taken from the accumulators, most of which energy was wasted in the coil and condenser, while an ordinary arc takes 450 watts in the arc alone without the waste in any resistance that may be employed.

Cases of lupus vulgaris and lupus erythematosus have been under treatment in the electrical department by this source of light. Cases of the former variety of the disease make more progress than the latter. The time of exposure has been from 10 to 15 minutes. And here I would point out the importance of compression. Cases in which this can be efficiently applied (as, for example, lupus on the end of the nose) improve much quicker than cases in which the compression is more difficult. At the present time it is somewhat hard to tell whether a given case of lupus will do better with the x rays or the ultra-violet rays. Many observers appear to regard the treatment by x rays and by light as something quite different. When we consider, however, in how many ways ultra-violet light and x rays are alike the distinction between the two almost vanishes. Both act chemically, both produce fluorescence in bodies, both discharge the gold-leaf electroscope. The action on the skin is, however, somewhat different, although they are both capable of producing dermatitis and pigmentation. In the case of the light treatment dermatitis supervenes after some hours; whereas with x rays it may require even weeks to produce it. Again, the dermatitis produced by the ultra-violet rays soon resolves, but it is well known that the x ray form may take weeks or even months to heal. It is true that x rays have more penetration, but in passing through a body they generate secondary rays which have a great analogy to ultra-violet rays. It is probable that secondary rays are Roentgen rays very slightly penetrative and possibly intermediate between the rays from a soft tube and extreme ultra-violet rays.[4] There is, according to current belief, a great difference in their action on bacteria, the x rays being said to stimulate their growth while the violet and ultra-violet rays are known to kill. In fact, we may say that the only absolutely sure ground on which we may build is that the ultra-violet rays will kill bacteria outside the body. Other observers are treating cases of lupus with the static breeze and the Tesla condensing electrode. The Tesla electrodes have been used with success in the department, and it appears to me in all these various methods of treatment that the only one point they possess in common is the ultra-violet ray.

The illustration (Fig. 2) will sufficiently show the general form of the lamp as used in treatment in the electric department of the hospital. When used from the street mains great care is necessary to see that there is no defect in the insulation, otherwise a severe shock may result. When worked from an induction coil ordinary precautions only are required. But in all cases it is necessary to shield the eyes from the arc or severe conjunctivitis may result. The apparatus is about a foot long and the tube is one and a half inches in diameter. When the end is not closed by a disc either of quartz or ice the arc makes a considerable noise. It is of course quite easy for the patient to press the end against the skin when the patch of lupus is conveniently situated.

FIG. 2.



It has already been shown that all materials used as compressors, or heat arrestors, unfortunately obstruct many of the bactericidal rays. A simple plated grid as a compressor has therefore been tried. This allows the naked arc to be used for a limited time at a distance of one and a half inches from the skin. Ice, however, has so many advantages both from a theoretical and practical point of view that it has been adopted in nearly all cases. These advantages are so important that it may be well to enumerate them: (1) it is hard enough to cause efficient pressure; (2) it adds to this effect by increasing the anæmia by cold; (3) by its transparency it allows the individual lupus nodules to be clearly seen; and (4) it is transparent to the violet and ultra-violet rays of the spectrum and opaque to the red and infra-red.

So far as I can see from about two months' treatment of lupus patients the curative action of the light given off by this apparatus is satisfactory.

*Bibliography.*—On the Influence of Light on Protoplasm, by Arthur H. Downes, M.D. Aberd., and Thomas P. Blunt, M.A., Proceedings of the Royal Society, vol. xxviii., 1878-79, p. 199. Experiments on the Action of Light on Bacillus Anthracis, by H. Marshall Ward, F.R.S., Proceedings of the Royal Society, vol. lii., 1892-93, p. 393; see also Proceedings of the Royal Society, vol. li., 1892, p. 183. Remarks on Finsen's Phototherapy, by Dr. Valdemar Bie, Brit. Med. Jour., vol. ii., 1899, p. 825. Untersuchungen über die Bakterizide Wirkung des Hochspannungsfunkenlichtes nebst

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[2] Engineering, Dec. 16th, 1901.

[3] Brit. Med. Jour., Jan. 4th, 1902, p. 46.

[4] G. Sagnac: Annales de Chimie Physiologique, June, 1901.

time prior and up to the time of the shooting. The district attorney, also within a few hours after the crime was committed, proceeded to put the prisoner under the observation of local experts in mental disease—namely, Dr. Joseph Fowler (police surgeon), Dr. Floyd S. Crego, and Dr. James W. Putnam. These physicians had free access to him down to and during the trial, covering a period of nearly three weeks, during which they examined him repeatedly and made a careful study of his case with reference to his mental condition. The district attorney also permitted the experts on either side to confer together freely, and allowed those for the defence to have free access to all facts and information relative to the case in his possession—a proceeding which in effect was equivalent to the appointment of a commission of five experts, three for the prosecution and two for the defence, to determine the prisoner's mental condition. This course on the part of the district attorney marks a new departure in the methods of getting expert evidence in criminal trials where the question of mental responsibility is involved which is to be highly commended as a practical measure tending to eliminate much superfluous testimony and at the same time to minimise the danger of contradictory expert opinions.

In view of the great importance of the case it is regrettable that no experts were called to testify on the trial as to the prisoner's mental condition in order that it might appear on the record of the trial that his mental state was inquired into and determined by competent authority. Had the experts on either side been given the opportunity of thus stating officially their unanimous conclusion, together with the grounds on which it was based and the methods by which it was reached, it would have left in the public mind no room for reasonable doubt as to its absolute correctness, and that it had been arrived at only by the rules of professional conduct governing the examination of such cases.

The attorneys assigned by the court to the defendant, at the request of the Bar Association of Erie County, were ex-judges Loran L Lewis and Robert C. Titus, both prominent lawyers and highly respected citizens of Buffalo. For obvious reasons these gentlemen were reluctant to undertake what they regarded as a most distasteful task, and consented to do so only from a high sense of duty to the public, at the urgent solicitation of the President—the Hon. Adelbert Moot—and other prominent members of the Bar Association, on Saturday, Sept. 21st, preceding the trial, which began on Monday, the 23rd.

Respecting the defence, it appears that substantially no preparation was made beyond a fruitless effort of counsel to confer with the prisoner and the examinations made of him at their request by Dr. Hurd and the writer with reference to his mental condition, and a verbal statement by them to counsel of their conclusion that he was not insane. It also appears that no plea was entered by the attorneys for the defence, but Czolgosz, speaking for the first time in court, entered a plea of "Guilty" to the indictment, which plea the court promptly rejected and directed that one of "Not guilty" be entered on the record for the defendant.

Each juror on qualifying said, in answer to the usual question, that he had formed an opinion as to the guilt of the prisoner, but that his opinion could be removed by reasonable evidence tending to show that the defendant was innocent. And yet, to one accustomed to being in court and observing jurors when qualifying, it was difficult to avoid the impression that each of the jurors in this case held a mental reservation to convict the prisoner. Had Czolgosz been on trial for the murder of a common citizen instead of the President it is safe to say that not one of the jury as completed would have been accepted by the defence, and instead of getting a jury in approximately one and a half hours, that feature of the trial alone would probably have occupied several days.

Having in view the nature and importance of the case, the fact that no testimony was offered on the defendant's behalf and that practically no defence was made, beyond a perfunctory examination of jurors and a mild cross-examination of some of the people's witnesses which was limited to efforts to elicit information respecting the President's condition during his illness and of his body after death, and a summing-up by one of the counsel—Judge Lewis—which consisted mainly of an apology for appearing as counsel for the defendant and a touching eulogy of his distinguished victim, render the case in this respect a unique one in the annals of criminal jurisprudence.

The jury retired for deliberation at about 4 P.M. and returned in less than half an hour with a verdict of "Guilty of murder in the first degree." Czolgosz heard the verdict of the jury standing and without appreciable display of emotion. Several of the jurors were reported to have said after the trial that the jury was in favour of conviction unanimously from the first and could have rendered a verdict without leaving their seats, but deemed it best to make a pretence of deliberation "for appearance' sake." Czolgosz was remanded to gaol for two days and on Thursday, Sept. 26th, he was sentenced to be executed by electricity at Auburn Prison in the week beginning Oct. 28th, 1901.

When Czolgosz returned to his cell after his conviction he ate a hearty supper and soon thereafter went to bed and slept continuously till midnight, when the guard was changed, when he awoke for a few minutes and then slept again until 6 A.M., when he arose and had a short walk in the cell corridor, after which he made a careful toilet and at 7.30 A.M. partook of a hearty breakfast. He talked freely, as usual, on ordinary topics, but maintained his usual silence respecting his crime and would not talk of the trial or the verdict. On Thursday, Sept. 26th, he was removed from the Buffalo gaol to the State Prison at Auburn, New York, where he was confined in a "death cell" until his execution took place.

### THE EXECUTION.

Czolgosz was executed by electricity on the morning of Oct. 29th, 1901. The official witnesses, consisting of the Superintendent of State Prisons and other prominent New York State officials, several physicians, three representatives of the respective press associations, Mr. Spitzka and others, and the official physicians—Dr. John Gerin, prison physician, and myself—having been assembled in the execution-room and having received the usual admonition from the warden as to maintenance of order during the execution, the prisoner was conducted to the room a few minutes after 7 A.M. Every precaution was taken by the warden, who had immediate charge of the execution, to minimise the opportunity for notoriety or sensationalism on the part of the prisoner as well as to insure that his taking off should be effected in an orderly and dignified manner.

As Czolgosz entered the room he appeared calm and self-possessed, his head was erect and his face bore an expression of defiant determination. The guards, one on either side, quietly and quickly guided him to the fatal chair, the binding straps were rapidly adjusted to his arms, legs, and body, and the head and leg electrodes were quickly placed *in situ* and connected with the wire which was to transmit the lethal current through his body. These preliminaries occupied about one minute. Czolgosz offered no resistance whatever, but during the preparations addressed himself to the witnesses in a clear distinct voice in the following significant language: "I killed the President because he was the enemy of the good people—the good working people. I am not sorry for my crime. I am sorry I could not see my father." At this moment, everything being in readiness, the warden signalled the official electrician in charge of the switch, who immediately turned the lever which closed the circuit and shot the deadly current through the criminal's body, which was instantly thrown into a state of tonic spasm involving apparently every fibre of the entire muscular system At the same time consciousness, sensation, and motion were apparently absolutely abolished. Two electrical contacts were made, occupying in all one minute and five seconds. In the first contact the electro-motive pressure was maintained at 1800 volts for seven seconds, then reduced to 300 volts for 23 seconds, increased to 1800 volts for four seconds, and again reduced to 300 volts for 26 seconds—one minute in all—when the contact was broken. The second contact, which was made at the instance of the writer as a precautionary measure, but which was probably unnecessary, was maintained at 1800 volts for five seconds. That conscious life was absolutely destroyed the instant the first contact was made was conceded by all of the medical witnesses present; also that organic life was abolished within a few seconds thereafter. Czolgosz was pronounced dead by the attending physicians and several of the other physicians present, after personal examination, in four minutes from the time he entered the room; one minute of this period, as already stated, was occupied in the preliminary preparations, one minute and five seconds in the electrical contacts, and the remainder of the time in examinations by the physicians to determine the fact of death. The physicians present at the execution and at the necropsy the only position which was at all supportable for her was when she leaned over the back of a chair and remained hanging on it in a half-upright attitude for hours at a time, occasionally for five or six hours By good fortune for the patient there was a member of her family who was strong enough to break up the conspiracy which had been formed against her life and my treatment, and the moment that the injections of cancroin were resumed the metritis gave way as if at the word of command and the patient began to recover her health. The tenesmus and dysuria vanished. The uterus, the fundus of which could not on its upper side be reached from the rectum, was once more able to be palpated, and in the beginning of October—i e , after hardly four weeks of the resumed treatment with cancroin—it was again changed to a small, hard, uneven, globular mass, easily defined with the finger and no longer painful. Since that time the patient has had no pains ; she can move about quite well, can sit and lie down, and can empty her bladder and rectum without discomfort Painful contractions of the uterus and painful micturition attended by cramps are occasionally felt, when the remnants of the cancer devitalised by the cancroin recover themselves ; but the intervals between these attacks become longer as time goes on. When the attack of cramp is over not the slightest sign of ill-health, either subjective or objective, is recognisable in the patient She is therefore to be regarded not only as being in good health at the present time but as having been on two occasions saved by cancroin.

Vienna.

# THE TRIAL, EXECUTION, NECROPSY, AND MENTAL STATUS OF LEON F. CZOLGOSZ,

ALIAS FRED NIEMAN, THE ASSASSIN OF PRESIDENT McKINLEY.

BY CARLOS F. MACDONALD, A.M., M.D.,
PROFESSOR OF MENTAL DISEASES AND MEDICAL JURISPRUDENCE IN THE UNIVERSITY AND BELLEVUE HOSPITAL MEDICAL COLLEGE; EX-PRESIDENT OF THE NEW YORK STATE COMMISSION IN LUNACY.

*With a Report of the Post-mortem Examination,*

BY E A. SPITZKA,
OF THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

THE terrible shock which the assassination of President McKinley by Leon F. Czolgosz at Buffalo, New York, on Sept. 6th, 1901, imparted to the entire civilised world, and which naturally engendered in the public mind a mingled feeling of horror, vindictiveness, and revenge—a feeling which was exceeded only by the profound sense of sorrow and depression which took possession of the people when a few days later it was realised that, despite the highest efforts of surgical and medical skill, a fatal result to the distinguished victim was inevitable—naturally suggested, both to the lay and to the medico-legal mind, the need of inquiry as to the mental status and responsibility of the perpetrator of so repulsive and atrocious an act. Moreover, there are many persons who are disposed to hold that the enormity of such a crime is in itself sufficient evidence to warrant the opinion of the existence of insanity, merely because it seems to them inconsistent with the principles of ordinary rational conduct, even though aside from the act itself there be nothing in the entire life and conduct of the individual that is suggestive of mental disease On the other hand, there are many who, in view of the magnitude of the crime, would oppose the granting of exemption from the ordinary consequences of capital offences, even though the offender were a raving maniac. Suffice it to say that the position taken by such persons in either case is untenable and would be an untrustworthy test of responsibility as regards the ends of justice, whether viewed from a legal or a medical standpoint. It need scarcely be said that the question as to whether or not a certain act is the offspring of mental disease cannot always with safety be determined by the act itself but must be determined by all the attendant circumstances leading up to, and surrounding, the act. "An act of violence," says Ray, "must not be attributed to insanity merely because to a person of high culture and correct morals it seems inexplicable on the ordinary principles of human conduct."

According to the Code of Criminal Procedure of the State of New York, Section 21, the legal test of mental unsoundness, as applied to criminal cases, is based on the assumption that insanity is a question of law to be determined by the court, and that the question of responsibility in mental disease hinges upon a knowledge of right and wrong as to the particular act at the time it was committed ; whereas medical science holds that insanity, in its relation to crime, is always a question of fact to be determined like any other fact in evidence, aided, of course, in such case by the interpretation of expert opinion and evidence, and that whenever its presence can be so determined the accused should be absolved from responsibility, irrespectively of the form or degree of his mental disease or of the nature of the act committed. "All that medical science has to do in any such case," says Dr. John P. Gray, "is to say whether the deed springs from disease or not. If it does not the man is responsible, however ghastly, seemingly purposeless, or vindictive the act may be" In other words, medical science holds that the whole question of responsibility should rest upon the presence or absence of mental disease, and not upon a knowledge of right and wrong as regards the nature and consequences of the act in question, and that that which in fact is a condition of mental disease cannot in law be a condition of mental health The question to be determined then, in the case of Czolgosz from the legal standpoint, as embodied in the Code of Criminal Procedure of the State of New York, was : When he shot the President did he know the nature and quality of the act he was doing and that the act was wrong? If *this question could* be determined in the affirmative, then he was responsible under the law and punishable for the offence which he committed, even though he was medically insane, so to speak. On the other hand, the question to be determined from the standpoint of medical science was : Was Czolgosz at the time he committed the act a victim of mental disease or mental unsoundness? If so, according to the dictum of medical science, he was not responsible and hence not puni*shable for the act which he committed. These* are the sole questions upon which the guilt or innocence of the accused must rest, whether in the eyes of the law or in the judgment of medical science, and it follows logically that if he were guilty of crime owing to the absence of mental disease he was equally guilty within the intent and meaning of the statute. Such being the case the subject of the responsibility of the accused resolves itself into a question of health or *disease—sanity or insanity. Hence* the application of the legal test may be dismissed from further consideration here, and we may proceed to consider the question of his responsibility from a medical point of view.

## THE TRIAL.

The trial of Czolgosz, which took place in the city of Buffalo, New York, on Sept 23rd and 24th, 1901, the Hon. Truman C. White being the presiding justice, was neither attended by delay "nor harassed by the trivial technicalities of the law." The "machinery of justice" moved so smoothly and so rapidly that the jury was procured, the case tried, and a verdict of "Guilty" rendered within a period of two court days with sessions from 10 to 12 o'clock in the forenoons and from 2 to 4 o'clock in the afternoons, the time actually occupied being eight and a half hours in all The proceedings were marked by no melodramatic or sensational episodes or unseemly wrangle among counsel ; while the fact that, under the extraordinary circumstances, the trial was not anticipated or interrupted by any riotous demonstration against the prisoner—any attempt at mob or lynch law—when he appeared in public affords striking proof of the respect for law and order which prevails in the community where the trial was held Czolgosz was brought into court closely guarded by a double cordon of police and handcuffed to an officer on either side He was neatly dressed and cleanly in appearance, his face being clean shaven and his hair neatly combed

The preparation and trial of the case on the part of the people by the Hon. Thomas Penny, district attorney, and his assistant, Mr Haller, were well-nigh faultless Shortly after his arrest the district attorney procured from Czolgosz a statement several pages in length which was taken down in longhand, in narrative form, each page of which he signed after himself making corrections and revisions as to matters which he claimed the reporter had misapprehended This statement gave in detail facts concerning his premeditations and preparations for the crime, also his movements for some into the prisoner's mental condition and to report my conclusion to them as soon as I had reached one. They also assented readily to my proposal to invite Dr. Arthur W. Hurd to become associated with me professionally in the case, Dr. Hurd being the superintendent of the Buffalo State Hospital for the Insane and a competent alienist of large experience in mental diseases. It was also agreed that we should be allowed to confer freely with the district attorney and with the experts for the people after completing our personal examination of the prisoner. Being unable to establish communication with Dr. Hurd before evening of that day, and in view of the short time intervening before the trial, I decided to make a preliminary examination of Czolgosz alone, and did so that afternoon in the district attorney's office, first disclosing to him my identity and the object of my interview, and informing him of his legal right to decline to answer any question that I might ask him. I examined him again on the following day (Sunday) in the gaol jointly with Dr. Hurd and in the presence of one of his guards, who was questioned at length respecting his observations of him in the gaol, as to his habits of eating, sleeping, talking, reading, &c. We subsequently interviewed the district attorney and the superintendent of police, General Bull, who gave us all the facts and information in their possession respecting the case. The statement which Czolgosz made to the district attorney shortly after his arrest throws much light on his mental condition on the day of the crime, but that official deemed it his duty to refuse to allow me to publish it. We also conferred at length with the people's experts, Dr. Fowler, Dr. Crego, and Dr. Putnam, who stated to us separately and in detail their observations and examinations of him. We also observed him carefully in the court-room throughout the trial. After our examination of Czolgosz on Sunday we reached the conclusion, independently of each other, that he was sane, and we so informed his counsel on Monday morning before the trial began.

It should be said that owing to the limited time—two days—at our disposal prior to the trial, and the fact that his family relatives resided in a distant State and were not accessible for interrogation, we were unable to obtain a history of his heredity beyond what he himself gave us.

Czolgosz, as he appeared at the time of my examinations of him at Buffalo, may be described as a well-nourished, rather good-looking, mild-mannered young man with a pleasant facial expression; features regular; face smooth-shaven and symmetrical; mouth and ears well formed and symmetrical; teeth, none missing but in poor condition from neglect; tongue clean; palate, fauces, and uvula normal in appearance; eyes blue and normal in expression; pupils equal in size and normally responsive to light and accommodation; hair light brown and slightly curly; stature medium, five feet seven and a half inches; and weight, estimated, about 140 pounds. The extremities were in all respects normal. The external genitals were normal, excepting two small, flat, unindurated cicatrices on the mucous surface of the prepuce, probably the result of previous chancroids, although he denied having had venereal disease other than gonorrhœa. There were no signs of specific nodes or periosteal tenderness over the usual sites of these lesions, nor was there any evidence upon the head or body of traumatism, excepting a slight deviation of the nose due to a blow which he received at the time of the assassination and a superficial perpendicular cicatrix on the left face which he said was the result of a slight injury which he received when working in a barbed wire factory. There were no tremors or twitchings of the facial muscles, the tongue, or the hands. The pulse, the temperature, and the skin were normal, as also were the special senses, the knee reflexes, coördinating power, and the sensory and motor functions. Finally, a careful inspection of the entire visible body failed to reveal the presence of any of the so-called stigmata of degeneration. The almost perfect symmetrical development, especially of the head and face, is a noteworthy feature in Czolgosz's case, although had deviations been found the fact would have had little weight as tending to show mental disease or degeneracy, as marked asymmetries, both cranial and facial, are frequently observed in persons who are quite sane and are above the average in mental capacity. (Figs. 1 and 2.)

In answer to questions Czolgosz stated, in substance, that he was born in Detroit, Michigan, of Polish parents; that he was 28 years of age, was unmarried, and was a labourer by occupation; that he was a Romanist originally, but had abandoned that faith several years ago because he no longer believed in it; that he attended the common schools as a boy and had learned to read and to write; that he had used beer and tobacco, but not to excess; that he had done various kinds of unskilled labour such as farming, factory-work, &c.; that his mother was dead, and that his father, one brother, and a married sister were living; that, so far as he knew, there was no insanity in his family, and that he had not suffered any serious illness or injury during his life-time; that he had never been subject to fits, spasms, or vertigo; and that he usually ate and slept well, and that his bowels were always regular. He admitted having had sexual intercourse with women, but denied masturbation or other unnatural practices. Careful inquiry failed to elicit any evidence of delusion, hallucination, or illusion. When questioned as to the existence of enemies, persecutions, or conspiracies against him, he replied in the negative. He evinced no appearance of morbid mental depression, morbid mental exaltation, or of mental weakness or loss of mind; nor did he display any indication of morbid suspicion, vanity, or conceit, or claim that he was "inspired" or had "a mission to perform," or that he was subject to any uncontrollable impulse. In fact, as regards the existence of evidences of mental disease or defect, the result of the examinations was entirely negative. On the contrary, everything in his history, as shown by his conduct and declarations, points to the existence in him of the social disease, anarchy, of which he was a victim.

My last examination of Czolgosz was made jointly with Dr. Gerin, physician of Auburn Prison, the evening before his execution. This examination revealed nothing either in his mental or physical condition which tended to alter the opinion which I gave to his counsel at the time of his trial—namely, that he was sane—an opinion which was concurred in by all of the official experts on either side—namely, Dr. Fowler, Dr. Crego, and Dr. Putnam, for the people, and Dr. Hurd and myself for the defence, also by Dr. Gerin, the only other physician who examined him. Furthermore, the prisoner's manner, appearance, and declaration in the execution room, together with the post-mortem findings, corroborated most conclusively the original opinion as to sanity, while his dying declarations that he killed the President because he regarded him as "an enemy of the good people—the good working people," and that he was not sorry for his crime, all tend to stamp him as an anarchist. In fact, his bearing and conduct from the time of the commission of the crime to his execution were entirely consistent with the teachings and creed of anarchy. Moreover, neither the three careful personal examinations which I made of him—one alone, one with Dr. Hurd, and one with Dr. Gerin—the measurements of his body by the Bertillon system, nor the post-mortem findings, disclosed the slightest evidence of mental disease, defect, or degeneracy. This opinion is confirmed by the people's experts who repeatedly examined him and observed him from time to time from the day of the assassination to the close of the trial, and by Dr. Gerin, the physician of Auburn Prison, who observed him carefully during the four weeks that he was in that institution awaiting execution. Dr. Gerin has had exceptional opportunity for the study of criminals, both sane and insane, in his capacity as prison physician and previously as assistant physician at the State Hospital for the Criminal Insane.

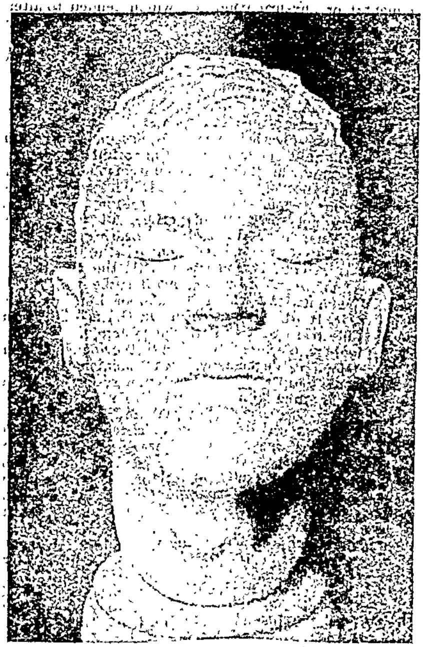
If Czolgosz was a victim of mental disease the question would naturally arise as to what form of that disorder he was suffering from. If in answer to this question we undertake to make a diagnosis by exclusion we find the following results. There was absolutely no evidence of insane delusion, hallucination, or illusion. There was none of the morbid mental exaltation or expansiveness of ideas that would suggest mania in any form, none of the morbid mental gloom and despondency of melancholia, none of the mental weakness of dementia, none of the conjoined mental or motor symptoms that are characteristic of paresis, nor was there anything in his manner, conduct, or declarations that would suggest the morbid vanity and egotism, the persecutory ideas or the transformation of personality which usually characterise paranoia or systematised delusional insanity. In fact, at no time during the period from his arrest to the time of his execution did he exhibit any of the mannerisms, boastful display, &c., or claim to have a "Divine inspiration" or "a mission," or make any complaint or suggestion of personal wrongs and persecutions

Dr. H. O. Ely of Binghamton, New York; Dr. W. A. Howe of Phelps, New York; Dr. G. R. Trowbridge of Buffalo, New York; Dr. W. D. Wolff of Rochester, New York; and Dr. C. R. Huntley of Buffalo.

### THE NECROPSY.

The necropsy was made by Mr. Edward A. Spitzka under the direction of the official physicians, Dr. Gerin and myself. The examination occupied about four and a half hours and embraced a most careful gross examination of all the viscera, attention being especially directed to the brain and its meninges. The accompanying masterly description of the post-mortem findings, and especially of the condition and anatomical structure of the brain, by Mr. Spitzka, leaves nothing to be said here upon this point beyond the fact that the necropsy revealed no evidence whatever of disease or deformity of any of the bodily organs, including the brain, which was normal in size, shape, weight, and appearance, and was well developed in all respects, a conclusion which was concurred in by all of the physicians present, several of whom had witnessed the execution. In deference to the expressed wish of the relatives of Czolgosz, and for reasons of a sentimental nature on the part of the State authorities, the prison warden declined positively to allow any portion of the body to be removed from the prison. Consequently, and regrettably, it was impossible for the examiners to retain honourable possession of any portion of the brain for microscopical examination and study. Accurate measurements, however, of the head and its appendages, of the face md of the exterior and interior of the skull, together with letailed anatomical drawings and descriptions of the brain vere made; also plaster moulds of the head from which a ast was subsequently made, and photographs of the same—full face and profile—were taken. These measurements, together with plates of the drawings and photographs, are presented in Mr. Spitzka's report of the necropsy.

FIG. 1.



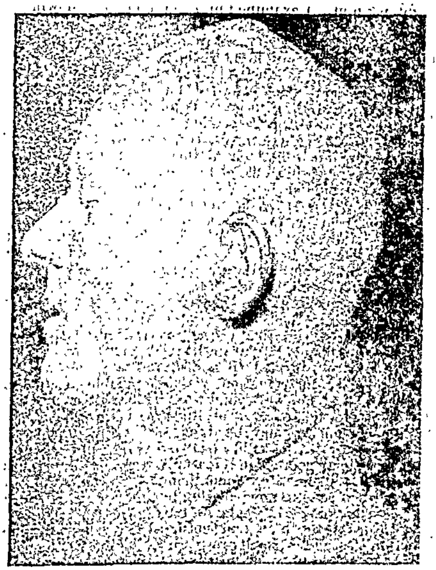
Full-face view of the plaster cast of the assassin Czolgosz. Unfortunately the left ear in the mould had been broken during transportation from Auburn to New York, and the fragments were pieced together with difficulty. The defects have been rectified in the photograph. On the subject the ears were perfectly symmetrical both as to form and size.

In view of its great importance, both to medical science and to medical jurisprudence I regard it as fortunate that the State was able to secure the services of so able a brain anatomist and skilled operator and draughtsman as Mr. Spitzka to make the post-mortem examination.

### THE MENTAL STATUS OF CZOLGOSZ.

On Thursday, Sept. 19th, 1901, I received a telegram requesting me to meet Mr. Adelbert Moot, President of the Erie County Bar Association, in Buffalo, New York, on the following morning. On my arrival in Buffalo the next day Mr. Moot informed me that he had sent for me for the purpose of requesting me to inquire into the mental condition of Leon F. Czolgosz, confined in the Buffalo gaol under indictment for the murder of President McKinley, and whose trial was to begin on the following Monday. Mr. Moot further stated in substance that three local experts had already examined the prisoner for the district attorney, but in view of the enormity of the offence and the fact that there obviously could be no legitimate defence other than insanity it was deemed important in the interests of justice that his mental condition should be investigated by other experts acting in behalf of the defence, or at least independently of the prosecution, to the end that the prisoner should be accorded every legal right, there being no desire to convict him if he were not mentally responsible, and that I had been selected for this responsible duty. With a deep sense of the responsibility involved I consented to act, provided that it should be distinctly understood that I was not there as a partisan expert in behalf of either side, but simply in a professional capacity to aid in determining the real mental state of the prisoner, and providing, further, that my selection would be acceptable to the eminent counsel whom the Bar Association had selected for the defence, should they decide to accept that duty, a matter which was then undecided. On the following morning (Saturday) Mr. Moot informed me that the gentlemen referred to had consented to act and invited me to meet them in conference, which I did, and which resulted in their requesting me to proceed at once to examine

FIG. 2.



Profile view of the cast.

# THE AFTER-HISTORIES OF 100 CASES OF SUPRA-VAGINAL HYSTERECTOMY FOR FIBROIDS.

By G. CREWDSON THOMAS, M.D., M.R.C.P. Edin.,
LATE REGISTRAR, CHELSEA HOSPITAL FOR WOMEN.

Although much has been written recently about the operation of supra-vaginal hysterectomy for fibroids, comparatively little has been published about the after-results of this operation upon patients. For this reason I have conducted an inquiry into the after-histories of all the patients at the Chelsea Hospital for Women who have, during a definite period, had the operation of supra-vaginal hysterectomy performed on them. Unfortunately, I have been unable to carry my researches further back than May, 1896, as it was at that date that supra-vaginal hysterectomy commenced to be the operation of choice at Chelsea, and I have continued them up to June, 1900. During that time there are 117 cases available for investigation, of which the earliest ones have an after-history of five years and the latest ones of one year.

The study of the after-histories of operation cases is never an easy matter, since patients come to hospital from distant homes in the country and afterwards return, a fact which makes a personal interview with them almost an impossibility. A second difficulty is that the class from which hospital patients are drawn is constantly changing its abode and so an address which finds them one year will fail to do so the next. However, owing to the kind assistance of the staff I have been able to communicate with 100 out of the 117. The majority of these I saw personally; the remainder filled up a simple schedule which I had drawn up, and in several cases the patient's own medical attendants communicated personally with me and gave me valuable information. Of the 17 patients whom I was unable to trace personally five have been seen at the hospital at periods varying from two to three years and have all been in excellent health. The tabulated results of my inquiry are given in Table I.

Before taking up each subject and dealing with it individually three patients—Cases 4, 20, and 45—must be noticed. All these patients made successful recoveries from their operations and left the hospital in good health, but have since died. The patient in Case 4 died six months after operation quite suddenly from cerebral hæmorrhage The patient in Case 20 was noticed to have a weak heart when in the hospital, but she bore the operation well; about a year afterwards she died from heart disease. The patient in Case 45 at the time of her operation was suffering from Bright's disease; she likewise made a good recovery, but died two years after the operation from her renal trouble In no case can the cause of death be ascribed to the operation, and in the two cases last mentioned the condition had commenced prior to the operation Two patients, Case 11 and Case 56, are in asylums; as their statements are untrustworthy, they are not included, but their condition will be fully referred to later

*Present condition.*—The first point that I wished to investigate was the general result of the operation on the patient (1) from her own standpoint and (2) from her capacity for work As regards the former the verdict was remarkable in its unanimity; in every case except two the benefit resulting from the removal of the tumour had, in the patient's opinion, fully compensated for any evil sequelæ, such as severe artificial menopause, constant abdominal pain, trouble in the scar, &c. Many were enthusiastic as to the relief gained, stating that they had never been so strong in their lives before and that they were enjoying perfect health. The sole exceptions were the patient in Case 31 who, having a weak constitution, took some time to rally from the operation, and the patient in Case 75 who had always suffered from great depression; as the latter patient was physically strong and healthy her personal statement as to lack of benefit could hardly be relied upon.

On estimating their capacity for work we find that out of the 95 cases available—i e., excluding the three patients who died and the two who were mentally deranged—the result is as follows: 86 (or 90·5 per cent) of the patients were able to perform hard work with comfort, although 12 of these cannot continue to do so for long; eight (or 8·3 per cent.) were only able to do light work; and one, for an ulterior reason, could do none. Nothing more need be said as to the 74 patients who were able to do a whole day's hard work without becoming abnormally fatigued. The fact alone testifies to the value that the operation has been to them. Case 15 is of particular interest. The patient, a professional vocalist, had been warned against the operation as, it was said, she would lose her voice. A large fibroid and two cystic ovaries were removed, but her voice, instead of becoming weaker, has increased both in power and in compass. 12 patients, although they were able to do their ordinary work with comfort, yet found that any extra exertion caused them to be easily fatigued; the majority of them are patients who have been operated upon more recently and have not yet had time to reap the full benefit of the operation. There were eight patients who were unable to do their ordinary work with comfort. The patients who were the subjects of Cases 6, 22, and 67 belonged to a restless, hysterical type; prior to operation they never possessed much energy and subsequently they have only done light work. The patient in Case 31 had always suffered from severe headaches, and these incapacitated her; the patient in Case 62 had to lead a quiet life owing to cardiac weakness; while the subject of Case 63 suffered from a floating kidney and the patient in Case 98 had been crippled by chronic rheumatism. These four patients suffered from extraneous diseases, and as far as their operation goes complete success has resulted. In Case 34 the patient has become so stout that hard work is an impossibility, and she will be referred to later. Finally, the patient in Case 33, although in complete health, was incapacitated from any work owing to total blindness. It would be difficult to find any operation which has restored such a large percentage of women to sound health as is revealed in these figures.

*Post-operative pain.*—The question of post-operative pain is always an important one. Of these cases 61 patients had not experienced any abdominal pain since the operation, while 31 patients stated that they had had some pain in the abdomen. In many cases this had ceased within a year. In a few it was still present but it caused them little annoyance. As a rule it was indefinite in character and depended largely on the condition of the bowel, but in no case had it been of sufficient severity to make an invalid of the patient. That the operation may have been the cause of the pain in some cases is probable, but every abdominal pain subsequently to an operation cannot be put down to that operation. In three cases only—Cases 33, 67, and 69—was the pain of a periodical description and in all these cases one ovary had been left. It was not severe and will be referred to later.

*The condition of the cervix.*—The condition of the cervix which has been left behind has been a subject of much discussion, many maintaining that its presence is only a source of danger. In the majority of cases in which I made a vaginal examination I found that the cervix was absolutely normal in size, and had it not been for the bimanual examination it would have been impossible to diagnose that the corpus uteri was absent. In some cases the cervix was smaller than normal and was atrophied, more especially in unmarried women who had had both their ovaries removed Some continental writers, as Zweifel and Freund,[1] have described carcinomatous degeneration of the cervix as the result of leaving it. In none of these 100 cases was there any condition that would lead to a suspicion of malignant change commencing, and there is at present no evidence to prove that the percentage of women suffering from carcinoma cervicis is higher in those who have had supra-vaginal hysterectomy performed than it is in those who have never been operated upon.

In making investigation into the discharge that may have occurred from the cervix it was found that in 66 cases there had been no discharge. In 20 cases there had been some discharge, usually viscid and opaque, causing little inconvenience; it had ceased altogether in 11 cases. Nine patients had a periodical loss every month; the discharge was usually stained with blood and as a rule it lasted for from two to three days. In each case it is to be noted that one or both ovaries had been retained. Case 26 is curious in that the patient had a discharge every second month for two and a which are so characteristic of paranoiacs; nor did he, during his trial, or subsequently, evince any indication of satisfaction or delight at being the central figure of the occasion and the observed of all observers, which he was; nor was there any attempt on Czolgosz's part to simulate mental disease. The refusal to talk with his counsel was perfectly consistent with the views which he expressed to the district attorney soon after his arrest—namely, that he did not believe in law and that he wanted no counsel. He did, however, converse with others—namely, the district attorney from time to time before his trial, also with his guards at the Buffalo gaol, with whom he frequently walked in the corridor fronting his cell for an hour or two at a time, conversing with them intelligently the while and making his wants as to bathing, toilet, tobacco, &c, known in a natural manner. He also conversed freely with the people's experts in their earlier examinations of him, and talked, though not so freely, with Dr. Hurd and myself, and when on arraignment for trial and formally asked to plead he promptly arose from his chair and answered in a clear voice, "Guilty." He also responded promptly when directed by the clerk of the court to "stand up and look upon the juror" as each of the jurors was sworn, and resumed his seat in each instance at the proper time. Beyond this he remained mute while in the court-room, and yet to anyone who observed him closely it was apparent that he was fully aware of, and attentive to, the proceedings.

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[1] German Gynæcological Congress, Berlin, 1899.

A recent writer—an eminent alienist—discussing the mental state of Czolgosz says:[1]

> We can perceive no indications of mental disease in Czolgosz, and were the absurdity of his statements and acts to be a criterion of mental unsoundness we should have to establish a new category of insanity for the reception of the various groups of anarchists, not to mention other terrorists. We deem it an error to regard Czolgosz's mutism in court when called on to plead and before his counsel as an attempt to simulate insanity. This conduct is in line with his rôle expressed in the theatrical declaration: "I am an anarchist and have done my duty." As it was his "duty" to slay the President it is his duty to go to death with his lips sealed, and with this intent first the plea of guilty and his conduct are perfectly consistent. He shows no reluctance to converse on matters disconnected from the crime, nor even of matters connected therewith provided they do not touch its preparations and thus betray his associates.

Aside from his reticence to his counsel there was nothing in Czolgosz's manner, appearance, or declarations that was indicative of insanity or of simulating. His reticence towards his counsel, as already intimated, was entirely consistent with his expressed disbelief in government and in law and his declaration that he shot the President with a clear knowledge of the nature and consequences of the act; and while he pleaded guilty in court and also proclaimed when he went to his death his reason for committing the crime, and declared that he was not sorry therefor in a manner which clearly implied that he regarded the act as a justifiable one, he did not claim that it was not a crime on his part, as paranoiacs usually do, nor did he in any way indicate that he regarded himself a victim of conspiracy or persecution. On the contrary, he declared to the people's experts that he fully understood what he did when he shot the President and was willing to take the consequences: "I know what will happen to me if the President dies—I will be hung." Justice White, commenting on Czolgosz's plea of "Guilty" when arraigned for trial—a plea which could not be accepted under the law—said: "The prisoner's plea of guilty indicates that he himself anticipates no escape from the penalty which the law prescribes for a crime of the character alleged in the indictment" Again, Czolgosz said: "I done my duty; I don't believe in voting; it is against my principles. I am an anarchist" He further said that he had been an ardent student of the doctrine of anarchy and had attended many "circles" where these subjects were discussed; that he had attended a meeting of anarchists "about six weeks ago" and also in July; that he had met and talked with an anarchist in Chicago about 10 days ago; that he belonged to a "circle" in Cleveland which had no name—"They called themselves anarchists"; and that he went to Cleveland "on no particular business" the Friday before the assassination He had been in Buffalo for two or three weeks prior to going to Cleveland "I planned to kill the President three or four days ago; after I came to Buffalo [from Cleveland] I don't believe in the Republican form of government and I don't believe we should have any rulers. I had that idea when I shot the President, and that is why I was there."

In explanation of his abandonment of his religious faith and his rejection of the services of a priest Czolgosz said the night before his execution: "I would like the American people to know that I had no use for priests. My family are all Catholics and used to go to church until the hard times of 1893. We had been taught by the priests that if we would pray God would help us along, but it did no good; it didn't help us and we stopped going to church at that time." He also said at this interview: "McKinley was going around the country shouting prosperity when there was no prosperity for the poor man. I am not afraid to die. We all have to die sometime."

It may be said that Czolgosz's belief which he expressed as he went to his death, that the President "was an enemy of the good working people," was a delusion, and such it undoubtedly was in the broadest sense of that term; that is, it was a false belief, but it was in no sense an insane delusion or false belief due to disease of the brain. On the contrary, it was a political delusion, so to speak—a false belief founded on ignorance, faulty education, and warped, not diseased, reason and judgment—the false belief which dominates the politico-social sect to which he belonged and of which he was a zealot, who in common with his kind believes that all forms of government are wrong and unnecessary—a body of malcontents whose teachings oppose all government and who advocate the use of violence to destroy the existing social and civil order of things. By his own admissions Czolgosz was a devout anarchist and a firm believer in the principles of "free society" as taught by Emma Goldman, of whom he was an ardent admirer, and others. These were the beliefs which furnished the motives for the murderous deed

That Czolgosz was an anarchist and was actuated in his crime by the motives which spring from the teachings of that sect are clearly shown by the following. 1. His declarations after his arrest—namely, that he did not believe in any form of government or law and that all rulers were tyrants who ought to be put down 2. His admissions to the district attorney that he was a member of anarchistic societies or circles and had frequently attended the meetings of the same; also that he had been influenced in his views by the "lectures" of Emma Goldman, and that when apprehended anarchistic literature was found on his person. 3. The recognition and commendation which he has received at the hands of anarchists at their meetings both in this country and abroad since his death, several of these societies having openly recognised him as such and lauded his action. The anarchists' creed teaches that when one of their number is selected to do a certain deed he is to proceed about it quietly and in his own way, taking no one into his confidence; that, having accomplished the deed, if apprehended he shall not admit his connexion with any other members of the circle; that if convicted and sentenced to die he shall go to his death without revealing his connexion with others, resting secure in the belief that he will be ever regarded by his associates as a martyr and a hero who died in the discharge of a noble duty. The course and conduct of Czolgosz from the beginning down to his death are entirely in keeping with this creed And, finally, the cool and courageous manner in which he met his death, and the fact that from the day of his arrest until he died he never uttered a word that could be used against his accomplices, if he had any, and that he died—as anarchists who suffer the death penalty always die—without uttering a word that would tend to incriminate any of his co-conspirators, all tend to stamp him as an anarchist.

Having viewed the case in all its aspects, with due regard to the bearing and significance of every fact and circumstance relative thereto that was accessible to me, I record the opinion unqualifiedly that Leon F. Czolgosz on Sept. 6th, 1901, when he assassinated President McKinley, was in all respects a sane man, both legally and medically, and fully responsible for his act.

*(To be continued.)*

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**HEALTH OF HONITON RURAL DISTRICT.**—Dr F. M. Reynolds, the medical officer of health of the Honiton (Devon) Rural District, reports that in 1901 the deaths were 120 and the births 220, which, calculated on a population of 9318, corresponded to a birth-rate of 23·6 per 1000 and a death-rate of 12·8 per 1000.

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[1] "The Mental Status of Czolgosz and Assassins Generally," by E. C. Spitzka, M.D., The Medical Critic, November, 1901.

Table I.—Showing the After-results of 100 Cases of Supra-vaginal Hysterectomy for Fibroids—(*Continued*).

| Case. | Years of age. | Date. | Operation. | Present condition. | Artificial menopause. |
|---|---|---|---|---|---|
| 34 | 31 | 1898.<br>April 7th. | Both ovaries removed; uninterrupted recovery. | Fair; only light work owing to obesity; occasional sharp abdominal pains with discharge. | Severely, decreasing now. |
| 35 | 36 | ,, 18th. | Right ovary retained; uninterrupted recovery. | Very good. | Very slightly. |
| 36 | 41 | ,, ,, | Right ovary retained; uninterrupted recovery. | Very good; slight yellow discharge. | Slightly; very seldom now. |
| 37 | 36 | ,, 22nd. | Right ovary retained; uninterrupted recovery. | Very good. | None. |
| 38 | 42 | May 3rd. | Right ovary retained; uninterrupted recovery. | Good, but tires easily; slight blood-stained discharge every month for two and a half years. | None till two and a half years after the operation; since then slightly. |
| 39 | 40 | ,, ,, | Right ovary retained; slow recovery owing to drained pyosalpinx. | Very good; slight discharge and intermittent pains. | Moderate. |
| 40 | 40 | ,, 16th. | Right ovary retained; slow recovery owing to pelvic effusion. | Very good. | None. |
| 41 | 44 | ,, 23rd. | Both ovaries removed; uninterrupted recovery. | Very good; has a yellow discharge. | Slight; almost ceased. |
| 42 | 47 | June 24th. | Right ovary retained; uninterrupted recovery. | Very good. | Severe; passing off, but still slight. |
| 43 | 40 | July 7th. | Left ovary retained; slow recovery owing to pelvic effusion. | Very good; slight pelvic pain for the first six months. | None till two years after; since then moderate. |
| 44 | 42 | ,, 15th. | One ovary retained; uninterrupted recovery. | Very good. | None. |
| 45 | 32 | ,, 25th. | Five months pregnant and had Bright's disease, good recovery. | Good till two years after, when she died from Bright's disease. | — |
| 46 | 46 | August 1st. | Both ovaries retained; uninterrupted recovery. | Very good; a regular blood stained monthly discharge for one and a half years. | None. |
| 47 | 37 | ,, 8th. | One ovary retained; uninterrupted recovery. | Very good. | ,, |
| 48 | 29 | Sept. 2nd. | Right ovary retained; uninterrupted recovery. | Good, but tires soon; has a regular monthly discharge. | ,, |
| 49 | 42 | ,, 12th. | Both ovaries removed; uninterrupted recovery. | Very good; slight pelvic pain after exertion; inclined to obesity. | Moderate; still slight. |
| 50 | 49 | ,, 26th. | Both ovaries retained; uninterrupted recovery. | Very good. | Severely; commenced some months before the operation. |
| 51 | 46 | ,, ,, | Right ovary retained; "white leg," otherwise good recovery. | ,, ,, | Slightly. |
| 52 | 42 | ,, 30th. | Both ovaries retained; uninterrupted recovery. | Good; slight pain in the pelvis after exertion | Moderately; almost passed off now. |
| 53 | 35 | Oct. 3rd. | Left ovary retained; uninterrupted recovery. | Very good. | Very slightly. |
| 54 | 55 | ,, 10th. | Left ovary retained; uninterrupted recovery. | Very good; had some pelvic pain for a few months after; ceased now. | None. |
| 55 | 43 | ,, 24th. | Right ovary retained; good recovery. | Very good. | Moderate; commenced some months after operation. |
| 56 | 50 | ,, 31st. | Both ovaries removed; uninterrupted recovery. | Good till November, 1900, when the patient, who was suffering from melancholia, was placed in an asylum. | — |
| 57 | 47 | ,, ,, | Both ovaries removed; good recovery. | Very good. | Moderately for the first year; ceased now. |
| 58 | 40 | Dec. 12th. | Both ovaries removed; "white leg," otherwise good recovery. | Very good; for the first two years had slight pain and discharge. | Severely ever since the operation. |
| 59 | 40 | ,, 19th. | Right ovary retained; secondary hæmorrhage; otherwise good recovery. | Good, but soon tires; every month has a blood-stained discharge. | None. |
| 60 | 42 | ,, 22nd. | Both ovaries removed; uninterrupted recovery. | Very good. | Severely; almost ceased now. |
| 61 | 26 | ,, ,, | Both ovaries removed; "white leg," otherwise good recovery. | Very good; some discharge for the first year. | Moderately; ceasing now. |
| 62 | 42 | 1899.<br>Jan. 23rd. | Left ovary retained; good recovery. | Fair; has a weak heart and can only do light work; slight discharge for first year. | None. |
| 63 | 38 | Feb. 6th. | Both ovaries retained; uninterrupted recovery. | Fair; suffers from a moveable kidney. | ,, |
| 64 | 37 | ,, 27th. | Both ovaries removed; uninterrupted recovery. | Very good. | Moderately. |
| 65 | 43 | ,, 27th. | Both ovaries removed; uninterrupted recovery. | ,, ,, | ,, |
| 66 | 49 | March 6th. | Right ovary retained; uninterrupted recovery. | ,, ,, | ,, |
| 67 | 54 | ,, 13th. | Left ovary retained; uninterrupted recovery. | Fair; only does light work; has some periodical pains and discharge. | Slightly. |
| 68 | 31 | ,, 27th. | Right ovary retained; uninterrupted recovery. | Very good. | None. |
| 69 | 28 | April 3rd. | Right ovary retained; uninterrupted recovery. | Very good; slight periodical right-sided pain. | ,, |
| 70 | 39 | ,, 10th. | Left ovary retained; uninterrupted recovery. | Very good, since suffering from acute rheumatism in 1900 has had some white discharge. | Very slightly. |

TABLE I — SHOWING THE AFTER-RESULTS OF 100 CASES OF SUPRA VAGINAL HYSTERECTOMY FOR FIBROIDS.

| Case | Years of age | Date | Operation | Present condition | Artificial menopause |
|---|---|---|---|---|---|
| | | 1896 | | | |
| 1 | 34 | May 5th | Both ovaries removed, good recovery | Very good, slight left sided pain and yellow discharge for two months, none since | Moderate, almost passed off now |
| 2 | 45 | August 10th | Both ovaries removed, uninterrupted recovery | Very good | Moderate, for 10 months, ceased now |
| 3 | 52 | Dec 28th | Both ovaries removed, uninterrupted recovery | Very good occasional abdominal pain, for the first four months had a yellow discharge | Moderate, came on some time after leaving hospital |
| | | 1897 | | | |
| 4 | 41 | Jan 8th | Both ovaries removed uninterrupted recovery | Died six months after operation from cerebral hæmorrhage | — |
| 5 | 39 | Feb 19th | Both ovaries removed, uninterrupted recovery | Very good | Moderate, almost ceased now |
| 6 | 50 | March 1st | Both ovaries removed, secondary hæmorrhage on the fourteenth day, reopened, good recovery | Fair, but can only do light work | Slight still some giddiness |
| 7 | 48 | ,, 12th | Both ovaries removed, uninterrupted recovery | Good but soon tires and gets neuralgic pains in the abdomen | Severe, lasted two years |
| 8 | 45 | ,, 22nd | Both ovaries removed, uninterrupted recovery | Very good, has had slight left sided pain | Moderate; slight at times still |
| 9 | 41 | April 20th | Both ovaries removed, uninterrupted recovery | Very good, pain in the bladder and some yellow discharge for two years until a ligature was passed | Moderate almost ceased now |
| 10 | 43 | June 14th | Both ovaries removed, uninterrupted recovery | Very good | Moderate, ceased now |
| 11 | 41 | ,, ,, | Both ovaries left, uninterrupted recovery | Very good till June 1900 when the patient was removed to an asylum suffering from delusional insanity | — |
| 12 | 35 | ,, 27th | Both ovaries removed, uninterrupted recovery | Very good | Moderate, lasting 18 months |
| 13 | 39 | ,, 28th | Both ovaries left, good recovery | ,, ,, | None |
| 14 | 44 | July 8th | Left ovary retained uninterrupted recovery | ,, | Slight for two years |
| 15 | 33 | ,, ,, | Both ovaries removed uninterrupted recovery | ,, ,, | Very severe at first, less now |
| 16 | 42 | ,, 12th | Both ovaries removed, uninterrupted recovery | Very good, at times a slight yellow discharge | Moderate for two years, almost stopped now |
| 17 | 30 | ,, 22nd | Both ovaries removed, uninterrupted recovery | Very good, slight blood stained discharge for six months after | Moderate for six months after operation, none now |
| 18 | 32 | ,, 26th | Both ovaries removed, uninterrupted recovery | Good, but tires easily | Severe, not yet finished |
| 19 | 44 | Sept 3rd | Right ovary retained uninterrupted recovery | Very good | Slight; lasting for the first few weeks |
| 20 | 43 | ,, 6th | Both ovaries left, uninterrupted recovery | Very good for one year when the patient died suddenly from cardiac disease | — |
| 21 | 45 | ,, 10th | Both ovaries removed, uninterrupted recovery | Very good | Moderately for first year, none now |
| 22 | 48 | ,, 13th | Both ovaries retained uninterrupted recovery, | Fair has indefinite abdominal pains and had thick discharge for 10 months after operation | Moderately, less now |
| 23 | 51 | Oct 28th | Both ovaries removed, uninterrupted recovery | Very good | Slight, passing off |
| 24 | 31 | Nov 1st | Both ovaries retained thrombosis of the left internal saphenous vein, good recovery | Good, at times a yellowish discharge | None |
| 25 | 35 | ,, 29th | Left ovary retained, uninterrupted recovery | Very good | ,, |
| 26 | 45 | Dec 16th | Left ovary retained, uninterrupted recovery | Very good, slight show every second month for two and a half years after | None till two and a half years after the operation, since then moderate |
| | | 1898 | | | |
| 27 | 39 | Jan 17th | Right ovary retained uninterrupted recovery | Very good | None |
| 28 | 32 | Feb 11th | Right ovary retained, small pulmonary embolism, otherwise good recovery | Very good slight show every month lasting two days | None |
| 29 | 40 | ,, 14th | Both ovaries removed uninterrupted recovered | Very good, some pain in the abdomen for the first year with an intermittent yellowish discharge | Slight |
| 30 | 33 | ,, 25th | Left ovary retained; uninterrupted recovery | Very good, slight abdominal pains at times | None |
| 31 | 30 | ,, | Left ovary retained, uninterrupted recovery | Fair Incapacitated by severe headaches is weak and nervous occasional sharp abdominal pains | ,, |
| 32 | 33 | March 14th | Right ovary retained uninterrupted recovery | Very good; has a regular blood-stained discharge every month | |
| 33 | 38 | April 1st. | Right ovary retained uninterrupted recovery | Good as regards the operation Is totally blind slight pains every month for the first year | ,, |

years; she had had the right ovary removed, but retained the left. There were three patients—Cases 26, 38, and 46—who, having had a periodical loss for two or three years, ceased to lose at the respective ages of 47, 45, and 47 years, showing that when the uterus has been removed and the cervix is sufficiently large and healthy to make an attempt at menstruation, this discharge will cease at approximately the same age-limit as when the normal uterus is present and fulfilling its function. The remaining patients who have a periodical loss at present are all below the age of 44 years. In the later cases in which the stump has been much smaller, and in some of which the cervical mucous membrane has been completely removed, there has been no instance of this loss.

*The artificial menopause.*—The effect of the removal or the retention of the ovaries on the after-condition of a patient has been a subject of much discussion in recent years. The advantages of conservative hysterectomy were first advocated by Mr. Bland-Sutton[2] in 1897 and this method has now been adopted when possible by many operators. Some writers, however, still consider that the presence of the ovaries is an exaggerated benefit,[3] that the severity of the menopause depends solely upon the age of the patient,[4] and that when the ovaries are left behind they suffer from congestion, swelling, and subsequent adhesion.[5] The uncertainty in the normal menopause makes it difficult to form a standard by which to judge the artificial. Just as no two women suffer equally in their normal menopause, so it is true that no two women experience the same sensations in an artificially induced menopause. For this reason it is impossible to form any conclusions or to make deductions from a few isolated cases; a large number must be used from which a normal standard may be adduced, so that individual idiosyncrasies may be judged from their true standpoint and be classified as abnormal when found to deviate from that which occurs in the majority.

In the present statistics I have classified the condition of the patient under five divisions. The first class is those who have had "none" of the phenomena of the menopause since the operation. The second class is those who have experienced it only very slightly; by this is meant those in whom the phenomena were so mild that the patient was hardly conscious of them. The third class is "slight"—those in whom the phenomena were more definite; they never caused much trouble, but the patient realised their presence The fourth class is "moderate"—those in whom the symptoms caused the patient considerable discomfort but never obliged her to cease her occupation. Lastly, "severe," in which the patient suffered from constant heats and flushes, headaches, and giddiness, which at times incapacitated her from work and caused great distress. The condition of the patient has been estimated as much as possible when they were at their worst. Three patients—Cases 26, 38, and 43—who only commenced to experience climacteric symptoms from two to three years after the operation have been classified as "none," and will be mentioned later.

Statistical results as to the severity of the artificial menopause are few and have been classified either—as by Kelly,[6] Werth,[7] Doran,[8] and Burckhard[9]—simply according to retention or otherwise of the ovaries, or else—as by Jordan[10]—according to the age of the individual. In Table II. both these factors have been taken into account, as the importance of the ovaries varies according to the age of the patient I have classified the ovaries into two groups, "removal" and "retention," and have divided the years into decades, except between the important ages of 40 and 50 years, where they have been further subdivided. Of the 95 cases that are available for investigation we find that in 36 patients both ovaries have been removed and in 59 one or both ovaries have been retained. If these cases are tabulated according to the severity of their menopause, we get the result as shown in Table II.

In Table II. it will be noticed that of the 36 cases in which both ovaries were removed every patient, except one, suffered more or less from an induced menopause, whereas many of those who had an ovary retained experienced no such symptoms. In considering those who have lost both their ovaries we find that two were between the ages of 20 and 30 years. The first patient, Case 94, who had only experienced slight symptoms, had had both her ovaries removed for disease nearly one year previously to her hysterectomy. In consequence she had already passed through the worst of her artificial menopause before her second operation; for this reason her case cannot be taken as giving a straightforward result. Between the ages of 30 and 39 years there were 11 cases. Seven of these patients, or 63·3 per cent., had experienced moderate symptoms, and four, or 36 3 per cent., had suffered from severe symptoms of their menopause. Between the ages of 40 and 44 years there were 12 patients. Four, or 33 3 per cent., suffered slightly; five, or 41 6 per cent., suffered moderately; and three, or 25 per cent., had severe symptoms Between the ages of 45 and 49 years there were seven patients. One patient, or 14·2 per cent., suffered slightly; five patients, or 71·4 per cent., moderately; and one, or 14·2 per cent., severely. Above the age of 50 years there were four patients. One only (Case 86) had both her ovaries removed and she experienced no ill-effects. This patient was 56 years of age when she was operated upon and she had passed through the menopause four years previously. Of the others two had suffered slightly and one moderately.

In turning to the 59 cases in which one or both ovaries had been conserved we find that not one of the three patients between the ages of 20 and 29 years had experienced any vasomotor disturbance. Between the ages of 30 and 39 years 23 patients had been operated upon Of these 18, or 78 2 per cent., had had no symptoms whatever; four, or 17·4 per cent., had been conscious of very slight disturbance, but practically of no importance; and one, or 4·3 per cent, had had slight symptoms. Between the ages of 40 and 44 years 20 patients were under observation. Of these 12, or 60 per cent., had had no symptoms; two, or 10 per cent., had suffered very slightly; three, or 15 per cent., had had slight symptoms; and three, or 15 per cent., had suffered moderately from flushes and heats and their concomita Between the ages of 45 and 49 years 10 patients had been operated upon. Of these four, or 40 per cent, had had no symptoms; two, or 20 per cent., had suffered slightly; two, or 20 per cent., moderately; and two, or 20 per cent., severely. These last two patients (Cases 42 and 50) were aged respectively 47 and 49 years. The patient in Case 50 had commenced to experience the ordinary symptoms of the menopause about two months prior to the operation; since the operation the menopause had been very severe. There were three patients over 50 years of age. Two had had no symptoms of the menopause and had not noticed any previously to their operation and one patient had slight symptoms. In comparing the percentages of the two sets of cases from their ovarian standpoint alone we get the following results (Table III.):—

TABLE III.

| Severity of the menopause. | Ovaries removed. | Ovaries retained. |
|---|---|---|
| None ... ... ... ... ... .. ... | 0 per cent. | 66 per cent. |
| Very slight ... ... ... ... ... | 0 ,, | 10 1 ,, |
| Slight . ... .. ... ... ... ... | 22·8 ,, | 11·8 ,, |
| Moderate ... ... ... ... ... ... | 54·2 ,, | 8·4 ,, |
| Severe . ... ... ... ... | 22 8 ,, | 3·3 ,, |

Table III. shows the advantage of keeping the ovaries as a general principle, irrespectively of age. If we now compare the results, taking into account the age of each patient, we get a still more striking result (Tables IV., V., and VI.):—

TABLE IV.

| Severity of the menopause. | 34 patients between 30 and 39 years of age. | |
|---|---|---|
| | Ovaries removed in 11 cases. | Ovaries retained in 23 cases. |
| None .. .. ... ... ... ... ... | 0 per cent. | 78 2 per cent. |
| Very slight ... ... ... ... ... | 0 ,, | 17·4 ,, |
| Slight .. ... ... ... ... ... ... | 0 ,, | 4·3 ,, |
| Moderate ... ... ... . ... ... | 63·3 ,, | 0 ,, |
| Severe . . .. ... ... .. .. | 36 3 ,, | 0 ,, |

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[2] Transactions of the Obstetrical Society of London, vol. xxxix., p 292.
[3] Doran: Brit. Med. Jour., Sept 15th, 1900.
[4] Jordan · British Gynæcological Journal, July, 1899, p 386.
[5] Fritsch: Centralblatt fur Gynäkologie, No. 5, 1899.
[6] Brit. Med. Jour., January, 1898.
[7] German Gynæcological Congress, 1899.
[8] Brit. Med. Jour, September, 1900.
[9] Zeitschrift fur Geburtshulfe und Gynakologie, Band xliii., Heft 1.
[10] British Gynæcological Journal, July, 1899.

TABLE I.—SHOWING THE AFTER-RESULTS OF 100 CASES OF SUPRA-VAGINAL HYSTERECTOMY FOR FIBROIDS—(*Continued*).

| Case | Years of age | Date. | Operation. | Present condition. | Artificial menopause. |
|---|---|---|---|---|---|
| | | 1899 | | | |
| 71 | 45 | April 28th. | Both ovaries removed, uninterrupted recovery. | Good but soon tires, pelvic pains at times and slight discharge. | Moderately. |
| 72 | 35 | May 1st | Left ovary retained; good recovery. | Very good. | None. |
| 73 | 42 | June 9th. | Both ovaries retained; uninterrupted recovery. | " " | " |
| 74 | 42 | ,, 26th | Left ovary retained; good recovery. | " " | " |
| 75 | 49 | Oct. 30th. | Left ovary retained; uninterrupted recovery. | Good, but tires easily; is very hysterical. | " |
| 76 | 44 | Nov. 3rd | Both ovaries retained; uninterrupted recovery. | Very good. | " |
| 77 | 40 | ,, 27th. | Both ovaries removed; uninterrupted recovery. | " " | Slightly. |
| 78 | 36 | Dec 4th. | Both ovaries retained; uninterrupted recovery. | " " | None. |
| 79 | 43 | ,, ,, | Both ovaries retained; uninterrupted recovery. | " " | Very slightly. |
| 80 | 46 | ,, 14th | Both ovaries removed; pulmonary embolism; otherwise good recovery. | Very good; had some pain for the first year in the left side. | Moderately. |
| | | 1900. | | | |
| 81 | 51 | Jan 11th | Both ovaries retained; good recovery. | Very good | None. |
| 82 | 43 | ,, 15th. | Both ovaries removed; uninterrupted recovery. | Good, but tires easily, some discharge for a year | Severely; becoming less now. |
| | 46 | ,, 28th | Right ovary retained; uninterrupted recovery. | Very good | None |
| 84 | 32 | Feb 19th | Left ovary retained; uninterrupted recovery. | " " | " |
| 85 | 42 | ,, 26th. | Left ovary retained; uninterrupted recovery. | Good, but tires soon, yellow discharge for five months | Very slight for from the first two to three months; none since. |
| 86 | 56 | March 8th | Both ovaries removed; uninterrupted recovery. | Very good; slight discharge for the first five months | None. |
| 87 | 35 | ,, 23rd. | Both ovaries retained; uninterrupted recovery. | Very good. | " |
| 88 | 34 | ,, 26th. | Both ovaries removed; good recovery. | " " | Severely for six months after the operation; becoming less now. |
| 89 | 37 | ,, ,, | Both ovaries removed; uninterrupted recovery. | Good; rather depressed | Moderately. |
| 90 | 40 | April 16th. | Both ovaries removed; uninterrupted recovery. | Very good; at times some discharge. | Slightly; passing off now. |
| 91 | 39 | ,, 9th | Both ovaries removed; uninterrupted recovery. | Very good | Moderately. |
| 92 | 29 | ,, 16th. | Right ovary retained; uninterrupted recovery. | " " | None. |
| 93 | 42 | ,, 23rd. | Left ovary retained; uninterrupted recovery. | " " | " |
| 94 | 29 | May 7th. | Both ovaries had been removed 10 months previously for disease; uninterrupted recovery. | " " | Slightly since the operation. |
| 95 | 40 | ,, 14th | Both ovaries retained; uninterrupted recovery. | Good, but tires soon | None |
| 96 | 36 | ,, 17th. | Left ovary retained; "white leg," otherwise good recovery. | " " | Slightly; becoming less now. |
| 97 | 42 | June 25th. | Right ovary retained; uninterrupted recovery. | Very good. | None. |
| 98 | 49 | July 2nd. | Left ovary retained; good recovery. | Fair; has rheumatism, slight discharge | Slightly. |
| 99 | 38 | ,, ,, | Left ovary retained; uninterrupted recovery. | Very good | None. |
| 100 | 32 | ,, 3rd | Left ovary retained; uninterrupted recovery. | " | Very slightly. |

TABLE II.—SHOWING THE SEVERITY OF THE MENOPAUSE AT VARIOUS AGE-PERIODS.

| — | OVARIES REMOVED Age-periods. | | | | | OVARIES RETAINED Age-periods. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 20-29 years | 30-39 years | 40-44 years. | 45-49 years | 50 years and over. | 20-29 years. | 30-39 years. | 40-44 years. | 45-49 years. | 50 years and over. |
| None ... .. | — | — | — | — | 1 | 3 | 18 (78 2°/o). | 12 (60 °/o). | 4 (40°/o). | 2 |
| Very slight .. ... | — | — | — | — | — | — | 4 (17·4 °/o) | 2 (10°/o). | — | — |
| Slight ... .. ... | 1 | — | 4 (33 3°/o) | 1 (14 2°/o). | 2 | — | 1 (4 3°/o) | 3 (15°/o). | 2 (20°/o). | 1 |
| Moderate .. ... | 1 | 7 (63 3°/o). | 5 (41 6°/o) | 5 (71 4°/o). | 1 | — | — | 3 (15°/o). | 2 (20°/o). | — |
| Severe . ... ... | — | 4 (36 3°/o). | 3 (25°/o) | 1 (14 2°/o) | — | — | — | — | 2 (20°/o) | — |

bowel or bladder, but on investigating these cases we find that only two patients suffered from lack of proper control over the bowel; they were usually constipated, but when by artificial means the bowels were opened they were unable to control them. As regards the urinary system, eight patients have had some trouble in micturition since the operation—in one case a ligature being passed per urethram—but this trouble has in every case ceased after the first year.

*Sexual instincts.*—The influence of hysterectomy, with or without conservation of the ovaries, upon the sexual instincts is a subject about which little is known and upon which great diversity of opinion exists. Out of the 95 patients 64 were unmarried, widows, or living apart from their husbands, but of the remaining 31 we find that in 19, or 61·2 per cent., the marital relations were unaltered (seven of these had had both ovaries removed). Nine of the patients, or 29 per cent., stated that their relations were not so good as formerly (only two of these had had both ovaries removed); and three, or 9 6 per cent., found these relations improved; of these three patients the one who had this characteristic most markedly had had both her ovaries removed. From these facts neither the uterus nor the ovary appears to be essential for sexual instincts. The only factor which seems to have any bearing upon the condition is age. In those in whom a change had occurred the ages in seven cases were over 40 years and the remaining two patients were only just under that age, whereas three-fourths of those who had experienced no change were under 40 years of age. Whatever the cause may be, in the vast majority of cases hysterectomy does not interfere with the sexual passions.

*Conclusions.*—In recapitulating the most prominent conclusions it may be stated that from the standpoint of the patients the operation is an eminently satisfactory one and their capacity for work is greatly increased. The statistics clearly demonstrate that one ovary should be retained, but that the importance of this diminishes in proportion as the age of the patient approaches more closely the climacteric period The operation *per se* causes no tendency to insanity, but a certain number of patients complain of a diminution in their powers of memory. The pain and discharge resulting from the operation are very slight; the functions of the bowel and bladder are not usually interfered with, and the sexual sensations, as far as can be gathered, are not generally influenced by the operation.

In conclusion, I must express my indebtedness to the staff of the Chelsea Hospital for Women, who so kindly placed their patients at my disposal and without whose assistance this investigation could not have been made.

London.

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# A CASE OF RECURRENT SARCOMA WITH APPARENTLY SPONTANEOUS CURE AND GRADUAL SHRINKING OF THE TUMOUR.

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THE following case seems to derive an exceptional interest from the fact that, so far as I can gather from the literature, nothing similar has been recorded. The facts have been carefully revised and all possible sources of error eliminated; indeed, in view of the unusual and unexpected result, I have been sceptical of everything that could admit the least suspicion. Coley,[1] in his article on the treatment of malignant tumours by mixed toxins and cultures of streptococcus erysipelatosus and bacillus prodigiosus, collects statistics of cases thus treated, and if his figures are at all accurate the results are certainly impressive; but after referring to the analogous cases in which cure has resulted from a supervening attack of erysipelas he goes on to add: "It would be somewhat remarkable that these cases should be the first, and thus far the only ones with both clinical and microscopical diagnosis of malignancy to disappear spontaneously, and it would be more remarkable still that this disappearance should be coincident with the beginning of the treatment with the toxins." Now, unless there has been some gross error of observation or deduction, the case here recorded stands quite apart from those of Coley, for there was no injection of toxins or any spontaneous attack of erysipelas, yet the tumour shrank in a most remarkable manner, and so far as its malignancy is concerned may be regarded as cured.

The patient, a strong, healthy-looking woman, aged 36 years, married, and with two children, was admitted to the Glasgow Royal Infirmary on Nov. 21st, 1900. She was absolutely free from ailment, and came into the hospital simply because a swelling on the back was annoying her and she wished to have it removed. This tumour was large and pendulous, being attached to the left side of the back by a base nine inches wide and rather less than four inches in vertical measurement; the apex hung down for almost four inches below the lower margin of its attachment to the back, while the upper margin was just below the inferior scapular angle. It was soft, but not fluctuant, slightly nodulated, and had the appearance of a lipoma undergoing degeneration; the skin covering the dependent portion was of a dark reddish colour. The tumour was regarded as simple, partly because of its character and partly because its history went back to the patient's childhood, though it had grown considerably in recent years.

On Nov. 23rd Dr. D. McK. Dewar, acting for Dr. D. Newman, removed it freely with all the discoloured skin, and remarked at the time that in three respects it differed from an ordinary lipoma: (1) the tissue was of a dirty greyish-yellow colour and very friable; (2) it was exceedingly vascular; and (3) its margins were diffuse and indefinite. After the operation hæmorrhage was so free that the dressings had to be frequently changed in the first few hours; thereafter they were left for four days untouched. On the 27th it was observed that the dressings had become tight and on exposing the back the tumour was found to be almost as large as before operation In the expectation that this might be due to accumulation of blood-clot beneath the flaps a portion of the wound was opened up, but no blood could be expressed, even when a director was introduced and worked about inside the wound. It was therefore concluded that the swelling was due to a rapid re-formation of the tumour. By an unfortunate oversight the tumour first removed had been destroyed without microscopical examination; but at this stage two small portions of the tissue were removed. One of these I hardened and stained myself, the other was sent to Dr. C. Workman, pathologist to the infirmary. The sections obtained from the first portion were examined by Dr. Newman, by Dr. Dewar, and by myself; and the recognition of sarcomatous tissue, chiefly round-celled, was unhesitating. Dr. Workman's quite independent report described the tissue as a mixed round-cell and spindle-cell sarcoma.

A week later the operation wound had begun to ulcerate along its margins, and it was decided to attempt a wider removal, but when on Dec. 4th the patient was placed on the table and anæsthetised, the tumour had attained such a size and was so diffuse in its margins that further radical interference was considered out of the question; the ulcerated edges were therefore cut away and the wound was again stitched up. During the remaining days of her residence in the infirmary the patient looked and felt very ill and weak. A bad prognosis was given and she was dismissed on the 13th. After this several medical men saw her and all took a gloomy view of the case; but in spite of everything she improved and a month after dismissal from the hospital a letter was received from her own medical attendant stating that the operation wound had almost completely healed. When I visited her at her home in the country on Feb. 9th, 1901, I reported as follows: "The operation wound has entirely healed up, with only a small scab at its lower extremity, and leaves a firm healthy-looking cicatrix. The tumour is much less tense than at the time of dismissal and shows a tendency to return to the pendulous form which it had when first seen; it is flaccid and quite painless. At its anterior margin are some subcutaneous livid patches which were noticed at the time of the recurrence of the tumour, but these do not appear to have changed at all or to be spreading. The patient's general condition is much improved; she is able to be up and about, eats with a good appetite, and in general feels very comfortable." She again reported herself at the infirmary in April and the tumour seemed to be still further diminished in size.

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[1] Twentieth Century Practice, vol. xvii.

A remarkable difference is noted by Table IV. which shows the extreme value of the ovaries in warding off the symptoms of an artificial menopause at this age.

TABLE V.

| Severity of the menopause. | 31 patients between 40 and 44 years of age. | |
|---|---|---|
| | Ovaries removed in 11 cases. | Ovaries retained in 20 cases. |
| None ... ... ... ... ... | 0 per cent. | 60 per cent. |
| Very slight ... ... ... ... | 0 ,, | 10 ,, |
| Slight ... ... ... ... ... | 33·3 ,, | 15 ,, |
| Moderate ... ... ... ... | 41·6 ,, | 15 ,, |
| Severe ... ... ... ... ... | 25 ,, | 0 ,, |

The same difference is to be noticed here also, but not to such a marked extent.

TABLE VI.

| Severity of the menopause | 17 patients between 45 and 49 years of age. | |
|---|---|---|
| | Ovaries removed in 7 cases. | Ovaries retained in 10 cases. |
| None ... ... ... ... | 0 per cent | 40 per cent |
| Very slight ... ... ... | 0 ,, | 0 ,, |
| Slight ... ... ... ... | 14·2 ,, | 20 ,, |
| Moderate ... ... ... ... | 71·4 ,, | 20 ,, |
| Severe ... ... ... ... | 14·2 ,, | 20 ,, |

Between these ages the percentage is still slightly in favour of retaining the ovaries although their value here has decreased greatly. The menopausal symptoms which have occurred in some of the older patients in whom the ovaries were retained may probably be ascribed not so much to the effect of the operation as to the onset of the natural climacteric.

Considering these tables as a whole, the striking value of the presence of an ovary in warding off the severity of an artificial menopause is very clearly demonstrated, and although there is no definite rule which applies to every patient without exception yet there is a governing principle. There is a ratio between the age of the patient and the severity of the menopause. The younger the patient who has her ovaries removed the more severe will be her artificial menopause; as the patient becomes older the nearer will the artificial menopause resemble the normal climacteric. If the ovaries be retained the induced menopause is practically avoided below the age of 40 years, above that age the ovaries decrease in value every year. It may safely, then, be stated that the artificial menopause is dependent upon two factors—the removal or the retention of the ovaries and the age of the patient.

If, on the other hand, we examine these 100 cases for ill-results following the retention of the ovaries we find that in no case has their presence threatened to invalidate the success of the operation. In examining the 31 cases, which included every patient who had had any form of abdominal pain since operation, we find that 13 come from the 36 cases who had both ovaries removed and 18 from the 59 in which both ovaries were retained; the proportion of painful symptoms being less in those with ovaries, the pain cannot be indiscriminately ascribed to their presence. In three cases alone was there slight periodical abdominal pain every month. Therefore, in comparing the advantages to be derived with the risks that are involved in the retention of the ovaries, there is no doubt but that the advantages far outweigh the very slight possibility of future trouble that may be occasioned by their presence.

It has been a matter of some speculation as to what happens to the ovaries when they are left in the pelvis. From these cases it seems probable that in certain patients they continue to perform their functions in the same manner as formerly, but in a less degree. The monthly cycle of the patient's life remains unchanged, ovarian influence continues, and in some cases, where there has been sufficient uterine tissue to secrete left behind, there is an attempt at menstruation, as has been formerly mentioned. In other cases—such as in Cases 33, 67, and 69—there is a certain amount of discomfort and pain periodically every month. How long an ovary under these changed conditions will continue to exercise its influence over the system is uncertain, but in three cases—Cases 26, 38, and 46—the periodical discharge ceased about the age of 46 years. These patients then underwent a normal climacteric. This, however, is not always the case, as is shown by the fact that a certain number of patients, although their ovaries have been conserved, yet have experienced some symptoms, though slight, of the menopause soon after operation. It may be that in these cases the ovary has become in some way injured by the operation and its vitality impaired; if this is so, it would also seem that the older the patient the more easily is this ovarian function interfered with. In several cases the ovaries were removed because they were markedly diseased, but this pathological condition has not in any way mitigated the severity of the ensuing artificial menopause. Two patients only—Cases 34 and 49—complained of obesity since their operations, and in Case 34 this increase in weight prevented the patient from doing hard work. In both cases the ovaries had been removed.

*The mental condition.*—There has always been a recognised relationship between the uterus with its appendages and the mental condition. On investigating these cases with a view to finding out any change that may have occurred subsequently to operation it is noticed that in the majority of cases there has been no change in their mental attitude; in a few depression and irritability have been complained of, but this usually existed as a concomitant of the menopause. Two patients, however—Cases 11 and 56—require special notice, as they are inmates of asylums. The former of these was operated upon on July 14th, 1897. It was a case without complications and both ovaries, being in a healthy condition, were left *in situ*. While in the hospital the mental condition of the patient was unstable, but she made a good recovery and returned to her former situation as a domestic servant. Her health improved greatly and she remained in her situation until May 4th, 1900—a period of nearly three years. She then had to be removed to an asylum suffering from melancholia. I am indebted to the medical superintendent of the County Asylum, Brookwood, for the following particulars of her present condition. He states that she is depressed and miserable, hears supernatural voices talking to her, and that she has lately developed sexual delusions. He adds that in his opinion the operation could only have had a beneficial effect. This patient seems to have had a tendency towards insanity which developed irrespectively of her operation. The other patient was operated upon in November, 1898 In her case both the ovaries were removed, but nothing abnormal was noticed in her mental condition. She made an uninterrupted recovery and went out to service as a lady's maid; she was quiet and bright and for 18 months was in very good health. The lady with whom she lived died suddenly; this seemed to upset her very much and in October, 1900, she had to be placed in the Three Counties Asylum. The assistant medical officer of that institution has communicated with me, and in his opinion her present mental condition is not the effect of the operation. Eccentricity and delusional insanity seem to have been present before and after operation. She has delusions that her food is poisoned and she also has hallucinations In both these patients we find an unstable condition prior to the operation,[11] and their present state cannot be considered as a direct result of the operation.

*Memory.*—Although the mental condition seems to be unaffected by the operation, yet it is interesting to note that the power of memory in many cases does not seem to be so good. Out of 95 patients 34 complained that their memory was less retentive than formerly. In six of these the loss had only been temporary, lasting two or three years, but in the remaining 28 there had been a permanent diminished power since the operation. 14 retained their ovaries and 14 had lost them, being a percentage of 23·5, as against 33·6 in favour of retention of the ovaries. The reason for this loss is, however, obscure, as advancing age can hardly be made to account for so large a percentage.

*Bowel and bladder complications.*—Operations upon pelvic tumours always entail the risk of a possible injury to the second day after the operation the patient complained of very great thirst he was allowed to sip a few teaspoonfuls of water. This was followed by no ill-effect, so on the next day milk was substituted for the water. Two days later he was given beef-tea, and at the end of the week he was allowed to have solid food. The patient made an uninterrupted recovery and was discharged completely cured, the cough, dyspnœa, and other symptoms having entirely disappeared. From the time of the operation until his discharge the temperature never rose above normal.

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[11] Halliday Croom: Transactions of the Edinburgh Obstetrical Society, vol. xxiv., p. 82.

For permission to publish this case I am indebted to the operator, Mr. Hugh Davies, visiting surgeon to the Miller Hospital.

Greenwich-road, S.E.

## NOTES ON A CASE OF VARIOLA HÆMORRHAGICA.

W. CULVER JAMES, M.D. ABERD., F.R.C.S. EDIN.,
SENIOR PHYSICIAN TO THE WESTMINSTER GENERAL DISPENSARY.

THE patient, a governess, was first seen on Jan 7th last, complaining of chill, pain in the back, and nausea. She had nasal and bronchial catarrh and a slight cough; the tongue was furred, the menstrual period was overdue, her temperature was 103° F., and her pulse was 108. She had recently been working rather harder than usual and had felt tired and weary. On the day before she was seen she suffered from backache which became so severe that she was unable to sleep and could with difficulty turn in her bed. She was suffering from constipation for which an aperient had been administered. On the evening of Jan. 7th the pain was relieved and she passed a good night. On the following day the catamenia appeared, the temperature fell, the pain in the back was less, and she felt much better. Towards night the uterine discharges became profuse and offensive; later an eruption appeared on her face. On Jan. 10th the skin of the whole of the face was red, inflamed, swollen, and covered with minute vesicles, giving the idea of a uniform scalding. Scattered over the neck, trunk, arms, and thighs were numerous small vesicles about a line in diameter, with reddened bases. Interspersed among these were a very few larger vesicles with small dark-brown centres; only about half-a-dozen were counted. The tongue was coated with a thick white fur and on the left of the palate was a vesicle of a dark-brown colour, of about a sixth of an inch in diameter. The catamenial discharges remained profuse and of a foul character, and she was expectorating blood-stained mucus. She was removed to the hospital in the evening, but the hæmorrhage from the uterus continued and that from the lung increased. She died on Jan. 13th.

On careful inquiry the following facts were elicited Six months before the patient was born her mother had suffered from a severe attack of small-pox, from which, however, she made a good recovery. The patient was born at full term, the skin showing several cicatrices—"small-pox pits." In infancy she was vaccinated and revaccinated unsuccessfully. When she was nine years of age she was vaccinated three times unsuccessfully and at the age of 14 years she was again vaccinated without result. With such an experience her parents naturally thought her immune, and she was unfortunately not vaccinated when small-pox broke out last year. A fortnight before she began to be ill she came in actual contact with an acquaintance who had come straight from a case of hæmorrhagic small-pox (that afterwards ended fatally).

The above case is interesting as it would appear to show that variola in intra-uterine life had rendered the patient insusceptible to vaccination for 14 years, but that after a period of 18 years it had afforded no protection against a fresh attack.

Marloes road, W.

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NEWTON ABBOT HOSPITAL.—The annual meeting of the subscribers to this institution was held on Jan. 23rd. The medical report stated that 224 in-patients had been admitted in 1901, compared with 220 in the preceding year. The out-patients numbered 872. The financial statement showed that the receipts amounted to £1391, including £163 from the Hospital Saturday Fund. The expenditure was £1143.

# A Mirror
OF
# HOSPITAL PRACTICE, BRITISH AND FOREIGN.

> Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Procœmium.

## EAST LONDON HOSPITAL FOR CHILDREN, SHADWELL.

### A CASE OF PERSISTENT OMPHALO-MESENTERIC DUCT; LAPAROTOMY; RESECTION OF THE DUCT; RECOVERY.

(Under the care of Mr. H. BETHAM ROBINSON.)

AN umbilical fæcal fistula resulting from patency of Meckel's diverticulum is somewhat rare. Probably in these cases the patent duct extends into the cord and is tied with the cord, so that when the cord separates an opening lined by mucous membrane is left. The degree of prolapse of the mucous membrane of the duct varies in different cases. It may form a prominence two inches in length. Mr. W. H. Battle showed a case at the Clinical Society of London[1] in which a very similar condition existed.

The little boy in whom the above condition was present was first taken to the East London Hospital for Children when he was a few months old. The history given was that at birth the cord was noticed to be very thick at its attachment and after its separation some fæcal discharge came from its surface. Very soon what seemed like a red polyp appeared on the umbilical cicatrix. The discharge from its apex was yellow like that from the small intestine, but its amount varied; it was occasionally tinged with blood due to the bruising of the surface of the polyp. The child was inclined to be constipated. Nothing abnormal could be felt on palpating the abdomen. A probe could be easily passed through the centre of the polyp, evidently into the intestine, proving that there was a persistent duct with prolapse of its mucous lining. As the child did not seem very robust Mr. Robinson thought it wiser to postpone the operation for a while, but when the patient was 13 months old, as he seemed to be much stronger and fearing lest its postponement should allow of the production of a difference in calibre of the lumen of the bowel on each side of the attachment of the duct, Mr. Robinson decided to operate.

The operation was performed under chloroform on June 13th, 1901. A vertical incision was made in the linea alba, starting about one inch above the umbilicus, then passing round the left side of the latter to the mid line to end one inch below. The fascia was divided and the peritoneal cavity was opened; a similar incision was made on the right side of the navel, thus freeing the umbilical cicatrix and leaving it attached to the duct. It was then shown that there had been an extension of the peritoneal sac into the base of the umbilical protrusion, the duct being centrally placed and completely surrounded by the sac. The tube was three and a half inches long, joining the free border of the small gut at right angles; there was a delicate mesentery on either side of the process attached to the gut at right angles to its long axis. As was anticipated the lower end of the gut was slightly reduced in size, although the calibre of the duct itself was not sufficient to divert the contents of the intestine to any extent. The process was next clamped inside its skin attachment and an incision was made round it through the serous and muscular coats about one inch from the bowel The latter coats were peeled back with a blunt dissector; the tube of mucous membrane was ligature and cut away. The sero-muscular sleeve was sewn up over the stump by Lembert's sutures in the long axis of the gut. The operation was completed by stitching up the abdominal wall in layers, there being of course now no umbilical cicatrix. Although the operation did not take very long there was considerable collapse but the child rapidly revived with brandy and strychnine.

The after-progress of the case was exceedingly satisfactory.

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[1] Transactions of the Clinical Society of London, vol. xxvi., p. 237.

As I have already stated, there was nothing of the nature of an attack of erysipelas in this case; but although locally no inflammatory phenomena manifested themselves the details of the temperature chart are suggestive. For the first six days after admission the temperature records showed a subnormal and normal range with a minimum of 97·2° F. and a maximum of 98 6°, being quite unaffected by the operation on Nov. 23rd, 1900. Then during the following week a slight upward tendency was noted, a maximum of 99 8° being registered on Dec. 3rd, and after the second visit to the theatre (on the 4th) the temperature shot up to 101·8°, remaining febrile and subfebrile, with daily remissions for five days, the highest point reached being 102° on the 8th From the 10th to dismissal on the 13th it was practically normal Whether this post-operative fever was an important factor in determining the subsequent resolution of the tumour I cannot pretend to say, but certainly the progress was continuous and most satisfactory.

Finally, I again visited the patient at her home on Nov. 21st, exactly a year after her admission to the infirmary, and the following is my report: "The general health is excellent. The tumour is much less prominent and hangs like a loose sac, as if almost all its contents had been evacuated There is slight lividity at the margins but no pain, except an occasional stinging like neuralgia in damp weather. The tumour covers about the same area as at the time of dismissal but consists of little more than loose skin. The scar of the operation wound is perfectly sound and firm. No pain is caused by free manipulation and the clothes are worn without discomfort"

The recorded cases of sarcomata which have disappeared after an attack of erysipelas are fairly numerous. One such has come under my own observation. It was that of a man under the care of Dr. J McC. Johnston in the Town's Hospital, Glasgow, and at the time it impressed me greatly. First of all, a small rounded tumour of about the size of a walnut was removed from beneath the chin and microscopical examination showed it to be a round-cell sarcoma. A few weeks later the patient returned with a chain of greatly enlarged glands on both sides of the neck. Dr. Johnston dissected away all the tumours on one side in a first operation, and just as he was ready to deal with the other side the patient developed a violent attack of erysipelas all over the neck and upper part of the chest, and with the clearing up of this the glandular swellings also disappeared. From such cases as this the treatment by toxic injections was a natural corollary, but in this country it does not appear to have been systematically and persistently tried with any measure of success. Yet the analogy between sarcoma as a morbid overgrowth of connective tissue and simple inflammatory hyperplasia seems to indicate a rational basis for such treatment, and certainly much progress may yet be made in this direction

Ayr.

# Clinical Notes:

## MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

### A BRIEF NOTE ON THE USE OF PETROLEUM EMULSION AS AN INTESTINAL DRUG.

BY THEODORE FISHER, M.D., M.R.C.P. LOND.,
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IN a letter to THE LANCET of Nov. 23rd, 1901, p. 1448, commenting upon the morbid anatomy lesions of typhoid fever, I suggested that petroleum emulsion might be found useful as an intestinal antiseptic in that disease. At that time I had not tested the value of the emulsion in the laboratory, but a few experiments undertaken since seem to show that when mixed in equal quantities with ordinary culture media it has no power to restrain the growth of either aerobic or anaerobic micro-organisms. My belief in the value of petroleum emulsion was based upon the experience of the out-patient room where one is exposed to many fallacies. One instance, however, where this emulsion was used in chronic diarrhœa is worth mentioning.

A child, aged two years, when brought to the hospital was said to be having about 12 motions a day. The patient was given two drachms three times daily of a medicine composed of equal parts of a simple chalk mixture and petroleum emulsion. At the end of a week the bowels were said to have been opened on an average from two to three times a day. There was then no petroleum emulsion in the dispensary and the child was given one and a half drachms of the chalk mixture three times a day, but at the end of the second week the diarrhœa was nearly as bad as before treatment was commenced. One grain of beta-naphthol was added to two-drachm doses of the chalk mixture, but at the end of another fortnight the bowels were still moved eight or nine times a day. The mixture containing one drachm of petroleum emulsion was then given again and the frequency of the motions immediately fell to twice a day.

In the treatment of threadworms petroleum emulsion has often seemed to me to be useful. A curious case may be mentioned which came under the observation of my colleague. Dr Cecil Williams A young woman, aged 25 years, had suffered from threadworms for about 15 years and had been under the care of several medical men for the complaint. At my suggestion Dr. Williams tried petroleum emulsion and after it had been taken for about three weeks the worms had ceased to trouble her. I have not, I regret to say, investigated in any reliable way the value of petroleum emulsion in the treatment of threadworms. Children are rarely brought up to a hospital for them alone and when the worms disappear while the child is taking the emulsion the medicine given for the primary disease may be the responsible remedial agent in the minor complaint. My belief in the power of petroleum emulsion to get rid of these worms is somewhat shaken by finding that the emulsion does not possess bactericidal power. If in some cases of diarrhœa petroleum emulsion is of real, not merely of apparent, value the explanation may be that it has some beneficial mechanical action upon the walls of the intestines. It is worthy of note, however, that naphtha has been thought by physicians practising in the East to be of value in the treatment of cholera. One can conceive it to be possible that there may be forms of petroleum less volatile than naphtha, but sufficiently volatile to be antiseptic when used in considerable quantity, yet which, when used internally, would, like the oil contained in petroleum emulsion, pass through the intestines without being absorbed

Clifton, Bristol

### SIX MONTHS' IMPACTION OF A COIN IN THE ŒSOPHAGUS; SUCCESSFUL REMOVAL BY PROBANG.

BY CHESNUT PEACOCK, M.B., B.CH. R.U.I.,
HOUSE SURGEON, MILLER HOSPITAL, GREENWICH ROAD, S.E.

ON Dec. 21st, 1901, a boy, aged six years, was admitted into the Miller Hospital, Greenwich-road, S E, suffering from brassy cough and regurgitation of food, accompanied by rise of temperature The history elicited the fact that in the previous July the patient had swallowed a halfpenny. Vomiting occurred immediately afterwards but was not repeated. For the next three weeks the patient said that he could "taste the ha'penny," and he complained of pain under the chin every time he took food; but at the end of that period these symptoms ceased, and until December the patient suffered no further inconvenience. At the beginning of December a dry, clanging cough, difficulty in swallowing, dyspnœa, and regurgitation of food came on, and as the symptoms steadily grew worse he was brought to hospital for treatment

Examination by the x rays showed a coin impacted in the œsophagus at the level of the third rib, the flat surfaces facing anteriorly and posteriorly respectively. On Jan. 1st, 1902, the patient was anæsthetised and an attempt was made to move the coin with the coin catcher. As this effort failed the probang was tried, and on the second attempt the coin was found to be lying free in the pharynx. It was quite black in colour and was entirely covered on one surface with an inflammatory exudation Immediately the coin was removed the patient's breathing, which up till then had been laboured, became easy, and he made a rapid recovery from the anæsthetic As it was not deemed advisable to allow him anything by the mouth, rectal feeding was tried, but the enemata were very imperfectly retained, and as on the *toto* rather more than 42 drachms of bromide of potassium; the bromide was stopped. On Dec. 3rd (thirtieth day) urine was passed naturally. The bowels were very loose and the patient was able to sit up in bed. On the 6th he was allowed bread and milk and custard in place of some of the fluid nourishment. 15 grains of bromide of potassium were given each night. On the 9th (thirty-sixth day) the patient was up for a couple of hours. There was no stiffness remaining except in the legs which were still somewhat rigid. On the 18th he had been up daily and was out on this day for some time. On the 30th the patient was discharged quite recovered.

# Medical Societies.

## ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

### *Adjourned Discussion on Modern Methods of Vaccination and their Scientific Basis.*

A MEETING of this society was held on Jan. 28th, Dr. F. W. PAVY, the President, being in the chair.

Dr. SIDNEY COUPLAND, in opening the adjourned discussion on Modern Methods of Vaccination and their Scientific Basis, said that the Act of 1898 had had a most beneficial effect on vaccination. It had greatly diminished the risk which resulted from vaccinal injury, since by making it obligatory to employ a glycerinated lymph nearly all the infective organisms had been eliminated. The performance of the operation at the child's home instead of at a station had reduced the accidents following vaccination to a minimum. He thought that the profession had not sufficiently considered the slighter injury which followed vaccination In the majority of cases in which bad results followed it was not the lymph which was at fault but some accidental complication. He quite agreed with Dr. T. D. Acland that the Government should have full control of all the vaccine used in the country. With regard to what might be regarded as efficient vaccination he said that since the purified lymph might give rise to such a small amount of scarring the size and area of the scars could no longer be considered as evidence of effective vaccination, and reliance would have to be placed rather on the number of scars than on either their depth or area It was a well-recognised fact that those persons with more scars were better protected than were those with fewer scars With regard to the protective value which a previous attack of small-pox had, he said that out of 250 people who had had small-pox in childhood 10 contracted a second attack of small-pox when exposed to infection, and in an epidemic investigated by Dr. T. D. Savill an even larger proportion occurred—viz., nine out of 41 cases. With regard to the protective value of vaccination, he said that about one in four persons who had been vaccinated in infancy contracted small-pox if exposed to infection in later life. Revaccination conferred absolute immunity, and even in a patient who had had small-pox the immunity could be prolonged by revaccination. In children under 10 years of age who had been vaccinated in infancy the liability to contract small-pox when exposed to infection was one in 12, while in those who were unvaccinated the liability was two in three. He did not consider that all even recently vaccinated persons were absolutely immune owing to their vaccination with various strains of lymph, some of which might have become inert.

Dr. A. E. COPE said that as a public vaccinator he wished to say a few words on the way in which the actual work of vaccination was carried out. He then gave details as to the cleansing of the arm, which he thought in the infant was best carried out with a little rectified spirit, while in revaccination a more thorough cleansing with 1 in 20 carbolic soap was advisable. With regard to the instrument used he was in favour of a platinum lancet with a hard iridium point—this could be sterilised easily in a flame without losing either its temper or its sharpness; it also possessed the further advantage that it did not get the dull, dirty appearance of a steel instrument after being heated in a flame. Before covering up the scratches he waited till an urticarial reaction had taken place and then covered the site of inoculation with a dressing of boric wool. One of the most troublesome complications which he had met with was the chronic eczema which sometimes started around the vaccination scars. He thought that children should be revaccinated at 14 years of age, and that if this were done then the inconvenience of a swollen arm, which often resulted if the vaccination was left till the patient was between 30 and 35 years of age, would be avoided, for the effect would be less severe.

Mr. WILLIAM F. BLAKE asked what constituted successful vaccination. If two persons were vaccinated from the same tube and the one took but the other did not, could it be asserted that the person who did not take was protected against small-pox? He also asked whether it was possible to vaccinate an individual successfully with different strains of lymph within a period of a few months, as had been asserted by a speaker at a former meeting.

Dr. F. CHURCHILL asked if any age-limit could be fixed at which it was unnecessary to revaccinate adults. He had been in the habit of advising revaccination in persons even of advanced age.

Dr. BERNARD O'CONNOR said that he thought that revaccination should be performed at 14 years of age and that after that revaccination should be performed at fixed periods until the individual ceased to take.

Dr. F. ST. GEORGE MIVART said that he had seen keloid occur after vaccination and that this had occurred in certain districts. He had been unable to discover any cause for this condition.

Dr. S. MONCKTON COPEMAN, in reply, said that the effect of glycerine in the lymph was to inhibit and eliminate all the non-spore-bearing organisms, and since most of the pathogenic organisms were non-spore-bearing the lymph was thus freed from all infective organisms. Even if such organisms as those of erysipelas and tubercle were intentionally added to the lymph in considerable quantities the subsequent addition of glycerine gradually eliminated them, so that after a given interval the lymph was free from any such infective qualities. He considered that the same amount of vaccination was necessary in the child as in the adult, and, as a rule, the vesiculation was less severe in relation to the amount of vaccine used in the child than in the adult. He said that no satisfactory method of standardising lymph had yet been discovered. There was no doubt that a person might contract small-pox twice or even three times. He referred to the great immunity which vaccination gave, and as an instance said that he had on two occasions accidentally inoculated himself from cases of confluent small-pox, with the result that no infection took place. With regard to inert lymph he said that when it was suspected that a vaccination had failed because of inert lymph the patient should not at once be revaccinated but should wait a month, for a certain amount of local immunity seemed to be produced even by apparently inert lymph. It was generally assumed that the glycerinated lymph was less potent than was the older form of lymph. This he did not think was the case, for in the preparation of the calf lymph the epithelium in which the vaccine organisms were supposed to be was scraped off, whereas in the lymph taken from the vesicles only the fluid portion was taken. In conclusion, he referred to the possibility of vaccination by internal administration.

## MEDICAL SOCIETY OF LONDON.

### *Discussion on the Nature and Treatment of Obesity.*

A MEETING of this society was held on Jan. 27th, Dr W. H. ALLCHIN, the President, being in the chair.

Sir T. LAUDER BRUNTON opened a discussion on the Nature and Treatment of Obesity. He said that it was difficult to give an exact definition of obesity, but in general terms it might be said that obesity commenced when the patient's fat was obviously very much greater than normal or when it became inconvenient to himself. In order to define more accurately what he meant he gave the following figures. The average height of an Englishman was about five feet eight inches and his weight 11 stones. This remained pretty constant till the age of 40 years, when the weight generally began slightly to increase. According to van Noorden this weight might increase as much as 15 per cent. and still be within the normal limit. When it reached 30 per cent. the person was regarded as stout; from 30 per cent. to 35 per cent. as

During the first 24 hours the temperature rose to 101° F. and the pulse increased in proportion; the child was rather weak and restless. After this there was marked improvement, both temperature and pulse remaining normal except on the 20th, 21st, and 22nd, when there was a slight rise due to the child cutting a tooth. There was no vomiting; the bowels were opened naturally on the first day and regularly afterwards. During the first day small quantities of meat peptones and hot water were given by the mouth, and saline enemata; afterwards the meat peptones were continued and peptonised milk was given. On the 18th the wound was dressed; it looked very well and some of the stitches were removed. On the 25th the rest of the stitches were taken out and the wound was quite healed. The child went to the convalescent home on July 4th.

*Remarks by* MR. ROBINSON.—Umbilical polypi are not infrequently met with on the site of the separated cord. Although sometimes in the past loosely spoken of as granulomata they rarely are so histologically. The majority show an adenomatous structure consisting of large Lieberkühn's crypts with goblet cells or of glands branched like those about the pyloric end of the stomach. Such a histological appearance suggests its origin—viz., from one of the epithelial-lined tracts in the cord; these are two in number, the omphalo mesenteric duct and the urachus.

In normal development the omphalo-mesenteric duct atrophies from the small intestine to the abdominal wall, setting free the bowel, and as a rule leaves behind no evidence of the site of its original attachment to the bowel. The commonest variation, probably, is for its central part to remain patent as Meckel's diverticulum, but it may, as in the present case, remain patent in its whole length. In other instances the lumen becomes obliterated and there will remain a ligamentous cord stretching from the bowel to the navel; the latter cord may again lose its connexion with the abdominal wall, remaining free or becoming abnormally adherent especially to the mesentery. These variations may, as is well known, play an important part in inducing different forms of intestinal obstruction. The urachus is the continuation of the bladder to the umbilical cord and related to the allantoic outgrowth from the hind-gut.

The histology of the polyp points to its origin from intestine, as in the recorded cases there is no account of one being composed of cells resembling those of the bladder; in this connexion, however, it must be borne in mind that a transition has here occurred from that resembling the lining of the hind-gut.

In nearly every case of a polyp the child is brought to the hospital with a history of discharge from the navel, and on examination the little raspberry-like growth is seen. It behoves the surgeon to examine every such case, most carefully inquiring as to, and seeing the character of, the discharge and looking for any lumen in the growth. When the discharge resembles the contents of the small intestine it is evident that there is a patent duct, the polyp in this instance being the prolapsed mucous membrane. Having, then, established the existence of such a patency the surgeon must consider his position as to how and when to act. As to the former there can be no two opinions bearing in mind the serious complications which may arise from non-interference. The prospect of strangulation under or across the band must always loom largely before the surgeon until this has been made impossible by an operation. The surgeon must be guided when to act by the child's general condition and also by the amount of discharge from the opening. If this is small it may be assumed that the lumen of the duct is narrow and that, if the operation is postponed, no great developmental disproportion will ensue in the lumina of the two ends of the bowel; but if the discharge is free and what comes from the rectum is limited then he must bear in mind that there will probably be a disproportion in size which will be more marked the longer the operation is postponed.

As to the surgical technique employed in this case no further remarks are necessary, the general principles in vogue in abdominal surgery being adopted.

The literature of this subject is extremely scanty. Treves[1] reports having successfully performed a plastic operation for the closure of the abnormal passage in a male infant a few weeks old, but he gives no details as to what that operation was. Beyond this case I can find no other recorded where such a plastic operation was deliberately done. From my search several cases have been reported where in an operation for intestinal obstruction a band has been found, the remains of the duct with only its central part patent—a Meckel's diverticulum with a fibrous cord passing to the navel—in these the diverticulum and its continuation have been removed.

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## ROYAL ISLE OF WIGHT COUNTY HOSPITAL.

### A CASE OF TRAUMATIC TETANUS; RECOVERY.

(Under the care of Mr. F. J. WADHAM.)

THE value of antitoxin in the treatment of tetanus requires very careful examination. Numerous reports are published describing cases in which its administration has been followed by recovery, and a smaller number of cases in which death has resulted. Yet it must not be imagined that the numbers of the recorded cases represent the relative frequency of recovery and death after treatment with antitoxic serum. Before the introduction of the antitoxin a proportion, by no means small, of the cases of tetanus recovered, though statistics vary greatly as to the exact proportion, and it has not been definitely shown that the percentage of recoveries has been materially altered. In the present state of our knowledge the administration of the antitoxin should not preclude the use of other means which have been found useful, such as the bromides. It would be well if we could obtain a long series of cases which had been treated in one institution both before and after the introduction of the antitoxin. We should then be in a better position to judge of its value. For the notes of the case we are indebted to Dr. R. O. H. Kennedy, house surgeon.

On Nov. 3rd, 1901, a man, aged 22 years, a groom, whilst working in a stable broke a pane of glass in the window and in so doing cut his right index finger on the dorsal surface of the proximal phalanx. He stated that the wound bled profusely and that in order to check the hæmorrhage he placed some cobweb on it. He did not suffer much pain. The wound suppurated slightly and then after a few days it closed up. On the 14th he felt some stiffness in his jaws and at dinner had difficulty in masticating his food and in swallowing. The wound broke down and he suffered some pain in it. On the 15th he consulted Mr. Wadham who immediately sent him to the Royal Isle of Wight County Hospital. He complained of pain and stiffness in the back and neck. Considerable trismus and risus sardonicus were present. The wound, which was about three-quarters of an inch long, was unhealthy-looking and discharging sanious pus. He was placed in a darkened room and put on bromide of potassium (30 grains every four hours), brandy (10 drachms every four hours), and beef-tea and milk (four ounces every two hours alternately). The wound was washed in a solution of perchloride of mercury (1 in 1000) and was dressed with a pad of gauze wrung out of a solution of the same strength. The axillary temperature was 98.6° F., the pulse was 60, and the respirations were 20. During the day the patient became very restless and all the tetanic symptoms became more marked. 10 cubic centimetres of anti-tetanic serum were injected into the flank. The spasms now appeared to be more clonic in character than tonic, with exacerbations. The injection of serum was continued during the first seven days until 110 cubic centimetres had been given, not more than 10 cubic centimetres being given at any one time. The various symptoms increased in severity till the fifth day after admission, when almost absolute trismus was present, swallowing was difficult, and great opisthotonos and pain in the back and neck with exacerbation were caused by the slightest noise or movement. The passage of a catheter, which had been necessary since the second day, became very difficult owing to the spasm which it caused. Nitrite of amyl was now administered as an inhalation during the exacerbations and afforded marked relief.

The patient remained in this condition till Nov. 24th (twenty-first day after injury), when the exacerbations became less severe and less frequent, and diuresis became much increased. On the 26th (twenty-third day) an enema was given, the bowels not having been opened since admission. On the 28th bromism developed, the patient having taken in cases of anorexia nervosa patients wasted quite out of proportion to the quantity of food which they took. He believed that there was in obesity a "perversion of metabolism."—Sir T. LAUDER BRUNTON replied.

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[1] Intestinal Obstruction, 1899, p. 42.

## CLINICAL SOCIETY OF LONDON.

### *Exhibition of Cases.*

A MEETING of this society was held on Jan. 24th, Mr. HOWARD MARSH, the President, being in the chair.

Dr. SEYMOUR TAYLOR showed a lad, aged 15 years, with Bilateral Facial Palsy. He had "paralysis of the legs and arms when five years old," from which he recovered. He had never been able "to move his face." There was no history of delivery by forceps or of otorrhœa, but he had had two attacks of rheumatic fever followed by valvular disease. The lad exhibited almost complete bilateral facial palsy; but there was slight voluntary power in the risorius and the depressor anguli oris, and also in a few fibres of the orbicularis oris muscles. He talked readily, but all labial and explosive consonants were pronounced by the aid of the tongue, so that "apple" was turned into "attle," "pear" became "tear," and so on. There was no sign of degenerative changes in any other nerve. The exact seat of the lesion had not yet been determined by complete electrical reactions, but the probability was in favour of the lesion being peripheral.—Dr. F. E. BATTEN suggested that the case might be a myopathy of the Landouzy-Déjerine type in which the face only was involved.

Mr. G. TURNER showed a case of Actinomycosis which had been cured by 45-grain doses of potassium iodide administered three times a day. The case was fully reported in the Transactions of the Clinical Society of London, vol. xxxiii.—The PRESIDENT referred to a case of actinomycosis of the buttock which he had treated in the same way with complete success.

Mr. LAWRIE H. MCGAVIN showed a girl, aged 18 years, with Bilateral Cervical Ribs and an Abnormal Bony Mass at the First Chondro-sternal Junction. She noticed a mass under the left clavicle six months previously, which had given rise to no inconvenience except from time to time aching pains in the region. On examining her the condition of the neck was accidentally discovered. She had lately complained of slight numbness and tingling over the dorsum of the first and second metacarpal bones of both hands. In addition to this she had occasionally experienced shooting pain in the area of distribution of the superficial branches of the cervical plexus, especially of the great occipital and supra-acromial divisions. The symptoms were more marked on the left than on the right side. The position of the supernumerary ribs was demonstrated on a skiagram; that on the right side was short and straight, and ended over the centre of the first rib, springing from the transverse process of the seventh cervical vertebra. That on the left was curved, arose from the same point, and appeared to end much nearer to the inner side of the clavicle. The sternal extremities of the first ribs were markedly different in shape, that on the right being broad and thick, while that on the left was thin and indistinct. At the upper margin of the skiagram was seen an indistinct nodular bony mass, apparently in connexion with the transverse processes of the fourth and fifth cervical vertebræ.—Dr. SEYMOUR TAYLOR said that these accessory ribs generally occurred in women and on the left side. He regarded them as a reversion of type.

Mr. J. JACKSON CLARKE showed a female child, aged nine years, with an Abnormal Curvature of the Spine determined by Shortening of the Left Rectus Abdominis Muscle. The patient's breathing was purely abdominal and the abnormal curves in the spine were fixed, not disappearing either when the patient lay down or when manual pressure was employed. On attempting to straighten the spine he observed that the lower portion of the thoracic wall on the left side was dragged upon, that the left rectus muscle was tense and hard in every position of the body, and that it was less resistant when the patient was sitting with the body bent forward than it was when she lay down on the back. On inquiry he found that when the patient was six months old her mother had noticed that the right side of the abdomen was more prominent than the left. The case was probably akin to the common form of wry-neck due to organic shortening (contracture) of one sterno-mastoid in infants. The treatment had been instrumental and gymnastic. Improvement had been thus obtained through the stretching of the shortened rectus; it remained to be decided whether any marked gain would result from elongation of the left rectus by the simple plastic operation by Z-shaped incision. There was no abnormal reflex. In the absence of progressive myositis, &c., he concluded that the origin was congenital.—Mr. A. H. TUBBY asked if the condition was congenital or acquired and whether any reflex cause for the spasms of the muscle had been found.—Mr. MCGAVIN asked if there had been any traumatism at birth.

Mr. W. D. HARMER showed a man, aged 20 years, with Arthropathy of the Shoulder-joint in a case of Syringomyelia. The patient had sustained an injury to the left shoulder 12 months previously, followed by a swelling (? ruptured muscle), which gradually subsided. Eight months ago a painless swelling of the same joint occurred, commencing suddenly without injury. This was followed by two months' grating and "shifting of bone." The back had been curved for the last three or four years. There was no history of syphilis. The patient was short and was strongly built. There was no muscular wasting. The left shoulder-joint was uniformly enlarged. Movement was free as high as the level of the acromion process, but was attended with marked grating and luxation. When the arms were hanging there was an inch of lengthening of the left arm, due to the laxity of the ligaments. There were well-marked kyphosis and lateral curvature with convexity to the left. There had been numerous painless ulcers on the thumb and fingers of the left hand, commencing as bullæ. There was complete thermo-anæsthesia from about the fifth cervical to the third lumbar spines, including the arms. Analgesia was marked only over the front and the lateral aspect of the shoulder-joint; it was slight in the left hand. Tactile sense was normal. There was no loss of muscular pressure or of localisation senses. The knee-jerks were marked. There was no ankle-clonus. Nystagmus had been observed.—Mr. J. R. LUNN referred to a similar case in a man, aged 52 years, who had been under his observation for 10 years. This case was fully reported in vol. xxvii. of the Society's Transactions.

Mr. TUBBY and Dr. J. PURVES STEWART showed a case illustrating a New Method of Treating Old-standing Paralysis of the Upper Root of the Brachial Plexus. The patient, a man, aged 57 years, fell on to his shoulder and head two years ago. He was unconscious for an hour afterwards and on recovery was unable to use his left arm. After treatment at various hospitals without benefit he was admitted to Westminster Hospital under the care of Dr. W. Murrell. There were then marked paralysis and atrophy about the left shoulder and upper arm, and Dr. Purves Stewart reported total loss of electrical excitability in the deltoid, infraspinatus, biceps, brachialis anticus, and supinator longus on the left side, and consequent inability to adduct the arm or to flex the elbow. There was also some anæsthesia along the outer side of the upper arm and forearm, which subsequently disappeared. These symptoms pointed to a paralysis of the upper root of the brachial plexus of the Erb-Duchenne type. Mr. Tubby, 20 months after the accident, transferred part of the triceps and fixed it into the biceps with the object of restoring the power of flexion at the elbow, and a month later an attempt was made to restore power to the deltoid. Since the operation the transplanted portions of muscle had been assiduously massaged and the faradic current had been applied. There had been great improvement in the movements and in the utility of the limb. The patient could flex the elbow fairly and during flexion the transplanted part of the triceps could be felt in front of the elbow, and both galvanic and faradic excitability had returned. He had not yet recovered the power of abducting the arm, but the transplanted part of the pectoralis major could also be felt to harden. At first there was a total loss of excitability both to induction shocks and to the galvanic current. Three months after operation the galvanic excitability returned and six months after faradic reaction could be demonstrated.

Mr. HAROLD L. BARNARD showed a child who had come under his observation with the characteristic signs of Coxa Vara. On questioning the mother he found that 18 months before the child had complained of pain in the hip and for three days had been unable to walk at all. Then he began to walk again, but the following year he commenced to limp. The signs were definitely those of coxa vara—viz., abduction was very much limited, internal rotation also very too stout; from 35 per cent. to 50 per cent. as moderately obese; and above 50 per cent. as very obese. The accumulation of fat occurred specially in the subcutaneous tissue, in the omentum, and around the heart and kidneys. Fat consisted chiefly of mixtures of different proportions of glycerine united with fatty acids. These mixtures varied in different animals, but each animal kept its own fat nearly up to a constant standard, although it might feed on other animals having a different kind of fat. This was not altogether the case, however, for as an old nurse of Weir Mitchell remarked, "Some fats are fast, some fats are fleeting, but cod-liver oil fat is soon wasted." This had been proved scientifically, for in animals fed on rape seed oil this oil could be detected unaltered in the tissues. Accumulation of fat in man depended on, firstly, how much fat or fat-forming food was taken into the body, and, secondly, on too little being burned off. These two causes might act together. Fat was, however, formed from different kinds of food even if fat itself was not contained in them, such as albuminates and carbohydrates. The body was able to split off fat with difficulty from albuminous materials, such as lean meat, but it formed fat with considerable ease from sugar and starch. The tendency to lay on fat was therefore determined to a considerable extent by the nature of the food. The tendency to the accumulation of fat both in men and animals after the removal of the testes and ovaries was well known, and Loewy and Richter found that in dogs the administration of ovarian extract had no effect when the generative glands were present, but increased oxidation in animals from which the ovaries and testicles had been removed. It was usual to distinguish two forms of obesity, the plethoric and anæmic. He referred to an instance of the former in which the patient had successfully effected a reduction in his weight so that he could run and vault with ease, but he found that when his bodily activity increased his mental activity diminished. The anæmic type of obesity was most frequently found in women. Certain diseases which lessened activity tended to cause the accumulation of fat, such as chronic nephritis, on account of the languor which it produced. With regard to the treatment of obesity, as the cause of the condition either in its severe or slight forms consisted in the ingestion of more fat-making food than the body could burn off, its treatment naturally consisted in limiting the food both in quantity and in quality and increasing the combustion of the body by accelerating the circulation. The best way of stimulating combustion was undoubtedly muscular exercise, but in severe cases the difficulty was that patients were unable to take muscular exercise, and in these cases the use of massage by means of which the circulation through the muscles might be increased threefold, tissue change was obtained without inconvenience to the patient. Massage alone was not sufficient and should only be the preliminary to more active exercise, and even exercise alone was rarely sufficient to bring down obesity. It was necessary that the amount of food should be lessened and this could generally be done by insisting that solids and liquids should be taken at different times. Many people were apt to wash down food, and especially farinaceous food, without much mastication; but if the farinaceous food was of a dry kind, such as crisp toast, rusk, or biscuit, the quantity that could be got down in a given time if fluid was withheld became very much less. He suggested that digestion in the stomach had less tendency to form fat than when the digestive process was carried on in the intestine. Should the regulation of diet combined with a fair amount of exercise fail to reduce the patient then the next best thing was to put the patient on the so called "Salisbury" treatment, which closely resembled that recommended by Harvey and Banting with the addition of hot water. The disadvantage of the Banting treatment was that an excessive amount of nitrogenous waste product occurred which unless eliminated produced poisonous results. The use of thyroid extract increased tissue change and would reduce fat considerably, but in most cases it was far better to diminish obesity by attention to feeding and exercise than by the use of thyroid. Nervousness, tachycardia, and tremor were produced by taking thyroid for too long a period.

Dr. I. BURNEY YEO said that he thought obesity might be divided into two classes—those cases that were easy to treat and those that were difficult to treat. In those which arose from dietetic errors the treatment was easy, while in those due to a "vice of metabolism" or of hereditary nature the carbohydrates might be removed with but little benefit. It was of great importance that treatment should be begun early. If a man at the age of 40 years began to show signs of obesity he should leave off sugar and should eat less bread and less potatoes. He referred to the successes that had been obtained by limiting the patient to an absolute milk diet of one quart per diem, but in such cases the patient must be kept at absolute rest. He considered that it was disadvantageous to limit obese persons too closely in the amount of water which they took, for many of these patients were of gouty nature and needed the water to eliminate the waste products. He referred to the effect of castration and doubted whether internal secretion played so important a part as was generally supposed, and suggested that the loss of sexual emotions accounted for the increase of obesity. He thought that thyroid extract should only be given in those cases which did not react to other forms of treatment. He considered that alcohol was an important element in the production of obesity. He was of opinion that the Salisbury treatment was risky in its application to elderly people.

Dr. SCHOTT (Nauheim) said that he intended to confine his remarks to the fatty condition of the heart. He described three forms: firstly, that in which fat surrounded the heart; secondly, that in which the fat was between the muscle fibres of the heart; and thirdly, that in which there was fatty degeneration of the muscular fibres. Treatment might be carried out by two methods: firstly by drugs and secondly by diet and exercise. With regard to the former he said that not long ago it was the habit to use purgative waters, so that the patients rapidly lost weight. In young persons with good muscular systems this might be carried out successfully, but in anæmic and old persons it was attended by very considerable risk, and he mentioned two cases in which patients lost 54 and 45 pounds respectively in a few weeks and fatty degeneration of the cardiac muscle took place from which the patient some six months later died. If fat was lost rapidly it was lost not only in the subcutaneous tissue but also in the nerves, the brain, and the muscle. It was often difficult to get stout persons to overcome their apathy and to take exercise. He considered that cool effervescing baths were safer and better for obese persons than Turkish baths, and he had seen serious collapse result in the latter. He characterised the treatment by milk alone and also that by dry rolls as a "hunger cure." Great care was necessary not to reduce the fat too rapidly.

Dr. R. HUTCHISON suggested that the reason why certain persons tended to get fat was that they were more economical machines and radiated less heat. He said that the theory lacked experimental verification. Treatment of obesity should be by oxidation of the fat in the body, and this was possible by the administration of thyroid extract. Unfortunately, however, it also produced oxidation of the albuminoid bodies and therefore largely increased the excretory products. With regard to the restriction in the quantity of fluid he said that the simple limitation of the amount did not experimentally produce a diminution of weight, but that the result was due to the smaller quantity of food that could be conveniently taken. In Germany, however, where the fluid commonly taken was beer, the restriction might have a marked effect.

Mr. C. R. B. KEETLEY referred to the disappearance of umbilical hernia under the Banting diet and he said that he frequently gave a modified diet before operating for the radical cure of such herniæ. He suggested that in some cases the fat on the abdomen might be removed by operation.

Dr. A. P. LUFF said that it was important to distinguish between obesity which was inherited and that which was acquired, and they should not be treated by one and the same method. He thought that the Salisbury treatment should not be attempted in any case in which there was either renal disease or weakness of the heart. He quite agreed with former speakers as to the advantage of allowing no water with the meals. He considered that thyroid extract should not be administered in persons with any affection of the heart or kidney, but that in other cases it was of service.

The PRESIDENT referred to the uncertainty of the causes of obesity; in some cases it followed on an excess of food, while other individuals got fat on but a very small amount of food. Again, there were individuals who took a large amount of food and yet remained small and thin. That the nervous system had a marked influence was shown by the fact that mentally deficient children often became very fat and also by the abnormal production of fat in the condition known as "adiposa dolorosa"; on the other hand, in the on Dysentery in South Africa, and of contributions by members unable to be present, were distributed in the room.

After a *résumé* by Dr. Mott of the salient points in his paper a contribution from Dr. P. J. Baily was read by the Secretary, in which, after describing the symptoms of the disease in his own case, he gave an account of a succession of outbreaks at Hanwell Asylum during the past two years. 15 of the staff were attacked but none fatally, whereas among the inmates 13 in 48, or 27 per cent., of the males, and 9 in 47, or 19 per cent., of the females, died, the majority of the deaths among both sexes being those of general paralytics or of persons who were 70 years of age. A large proportion of the cases in 1901 were of persons, including one of the staff, who had suffered previously, and the infectious nature of the disease was well seen in a mild outbreak in a female ward last April, as was the value of prompt removal of the cases to isolation wards when circumstances permitted of its being carried out.

A short communication was read from Dr. Claye Shaw in which, while admitting that the disease as described by Dr. Mott differed in no respect from tropical or camp dysenteries, he maintained that there was an asylum dysentery distinct from dysentery in asylums, not bacterial and of extrinsic origin, but induced by degeneration and necrosis of the intestinal tissues dependent on the nerve changes inseparable from the general paralysis and like degenerations in the chronic insane, and that the cases that he had described as having occurred under his care at Banstead Asylum belonged to this class, arising from time to time independently of faulty sanitation or nursing and often more or less anomalous in their phenomena.

Colonel Kenneth McLeod, R.A.M.C., said that his first experience of dysentery was at the Durham County Asylum in 1864, a like outbreak occurring at the same time in the asylum at Carlisle, when he was much impressed by a paper by Dr. T. S. Clouston on Sewage Exhalation as a Cause of Dysentery, which, though now 50 years old, was still well deserving of study. Among 200 inmates there were 30 cases, 20 of which were fatal, occurring in small groups at short intervals between March and August, and one in the following March, ordinary diarrhœa prevailing at the same time and a few cases of enteric fever. No fault could be found with the food or the water, but the excreta were received in a huge cesspit and from time to time the putrid sewage was spread over a meadow. The cases, 24 of which were on the ground floor, always occurred from three to six days after such irrigation, provided the wind was blowing from that direction, except those in March, 1865, which followed a stoppage and opening up of the drain. One attendant and a labourer were also attacked. The like coincidence of the outbreaks with irrigation was observed at Carlisle, where the sewage tank was not covered as it was at Durham, confirming Dr. Clouston's view of its connexion with sewage exhalations, though the inmates might have contracted the diseases while engaged in the work of irrigation. He had seen much dysentery in India in jails, asylums, and hospitals, and among the general population, and latterly at Netley among men invalided from all parts of the world. In India it was always associated with overcrowding, insanitary conditions, and foul water-supply. In Calcutta the diphtheritic and worst form was very frequent, but wherever the new public service of pure water was substituted for that from the tanks used for bathing, &c., dysentery and other fæcal diseases were greatly reduced or ceased altogether. The dysentery which he had seen at Durham differed in no respect from that of India. The relations between dysentery and enteric fever, sometimes one and sometimes the other preceding, called for investigation, as did the persistence of dysentery in asylums when the general population, though amid more insanitary conditions, escaped. The insane were doubtless more susceptible from their want of decency and from their uncleanly habits, and less resistant from their lower vitality. Major Buchanan had described the "terminal dysentery" that carried off many phthisical patients and perhaps the majority of lepers. He deprecated the use of euphemisms as "ulcerative colitis" for what was simply dysentery and insisted on its essentially fæcal causation and preventability.

Dr. E. W. Goodall criticised Dr. Claye Shaw's paper, whose remarks as to the non-occurrence of primary cases among the attendants in asylums might equally be applied to so obviously infectious a disease as diphtheria in hospitals, and he failed to see the "mystery" that Dr. Shaw found in asylum dysentery. He had at the Eastern Hospital, Homerton, a young woman who when convalescing from enteric fever died from "ulcerative colitis" or dysentery. He knew that some unreported cases of dysentery had occurred at Leavesden Asylum several years ago, and that in 1895 there were numerous cases of fatal diarrhœa. Some of these were very probably enteric fever, but the others were very obscure, and in none of the fatal cases was ulceration of the colon observed. Dr. A. Shadwell had suspected the water-supply. How, he asked, could the appearance of dysentery in asylums be accounted for when there was none outside?

After some remarks by Mr. Shirley Murphy and Dr. W. H. Hamer, Dr. Stansfield, in reply to Dr. Goodall's question, said that patients were constantly transferred from one asylum to another, and that the new asylums were at once filled by drafts from the older and overcrowded ones, many of the patients suffering from chronic or latent forms of the disease. He had thus had many cases at the County Asylum, Bexley, within the first three years, the initial cases in each outbreak having always been transfers, while the sanitary conditions of the asylum were perfect.

Dr. Eric France held that no one with any experience of dysentery in asylums could doubt its specially infectious character. At Claybury Asylum after isolation was carried out the cases were far less numerous and the mortality only half as high as before, though perhaps the recognition of its infectivity by the attendants had as much to do with the improvement. Under ordinary circumstances he did not think that more isolation was necessary than was required with enteric fever, but the conditions of the insane in asylums were not ordinary owing to their filthy habits.

Dr. Wilson said that a patient having been admitted into the hospital at Trinidad from the gaol where dysentery prevailed communicated the disease to those in the bed on each side and to two others in the same ward.

Dr. Washbourn then read a paper by himself and Mr. Owen Richards on South African Dysentery and its Relation to that in Asylums, in which they described three types of the disease alike marked by bloody and mucous stools, fever, tenesmus, and abdominal pain in different degrees. The normal type, with its febrile stage lasting a week, the temperature ranging between 101° F. in the morning and 104° in the evening, and thick white fur on the tongue, the symptoms subsiding in a week or becoming chronic unless death occurred in the first week from the fever itself or subsequently from perforation, peritonitis, or exhaustion. The second type comprised mild non-febrile cases soon recovering, and the third was distinguished by the pyrexia continued for three or four weeks, with perhaps an entire absence of blood and mucus, the bowels being either loose or constipated. These cases were often taken for enteric fever, but were doubtless due, like the typhoid form of scarlet fever, to secondary septic invasion. The mortality in South Africa had been low, the patients being healthy young men—only 1·86 per cent. in the Imperial Yeomanry Hospital at Pretoria. Liver abscess was rare and in one case the pus was full of streptococci and bacilli, thus differing from the usual tropical form. The cæcum and rectum were most affected, the lesions being thickening of the walls with hæmorrhages and ulceration, and perforation being the most frequent cause of death. There were no amœbæ in the contents of the intestine or of the abscesses.

Dr. H. D. Rolleston, who succeeded Dr. Washbourn at Pretoria, said that in the absence of amœbæ and of the sterile abscesses of tropical dysentery these cases corresponded to those described by Shiga in Japan. In his sections the inflammation appeared to have begun in the mucous, and not, as Dr. Mott maintained, in the submucous, layers, which might point to a different causation though the clinical phenomena were the same.

Dr. Washbourn then read a communication from Dr. T. Dunlop, describing an Outbreak of Dysentery at Aldershot in August and September last. It had never been known in the district before, but the diagnosis was confirmed at once by Dr. Washbourn, Lieutenant-Colonel Franklin, R.A.M.C., Dr. Donald of Uganda, and others. There was diarrhœa, followed by blood and mucus, and great tenesmus, but not much fever or pain. The cases were 170 or 180, with 38 deaths, about 27 per cent., 28 of these being of children under five years of age. Its infectivity was very marked. No cause could be detected, the most insanitary quarter of the town escaped, and the water-supply was the same as was that of the camp where one case only occurred.

Mr. E. J. F. Hardenberg described 19 cases in the same outbreak that had been under his care, of which limited, while flexion and adduction were free No pain was complained of in the joint or on movement The treatment *so far had been a Thomas's knee-splint to keep the* weight off the hip-joint, the mother objecting to any operation. The child had suffered from blood-spitting.—Mr. JACKSON CLARKE thought that no operation should be performed in these cases before the bone had become fully developed and that most cases did well with massage and exercises.—Mr. A. A. BOWLBY suggested that the condition coxa vara was often evidence of slight tuberculous affection of the hip-joint. He asked if there was either shortening or muscular wasting in this case, and if these were present he thought that the condition was probably tuberculous. There was no evidence of rickets in the case.—Mr. TUBBY thought *that there was often considerable difficulty in distinguishing* coxa vara from congenital dislocation of the hip.—Mr. BARNARD, in reply, said that he considered that neither wasting nor shortening was necessarily evidence of tuberculous disease of the hip.

Mr. BARNARD also showed a patient who had Compound Fracture of the *Patella* *This he had sutured with kangaroo* tendon; suppuration followed and drainage of the knee-joint, bony union and good movement resulting.

Mr. J. HUTCHINSON, jun, showed a lad, aged 17 years, with Traumatic Separation of the Epiphysis of the Head of the Femur demonstrated by skiagraphy. The patient had had a fall, with probably forced extension and eversion of the right hip. He was unable to walk and complained of intense pain on passive movement of the right thigh. The latter was everted, as in most cases of impacted fracture of the femoral neck. There was no bruising over the trochanter or abnormal fulness in Scarpa's triangle. *The right ilio-tibial band was slightly* relaxed, but yet no shortening could be made out. Pressure on the trochanter did not cause pain. The Roentgen rays showed very plainly a separation of the femoral head exactly at the epiphyseal line, the epiphysis remaining in the acetabulum and being only in contact with the femoral neck *to about half the normal extent. Under an anæsthetic the* limb could be freely moved in all directions and a faint sort of crepitus was obtained. The eversion could easily be overcome, but when the extension was taken off the deformity at once recurred. The limb was put on a Liston's long splint and almost perfect apposition was obtained. Until the intro*duction of the x rays positive evidence as to the occurrence* of traumatic separation of this epiphysis was singularly scanty.—Mr. BARNARD said that it had been shown by Royle Whitman that cases of this nature which occurred before the age of six years were usually fractures, whereas in the older patients they were usually cases of separation *of the epiphysis.*

Dr. W. EWART showed a patient with Major Dilatation of the Left Auricle. The distinctive physical signs were:—1. *Palpatory:* the definite systolic pulsations in the right mammary region, and the occasional thrill perceived there as well as at the apex, and the occasional pulsation of the liver. 2. *Auscultatory:* the identical character of the murmurs in both mammary regions, whilst in the interval between them and at the aortic interspace the systolic murmur, though easily perceptible, was much less loud; and the presystolic murmur, which, however, in this case was of inconstant character. 3 *Percussory* · the tracings exhibited showed the conditions which served as a basis for the diagnosis. *Anteriorly* the cardiac dulness was much enlarged in its transverse diameter and somewhat also in its vertical diameter, the liver being depressed as well as slightly enlarged, whilst at the base there was no dulness suggestive of an aneurysm. The left cardiac boundary, although further out than normal, presented no irregularity, and the right boundary did not differ much from that of a greatly enlarged right auricle. But *posteriorly* the dulness was characteristic. The dulness belonging to the heart was slightly enlarged, but that special to the left auricle was considerably increased (from a normal size of about two and a half inches by two inches to that of nearly four inches by two and *a half inches*) mainly *in its* transverse diameter and in the direction of the seat of abnormal pulsation, which by auscultation was identified as belonging to the left auricle

Mr. ARTHUR E. J. BARKER showed a case of Excision of the Cæcum. The patient was a man, aged 30 years, who was operated on for acute *intestinal obstruction on May 7th*, 1899. The enormously distended and hypertrophied small intestine was first incised and five pints of liquid fæces were evacuated. The cause of the obstruction could then be made out to be a hard growth round the ileo-cæcal valve. The small gut, at about two feet from its termination, was therefore anastomosed laterally with the transverse colon. Six weeks later a fresh incision was made over the cæcum and the latter was excised with some inches of the ascending colon and ileum. Beyond the presence of a slight fæcal fistula for some weeks, recovery was perfect. The patient was now in excellent health, without any evidence of recurrence, two years and eight months after operation. The growth was a typical carcinoma.

Mr. BARKER also showed a case of Excision of the Transverse Colon in a woman, aged 58 years, who was operated on for carcinoma of the transverse colon and chronic obstruction *on Oct. 25th, 1900.* She was suffering at the time from long-standing diabetes. About four and a half to five inches of the transverse colon were removed and end-to-end anastomosis followed. The dressings remained untouched for 10 days. On their removal a small fæcal fistula was found, which discharged for some weeks. Recovery was otherwise uneventful. *The growth was typical carcinoma.* The patient had been in first-rate health ever since, and showed no evidence of recurrence.

Dr. NORMAN DALTON showed a case of Ataxic Paraplegia in a man, aged 53 years, who contracted syphilis two years previously. His present symptoms had been coming on about one year ago. His mind was sound, but he was emotional and excitable. His symptoms were partly those of locomotor ataxy and partly those of lateral sclerosis. The eyes and the upper limbs were normal. As a rule he stood fairly steadily with his eyes shut. He complained of "precipitate" micturition and defecation. In "walking" he brought his *foot down forcibly on the heel as in ataxia, but he did not* lift the knees and the legs were affected by a certain amount of stiffness The muscles of the legs and thighs were rather flaccid. The electrical reactions were normal. The "knee-jerks" were greatly exaggerated, particularly on the left side, and ankle-clonus could be obtained always in the left *foot. The plantar reflex* was of the *extensor type.* There was no delayed sensation. He had complained of pains in the left leg, shooting from the hip to the foot, sometimes accompanied by twitching movements. In the right lower limb as high as the crest of the ilium (back and front), there was loss of painful sensation and of sensations of heat and *cold.* The sense of touch was retained and the sole of the foot was very sensitive to touch.. There was no loss of the sense of position of the lower limbs. There had been no definite crisis, but he had had pains in the hypogastrium.

Dr. W ESSEX WYNTER showed a case of Congenital Spinal Degeneration with Symmetrical Arthropathy in a young man, aged 17 years, who was kicked over the left eye by a horse at 14 years of age Two years ago difficulty was experienced in walking, then it was noticed that the right hip was stiff. In May, 1901, the left hip was similarly affected, and by June there appeared to be no movement at all in either. On admission to hospital on Dec. 9th, 1901, both hips were completely fixed in a fully-extended position. There was some enlargement on the right trochanter. Measurement from the anterior superior spine to the internal malleolus was 33½ inches on both sides. Both trochanters were below Nélaton's line. Bryant's line: left, two and three-eighths inches; right, two and five eighths inches. There was no wasting or loss of sensation or of muscular power. Electrical reactions were normal. The reflexes were uniformly exaggerated. The patient stood in a peculiar attitude, with the knees slightly flexed and the spine curved forward. He walked by rotating the pelvis and spine After 14 days' treatment by iodide of mercury there was some movement in the left hip The urine and the temperature were normal.

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## EPIDEMIOLOGICAL SOCIETY.

### *Dysentery in Asylums.*

A MEETING of this society was held on Jan 17th, Dr. PATRICK MANSON, C M.G., F.R.S, the President, being in the chair.

The meeting was devoted to a discussion of the paper read on Dec. 13th, 1901, by Dr. F. W. MOTT on Asylum Dysentery, a short extract of which appeared in THE LANCET of Dec. 23rd, 1901, p. 1799, and copies of which, printed *in extenso*, as well as of one by Dr. J. W. Washbourn, C.M.G., lantern slides illustrative of the development of carcinoma from breasts affected with chronic mastitis.

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# NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

*Exhibition of Specimens.—Recurrent Papilloma of the Vagina.—Election of Officers.*

THE annual meeting of this society was held at Manchester on Jan. 17th, Dr. S. BUCKLEY (Manchester), the President, being in the chair.

Dr. A. DONALD (Manchester) exhibited two specimens of Tubal Mole. In each case the occurrence of hæmorrhage at about the sixth week had destroyed the life of the ovum without leading to rupture of the tube. Each tube contained a mass of clot embedding an embryo surrounded by its amnion, but with no trace of liquor amnii. No blood or clot was found in the peritoneal cavity. In one case there had been nearly two months' amenorrhœa; in the other the menstrual period had not been missed. In both the bleeding was profuse and lasted for six weeks, and a well-defined tumour was felt on one side of the uterus. The tubes were removed by abdominal section in the first case and by anterior vaginal section in the second. Both patients made a good recovery.

Dr. DONALD and Dr. W. E FOTHERGILL (Manchester) showed sections from a case of Folliculoma Ovarii Malignum The tumour, of about the size of a cocoa-nut, was hard, solid, and nodular It was removed from a single woman, aged 57 years. The clinical features of the case suggested malignancy. There were wasting, pain, and ascites. The sections showed the growth to consist of alveoli filled with epithelial cells and embedded in a fibrous stroma. The alveoli varied in size and some of them contained one or more large cells presenting the characters of egg cells in various stages of development

Dr. FOTHERGILL also showed a series of sections of Uterine Casts from cases of Membranous Dysmenorrhœa. The casts were all shown to be composed of fibrin and leucocytes. Dr. Fothergill had examined many such casts and had never ound any composed of mucosa with a lined cavity such as were frequently described.

Dr. J. B. HELLIER (Leeds) showed an Early Ruptured Tubal Gestation. The patient, a woman, aged 35 years, who had been married for 11 years, had had one doubtful abortion ome years ago. She did not suspect pregnancy and mentruation was quite regular. While cycling she was seized with sudden abdominal pain and faintness Internal hæmorrhage was suspected and abdominal section was perormed. Much dark blood-clot was found in the peritoneum. A very small tubal pregnancy had caused rupture of the right Fallopian tube, which was removed. The patient made a good recovery

Dr. W. WALTER (Manchester) showed a specimen of Fibromyoma of the Uterus removed from a single woman, aged 9 years, by Abdominal Hysterectomy. The patient had uffered from pain and hæmorrhage for some time and for ight months was unable to follow her occupation. On an. 14th abdominal section was performed. The broad igaments were tied and divided in the usual way and the terus was removed with a wedge-shaped incision just above the vaginal roof. The cervix was dilated from above downwards with a pair of Spencer Wells small forceps and a narrow gauze drain was passed through into the vagina The igatures were cut short and the peritoneum was stitched over the stump with fine silk sutures, except at a small spot in the entre where the end of the gauze served as a drain. The bdominal wall was closed with uninterrupted silkworm utures, in addition to which buried catgut was used for he muscle and fascia. The specimen, consisting of a submucous fibroid attached to the fundus and anterior wall f the uterus, was undergoing in some parts myxomatous, nd in other parts fatty, degeneration. The patient was proressing favourably so far, but without including this case Dr. Walter had just completed a series of 35 abdominal ysterectomies for myoma with one death.

Dr. WALTER also gave an account of a case of Recurrent apilloma of the Vagina. The patient, an unmarried woman, ged 37 years, was admitted into St. Mary's Hospital, Manhester, in August, 1898, complaining of bleeding from the agina between the periods which had continued off and on for several months. Her general condition was good. The uterus and other pelvic organs were healthy. Inside the vagina on the posterior wall was a small papilloma which bled readily. This was curetted and the thermo-cautery was applied freely. The microscopical character of the scrapings presented the appearance of a simple papilloma with no sign of malignancy. In November, 1898, the patient re-entered the hospital, as the papilloma was commencing to recur. The cautery was again applied. The following year on two occasions similar treatment was necessary. In 1900 the patient was re-admitted in June and in December. The patches were larger in size than formerly, but they were still quite superficial and were free from any deep-seated attachment. The cautery was applied to the affected surface Last year, in March, July, October, and December, the patches had returned and were spreading upwards on the posterior and left wall. In December it was found that infiltration into the peri-vaginal tissue on the posterior and left side had occurred since her previous visit. As the vagina was extremely narrow the perineum was divided and the part was exposed to view. A patch of mucous membrane of the size of a shilling with a raised and granulating surface, together with a small growth nearly as large as a filbert nut, were removed and the vagina was packed with gauze. The microscopical appearance of the growth showed a fibrous and elastic tissue matrix containing a considerable number of cell nests.

The following officers were elected for the year 1902:—President: Dr. S. Buckley. Honorary treasurer: Mr. Richard Favell (Sheffield). Honorary general secretary: Dr. E. Octavius Croft (Leeds) Honorary local secretaries: Dr. John Scott (Manchester), Dr. Arthur J. Wallace (Liverpool), Mr. Walter Thompson (Leeds), and Mr. Sidney F. Barber (Sheffield).

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# ROYAL ACADEMY OF MEDICINE IN IRELAND.

## SECTION OF PATHOLOGY.

*Vaccinia.—Disease of Vertebræ and Humerus.*

A MEETING of this section was held on Jan. 10th, Professor E. J. MCWEENEY, the President, being in the chair.

The PRESIDENT, who was temporarily replaced in the chair by Dr. H C. EARL, read a paper on the Present State of our Knowledge as to the Etiology of Vaccinia. He said that since the work of von Thieme, Ceely, Voigt, and Fischer there could be no doubt that vaccinia was merely small-pox modified by passage through the calf. The microbic etiology of the two diseases must therefore be identical. Since the commencement of the bacteriological epoch repeated and unsuccessful endeavours had been made to establish a bacterial etiology for these maladies. Among the most recent of these attempts might be cited those of Klein, Copeman, Kent, Nakanishi, and Czaplewski and Vanselow. Mann had demonstrated that in sections of vaccine tissue appearances closely resembling micro-organisms, but really consisting of granular or rod-like precipitates of stain—mere artefacts—might be produced in the process of carrying out Gram's method. The bacillus of Nakanishi was at once recognisable by anyone familiar with the microbic flora of the calf's skin as the xerosis bacillus, which closely resembled that of diphtheria but was harmless. The micrococcus quadrigeminus of the last-named observers had been recently admitted by themselves to be devoid of all etiological relation to the vaccine process The attempts to prove that variola and vaccinia were due to a parasitic protozoon were begun in 1886 by van der Loeff, continued by L Pfeiffer of Weimar, and still further developed by Guarnieri of Pisa, and by Pfeiffer's pupil, von Wasielewsky To Guarnieri belonged the credit of having selected as the field of observation the rabbit's cornea, a transparent, non-vascular structure, in which the histological events could be observed uncomplicated by the vascular and exudative phenomena of inflammation. Guarnieri saw in the epithelial cells of the inoculated cornea rounded bodies varying in size from that of a minute coccus to about one-third of that of an epithelial nucleus They lay in the protoplasm, often close to, and even indenting, the nucleus. Amœboid movements were observable on the warm stage, and Ernst Pfeiffer saw the bodies lying *between* the epithelial cells an hour after vaccination, and *within* them a few hours later. Several observers, such as Ferroni and Massari, Salmon, and others, 12, with three deaths, were those of children; the other seven cases were adults, the oldest being 71 years of age, all of whom recovered. They were confined to one district, some of the houses being filthy, but others scrupulously clean, and in them every precaution was taken, but the infectivity of the disease was equally evident in all. He noticed pyrexia in most cases, the highest temperature being 103° F. in a child; there was abdominal pain but there were no complications; prostration and collapse were marked and were the cause of death in all the three children.

Colonel **DAVID BRUCE**, R.A.M.C., had for three months worked in a laboratory in South Africa. Amœbæ were found in one only of 30 cases examined and he doubted the existence of an amœbic dysentery. The organs were all sterile, as was the mucus, but so soon as it was mixed with fæcal matter it swarmed with bacteria, rendering the detection of the specific organism as yet impossible. He had isolated a series of the so-called "coli" group, presenting every gradation of characters, positive and negative, and agglutination experiments were conflicting. Flexner's and Shiga's bacilli belonged, he thought, to this group, no one of which was the cause. The inflammation was, he believed, always submucous in the first instance, and there might be no ulceration.

The **PRESIDENT** considered that Dr. Mott had done a public service in calling attention to a preventable disease in asylums, and the London County Council deserved credit for boldly instituting and publishing the results of the inquiry. He deprecated such aggregation even of sound men, much more of the insane and infirm, as tending to develop disease, and animadverted on the instruction of attendants in psychology while the elements of hygiene were ignored.

Dr. **MOTT**, in his reply, expressed his belief that Dr. Shaw's views had changed considerably. He, too, recognised the "weakness of the bowel" in insane paralytics, but only as tending to render them more susceptible to infection, and not as an essential cause of dysentery, which was everywhere the same disease and equally avoidable in asylums as elsewhere. At Claybury Hall 25 per cent. of the patients suffered from general paralysis, but there had been no case of dysentery in six years. Its introduction into asylums was by means of transfers, many of whom had the disease in the recurrent form, and with these the new institutions were filled. As to irrigation he knew that at Claybury Asylum patients engaged in the work ate without washing their hands and that lettuces were watered with the raw sewage.

## LIVERPOOL MEDICAL INSTITUTION.

### *Adjourned Discussion on Sir William Banks's Paper on Mammary Cancer.*

A SPECIAL *meeting of the Pathological and Microscopical* Section of the Liverpool Medical Institution was held on Jan. 23rd, Mr. **RUSHTON PARKER**, the President, being in the chair.

Mr. **KEITH W. MONSARRAT**, in opening the adjourned discussion on Sir William Banks's paper on Mammary Cancer, said that he considered it probable that carcinoma originated from a variety of causes. There was certainly evidence to show that certain of the new growths at present grouped together as carcinomata were pathologically and etiologically distinct He wished to discuss particularly the relation of carcinoma mammæ and mastitis. The study of sections did not support, in his opinion, the theory of Ribbert that carcinomatous changes were primarily due to proliferation of the connective tissue; on the contrary, the "invasion" was from the side of the epithelial element He further discussed the ways in which mastitis might conceivably be related to the carcinomatous proliferation. Although he had been successful in isolating certain organisms from cancerous growths he had not hitherto produced by their inoculation new formations that could legitimately be called carcinomatous

Dr. **A. O. RENDLE** said that whereas the cell theory threw no light on the difference between malignant and non-malignant neoplasms, the germ theory had not explained the fact that secondary growths invariably copied the primary type. Still he did not think it proper to deny the strong probability that the malignant properties of the cancer cell were due to the action of a parasite.

Mr. **H. G. PLIMMER** (London) expressed his reasons for thinking that the parasitic theory afforded a reasonable explanation of epithelial cancer. He showed lantern slides illustrating the cell inclusions on the one hand and also the organisms which he had isolated from carcinomata and the epithelial overgrowth produced by their inoculation.

Mr. **H. J. STILES** (Edinburgh) exhibited microphotographs illustrating his view that the so-called "cell inclusions" originated in degenerations and dropsical changes in the nuclei.

Dr. **R. J. M. BUCHANAN** referred to the subject in relation to heredity on the one hand and the parasitic theory on the other. In view of the transmission of minute details of conformation and disposition from parent to offspring through the agency of the spermatozoon, he thought it a legitimate consideration that peculiarities of cell reproduction should also be transmitted, and that the characteristics of cell structure as seen in cancer growths might in some way be associated with stages in karyokinesis. Dr. Buchanan exhibited a specimen of *tradescantia virginica*, showing various stages of cell division, and he drew attention to the fact that nuclei of many cells at a similar stage presented structures closely resembling cancer bodies. He referred to the importance of the centrosome in cell division and to the possibility that cancer bodies might be of centrosomic origin and expressive of an exaggerated or abnormal condition of the centrosome The question of hereditary transmission he considered applicable both to the developmental and parasitic theories: in the former as reproducing special peculiarities in the life-history of cells, in the latter as reproducing a soil susceptible in high degree to parasitic invasion. Referring to the parasitic theory in relation to the etiology of carcinoma Dr. Buchanan stated that his endeavours to grow the so-called parasite had proved unsuccessful, and that he was not fully satisfied with the results of other observers in view of the grave possibilities of contamination and the lack of evidence that inoculations of organisms isolated from cancer had reproduced this disease. This might reasonably be due to differences in experimental technique. As an advocate in the belief that cancer would ultimately be proved to be of parasitic origin he emphasised the desirability of working further afield in the direction of comparative histology and pathology in order to eliminate all source of error Apart from the purely experimental method of procedure in the endeavour to isolate an organism from, and to reproduce, cancer by inoculation of animal tissues with it, Dr. Buchanan considered that some consideration should be given to the circumstantial evidence in favour of the parasitic theory as offered by records of geographical distribution, the existence of "cancer houses," and conditions of environment associated with the occurrence of the disease Relative to this he did not accept the statement by Sir William Banks of his conviction that cancer was more prevalent in people who indulged largely in flesh meat as an article of diet. On the other hand, Dr. Buchanan was of opinion that cancer was more closely associated with indulgence in raw vegetables as articles of diet. In his belief in the parasitic theory of cancer he ventured to suggest that the parasite most probably was introduced into the body through the medium of some lower form of animal life which was in constant association with such vegetable growths as were used for food. On inquiry in certain cases of cancer he had noted that the houses in which the affected individuals resided were infested with snails to a remarkable degree, and in many cases the victims had been addicted to indulgence in salads as articles of diet.

Mr. **GEORGE G HAMILTON**, who showed a number of casts, drawings, and microscopical sections, regarded chronic mastitis as a very serious disease and was in the habit of incising breasts so affected at an early stage under a local anæsthetic and removing portions for examination. He had seen tuberculosis of the breast mistaken for carcinoma in two instances. He did not agree with some of Mr. Plimmer's views on the physiological properties of epithelium, and particularly the idea that it exercised universally a protective property against invasion; he looked upon experiments on animals by feeding with tuberculous material as evidence against such a conception

The **PRESIDENT** drew attention to the claims of M. Doyen to have discovered a micrococcus which he maintains to be the universal cause of new growths.

Sir **WILLIAM BANKS**, in his reply, referred to Mr. Plimmer's statement that the cell inclusions of carcinoma were peculiar to that disease and were not found in normal tissues or in other morbid conditions. He showed a series of blow.—Mr. J. W. Gooch introduced a discussion upon the question, "What is the Best Mode of Conducting Normal Labour?" After a few brief introductory remarks the questions of the choice and arrangement of the lying-in room and the dress and preparation of the patient were entered into as far as possible. The methods adopted for cleansing the hands and the question of the lubricant were discussed in detail, and a description was given of the means often adopted by the speaker for the purpose of expediting the normal course of labour. Mr. Gooch advocated a more frequent use of the forceps than is commonly advised in the schools, the short instrument of Assilini being much commended. The uses of ergot and chloroform in the various stages of labour were next discussed and allusion was made to the advantages to be gained by the application of the binder before delivery. The question of the douche after labour was next entered into, the opinion of the speaker being that bathing the external genitals with antiseptics was of more importance than the douche.—The discussion was continued by Mr. J. Brickwell (Slough), Dr. G. J. Sealy (Weybridge), Mr. W. A U. Thomson (Maidenhead), and Mr. W. Netterville Barron (Ascot), all of whom were in agreement with Mr. Gooch in the matter of frequent use of forceps, while on the questions of the use of chloroform and ergot and of the douche considerable diversity of opinion was found to prevail.—Dr. P. J. A. Seccombe of West Drayton was elected by ballot a member of the society.

**Newcastle-upon-Tyne Clinical Society.**—A meeting of this society was held on Jan. 16th, Dr. O. W. Ogden, the President, being in the chair.—Dr R. P. Ranken Lyle showed a case with Sequestration Axillary Mammæ. In each axilla there was a mass of the size of a kidney. The mass in the left axilla was rather larger than was that in the right. The masses had a soft, solid, lobulated feel. The mass in the left axilla being a little inflamed was rather tender. There were no supernumerary nipples. The patient was suckling her third child. The history of these masses was that after her second parturition she noticed a small lump of about the size of a walnut in each axilla On the third day after her last—i.e., her third—parturition these lumps became much bigger. Dr. Lyle pointed out that there were some lobules separated from the breast near the sternum. He considered sequestration mammæ to be commonest near the sternum or in the groin, while in the axilla they were rare He recommended these masses to be excised, as he considered that they would become larger and more inflamed if another pregnancy occurred.—Mr W. G. Richardson showed a specimen of Molluscum Fibrosum. The growth, which was of the size of a child's head, had been removed from the region of the right elbow of a man, aged 50 years. The growth was covered with thickened, dark-brown, puckered skin. The man had had this thick skin all his life and had suffered from the growth for 11 months Sections of the thick skin showed it to contain a large amount of fibrous tissue, while sections of the growth underlying it showed it to be spindle-celled sarcoma. The patient recovered from the operation and went back to the country where he was a farmer. The further history of the case was that in four months he developed some lung trouble with hæmoptysis and died. Mr. Richardson considered that he had died from secondary growths in the lung. He considered that the new growth in the skin was molluscum fibrosum. He referred to Dr. Alexis Thomson's book, where cases of molluscum fibrosum had been shown to be of the nature of false neuromata, the thickened skin being due to overgrowth of the endoneurium of the cutaneous nerves.

**Harveian Society of London.**—The annual meeting of this society was held on Jan. 16th, Dr. D. B. Lees, the President, being in the chair.—The following gentlemen were unanimously elected officers of the society for the year 1902:—President: Mr. W. Watson Cheyne. Vice-Presidents: Dr. H. A. Caley, Dr. F. W. Cock, Mr. J. Jackson Clarke, and Dr. L. G. Guthrie. Treasurer: Mr. Edmund W. Roughton. Honorary secretaries: Dr. Edmund Cautley and Mr. Francis Jaffrey. Council: Dr. Edgar G. Bulleid, Dr. C. Buttar, Mr. H. S. Collier, Dr. A. Eddowes, Mr. Raymond Johnson, Dr. D. B. Lees, Dr. H. J. Macevoy, Mr. Hubert C. Phillips, Dr. J. S. Risien Russell, Mr. J. Sefton Sewill, Dr. G. A. Sutherland, and Dr. James Taylor.—The reports of the council and the treasurer showed that the number of members exceeded 400 and that the society had a credit balance of over £125.—Votes of thanks to the President, the treasurer (Mr. Edmund Roughton), and the secretaries, especially the retiring secretary (Mr. Hubert C. Phillips), for their valuable services during the year were carried and were suitably acknowledged.—The President delivered an address on the Heart of the Child, which appears in full at p. 279 of the present issue of The Lancet. A vote of thanks to the President for his interesting address was carried with acclamation.—On receiving the report of the election from the scrutineers (Dr. E. Symes-Thompson and Dr. W. H. Blenkinsop) the President declared the result and inducted the new President (Mr. W. Watson Cheyne) into the chair. Mr. Watson Cheyne briefly returned thanks for the honour conferred on him and declared the conversazione open.—A lantern demonstration was given by Mr. Frank Crosbie, showing a method of producing photographic transparencies in colour — Mr. Noble Smith exhibited microscopical illustrations of Abnormal Gaits, &c., in Various Nervous Diseases, and a collection of Histological and other Water-colour Drawings. —Mr. Hubert C. Phillips, F.E S., exhibited a valuable collection of British Lepidoptera with Original Water-colour Drawings from Nature.—Music was provided by the string band of His Majesty's Royal Horse Guards (Blue), by permission of Colonel Lord Binning.

**Æsculapian Society of London.**—A meeting of this society was held on Jan. 24th, Dr. Arthur T. Davies the President, being in the chair.—Mr. A. Q. Silcock read the notes of two cases The first case was that of a man, aged 30 years, who was admitted to St. Mary's Hospital with a history of Abdominal Pain of one week's duration. On admission the patient had a distressed look, with thoracic respirations and general tenderness over the abdomen which was specially marked in the right iliac fossa. There was no distension. The temperature was 100° F. Appendicitis was diagnosed. At the time of operation, when under the anæsthetic, a rounded, hard, non-fluctuating tumour was found reaching from the lower edge of the liver to the umbilicus. This was opened. It proved to be the gall-bladder, and a large quantity (a pint) of mucus was evacuated, followed by some muco-purulent discharge. No gall-stones were found. The gall-bladder was sutured to the abdominal wound and a biliary fistula resulted. Otherwise the patient made an uninterrupted recovery. In the second case the patient, a man, was admitted into St. Mary's Hospital under medical treatment with a history of Marked Jaundice of three months' duration The liver was enlarged and the gall-bladder was distended. No surgical treatment was adopted and the patient finally developed purpura, became comatose, and died. Post-mortem the gall-bladder and the hepatic and common bile ducts were very much distended with mucus The head of the pancreas was hard and swollen, but whether from chronic inflammation or from new growth had not yet been determined. There was some perihepatitis and scarring of the edge of the liver, probably syphilitic.—In connexion with the first of the cases Mr. A. W. Galloway related cases bearing on the difficulty in making an accurate diagnosis in appendicitis.—The point raised by Mr. Silcock for discussion with regard to the second case was whether it would not have been advisable to call in surgical aid in the treatment of the case with the view of opening and draining the gall-bladder and thus relieving the symptoms.—The President concurred in this view.—Mr. R. Brown also agreed with Mr. Silcock and he drew attention to the similarity of the fatal symptoms in this case to those of acute yellow atrophy of the liver.

**Glasgow Southern Medical Society.**—An ordinary meeting of this society was held on Jan. 23rd, Dr. John Stewart, the President, being in the chair.—Mr. R. H. Parry showed the following group of surgical cases—viz., (1) a case in which there had been Rupture of the Thoracic Duct; (2) Excision of a Stricture of the Urethra and Immediate Approximation of the Divided Ends of the Urethra; (3) Excision of the Tongue and Half of the Lower Jaw for Carcinoma of the Floor of the Mouth; (4) Excision of Tuberculous Glands from the Anterior and Posterior Triangles of the Neck through an Incision in the Hairy Scalp; (5) a Cerebral Tumour (Glioma Sarcoma) removed by raising a large osteoplastic flap; (6) Injury to the Fifth Cervical Nerve, Paralysis of the Deltoid, Biceps, Brachialis Anticus, and Supinator Longus Muscles; (7) Idiopathic Dilatation of the Colon in the treatment of which the ileum had been joined to the rectum; (8) Rupture of the Gall-bladder, Escape of Pus into the had endeavoured to explain these bodies as resulting from irritation of a non specific kind But Hückel, whilst not admitting their parasitic nature, had been led to infer that they were the result of some alteration of the cell produced by the parasite or its toxin E Pfeiffer had shown that lymph that had lost its activity through filtration or otherwise was incapable of producing "bodies in the corneal epithelium Wasielewski had propagated the vaccine virus on the rabbits' cornea for 43 generations, and used the corneal epithelium scraped off the forty third consecutive rabbit for vaccinating children and produced a large percentage of typical vesicles The only feature presented by such virulent epithelium and not presented under any circumstances by normal or otherwise irritated epithelium was the presence of the bodies described by Guarnieri For this reason it was difficult to escape from the conclusion that the "bodies ' were the carriers of the infection Beyond the seeming existence of a nucleus the most careful examination had failed to reveal much structure in the "bodies" as found in the infected epithelium, and as to their reproduction and developmental cycle little or nothing was known Through the kindness of Dr Gustave Mann of the Physiological Laboratory, Oxford, the President was enabled to show the several stages in the evolution of the vaccine vesicle, illustrated by lantern slides and actual preparations and he also exhibited slides and sections of the inoculated rabbit cornea in which every cell was seen to harbour one or more "bodies "

Mr J P DOYLE read a paper on Disease of Two Upper Cervical Vertebræ and Upper Part of the Left Humerus The patient, a boy, aged nine years was admitted to St Joseph s Hospital under the care of Mr Doyle, on Sept 6th 1901 On Dec 4th he died suddenly At the necropsy Mr Doyle found that the anterior surface of the occipital bone and the first and second cervical vertebræ with their intermediate anterior portion were very much eroded The odontoid process of the axis was considerably diseased and by the giving way of the transverse ligament the process pressed on the upper portion of the spinal cord and thus caused sudden death —Dr MONTGOMERY moved Dr WATSON seconded and it was resolved that Mr Doyle s paper should be sent to the Reference Committee

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SHEFFIELD MEDICO CHIRURGICAL SOCIETY —A meeting of this society was held on Jan 16th Dr O H Willey, the President, being in the chair —Dr S White exhibited the following specimens and case 1 Phosphatic Calculi and Prostatic Tissue removed Suprapubically from a patient, aged 63 years who had been suffering from enlarged prostate 2. An Excised Gastric Ulcer removed from the Anterior Wall of the Stomach of a man, aged 24 years The ulcer had existed for two years and had perforated 18 months previously, but owing to extensive adhesions the general peritoneum had not been fouled The ulcer was about an inch in diameter and was funnel shaped The walls of the stomach around the ulcer were fully one third of an inch in thickness and a dense band of fibrous tissue united the ulcerated area to the anterior abdominal wall The patient was now quite free from his old symptoms 3 A child, aged two years the subject of Retroversion of the Bladder, in whom the ureters had been transplanted into the rectum by the extra peritoneal method described by Dr Peters of Canada This operation was described and criticised —Dr A. J Hall showed the following cases —1 A case of Acute Myelitis in which the first lesion had occurred in the lower thoracic region of the cord The onset was accompanied by pyrexia diarrhœa, and vomiting An interesting feature was the presence of a circular ring of acute bedsore due to the pressure of the rim of a chamber pot on which the patient had been placed for some hours before admission on account of his diarrhœa. About five days after his first attack paralysis of both arms dysphagia and paralysis of the tongue occurred, and the patient became temporarily insane These symptoms lasted for about a week. The patient made a complete recovery 2. A case of Occupation Neurosis The patient was a single man aged 43 years, a bricklayer, who had noticed weakness of the right hand following upon influenza two years before. The loss of power was most marked on using his trowel, and was accompanied by numbness and occasional stiffness Tremors and pain occurred on excitement To show the psychical element in the condition the facts were adduced that the patient witnessed the sudden death of his father by accident five years ago and that the affection was improved by stimulants and arrested by a rubber ring on the finger 3 A case of Trade Eczema of 11 years' duration affecting the hands and arms in a polisher who worked in rouge The patient had been previously shown to the society and since then had been applying calamine gelatin daily over the dorsa of the fingers, hands, and forearms, with the result that she had been perfectly free from eczema for several weeks —Dr G Wilkinson related two cases of Successful Operation for Ruptured Intestine In the first case a boy, aged 12 years, was stabbed in the lower abdomen with a pocket knife. The intestine was wounded in two places and the mesentery in one There were much bleeding and some extravasation of fæces Resection of the wounded portion of intestine was performed and the ends were united over a Mayo Robson bone bobbin The second case was that of a boy, aged 11 years, who was kicked in the abdomen by a horse Dr Wilkinson saw him 24 hours later when signs of acute general peritonitis were present The abdomen was opened by an incision eight inches in length in the middle line A circular hole half an inch in diameter was found in the ileum and was sutured A large fæcal collection was found in the lower part of the abdomen and general septic peritonitis was present After wiping out the extravasated fæcal matter thorough irrigation of the abdomen was performed The abdomen was closed without drainage Though much collapsed after the operation the patient eventually made a good recovery

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY —A meeting of this society was held on Jan 15th Dr E O Kingdon, the President, being in the chair —Miss Sarah Gray read a paper entitled, "Is Alcohol properly described as a Stimulant? The paper dealt with the question whether the action of alcohol on the human body was predominantly that of a stimulant (defined as "something which produces activity ) or whether by inhibiting nervous centres in inverse order of their development it produced only a factitious and transitory display of energy due to over-action of centres below those inhibited The effect on nervous tissue, especially on that of the highest cerebral centres was regarded as of primary importance Experimental work by Krapelin, Furer, Aschaffenberg, Hodge Killogg, and others was cited to show that this effect was uniformly depressant for higher centres and also depressant after a brief initial acceleration for lower centres With regard to muscular work the experiments of Frey and Destree were quoted as supporting those of Parkes The effect on the heart was particularly discussed and in the absence of decisive physiological and pathological experiment clinical evidence with regard to treatment of diseases, such as enteric fever, diphtheria, and septic peritonitis, with and without alcohol, was adduced from Knox Bond, MacNicholl of New York G B Davis of Chicago, and others Their evidence seemed to show that the results obtained without alcohol were better than were those which were obtained with alcohol, when "true' cardiac stimulants were used, such as caffeine and strychnine Mortality, it was stated, in septic peritonitis had been reduced by such treatment from 85 5 per cent to 14 per cent. The results of treatment at the London Temperance Hospital were also cited The effect of alcohol on digestion was very briefly discussed In conclusion, a plea for more exact study of the subject and the formation of more accurate and fully-considered views of the action of alcohol as a drug was urged —In the discussion which followed the following members took part—viz., the President Dr C H Cattle, Dr A Fulton Dr J S Bolton Dr W Hunter, Mr T Gerity, Mr J. H Cox, and Dr T A Clinch and Miss Gray replied

WINDSOR AND DISTRICT MEDICAL SOCIETY —The fourth meeting of the session of this society was held on Jan 22nd Mr W B Holderness J P, the President, being in the chair —Microscopical preparations were exhibited illustrating certain morbid conditions of the Ovary, including Papilloma Carcinoma and Cystic Disease. The sections were lent by Dr G Leslie Eastes —The President showed 1 A case of Locomotor Ataxia in a man, aged 46 years There was very marked affection of the knee joints and the Argyll Robertson phenomenon was present There was a distinct specific history 2. A case of Morbus Cordis following an attack of Subacute Rheumatism Both apical and basic murmurs were present.—Captain F. S Brereton R.A.M.C., showed a case of Enlargement of the Testis following a and arrangement of its material and in the compilation of the work.

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*A Short Practice of Midwifery, embodying the Treatment adopted in the Rotunda Hospital, Dublin* By HENRY JELLETT, B A., M.D. Dub., F.R C.P. Irel. Third edition, revised and enlarged, with 124 Illustrations and an Appendix containing the Statistics of the Hospital for the last 11 years London: J. & A. Churchill. 1901. Crown 8vo. Pp. 533. Price 8*s.* 6*d.*

IN this, the third edition of this manual, Dr. Jellett has given up the unsatisfactory task of attempting to write a handbook suitable both for nurses and for students and medical practitioners. He has accordingly included a considerable amount of new material in the present edition, while he has prepared a second and shortened one for the use of nurses. New chapters have been written upon Pregnancy and its Phenomena, the Ovum, and Obstructed Delivery; while the chapters upon Obstetrical Diagnosis, on the Different Presentations, on Obstetrical Operations, on Infant Feeding, and on Infantile Diseases have been made fuller and more complete. We notice that on p. 16 Dr. Jellett gives the old familiar but utterly erroneous table of the height of the fundus uteri at the various months of pregnancy. How absurd the statement is that the fundus of the uterus is at the level of the top of the symphysis pubis at the end of the fourth month of pregnancy is shown by the fact that the fundus of the non-pregnant uterus in the anatomical position of the body, in which all such measurements must be taken, is one and a quarter inches above the upper border of the symphysis pubis. In other words, the uterus at the end of the fourth month of pregnancy is actually lower in the abdomen, if we are to believe this table, than the non-pregnant uterus. The very diagram (Fig. 6) introduced to illustrate the table shows that this is not so, while a reference to either Bayer's or Waldeyer's frozen sections of the pregnant uterus at the third and fourth months of pregnancy respectively would have shown to Dr. Jellett the worthlessness of this table. In Bayer's specimen the fundus of the uterus is at a level of 70 millimetres ($2\frac{4}{5}$ inches) above the symphysis, the total length of the body of the uterus being 85 millimetres ($3\frac{3}{8}$ inches), while in Waldeyer's case the fundus uteri is 125 millimetres (five inches) above the symphysis or at a height equal to the total length of the body of the uterus in this particular specimen—that is to say, the whole of the body of the uterus is in the abdominal cavity, a fact which Pinard demonstrated years ago by clinical observations to be the case as early as the end of the third month of pregnancy and which he has frequently insisted upon since. In other respects the book has been well revised and brought up to date. The new illustrations are good and useful and we can recommend this third edition to students and medical practitioners as cordially as we have done the former ones.

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*Bath Waters: A Rational Account of their Nature and Use.* By PRESTON KING, M D. Cantab., Honorary Physician to the Royal Mineral Water Hospital, Bath; Honorary Assistant Physician to the Royal United Hospital, Bath. With an Historical Sketch by S. BARING GOULD, M.A. Bristol: J. W. Arrowsmith. Pp. 128.

THE object of the author of this volume is to give a short and rational account of the Bath thermal waters and also of the principal diseases which may be most successfully treated by suitable applications of these waters. Dr. King has succeeded well in his endeavours to render the volume a purely medical one. It is not easy to avoid making such a book a "medical guide"—a class of literature to which we have strong objections. Dr. King, however, steers perfectly clear of such temptations. The account of the "source and heat of the waters" is an interesting one. He quotes the researches of Mr. J. W. Morris of Bath who came to the conclusion that the mineral waters have their origin in some volcanic region to which marine sources have made contribution. The description of the bath-rooms and appliances is well carried out and the illustrations are excellent. The chapters on the Treatment of Rheumatism, Gout, and Rheumatoid Arthritis will well repay perusal and the beautifully executed illustrations add to the value of the letterpress. Dr. King draws attention to certain symptoms in rheumatoid arthritis which are apt to escape notice, such as the "fibrillar twitchings," persistent and troublesome cramps, the latter occurring chiefly at night and sometimes causing great distress. The pigmentation which so frequently manifests itself is also described and a capital reproduction of a photograph of the "butterfly" pigmentation is given. The therapeutic value of the Bath waters is fully recognised and the volume now before us forms a useful epitome of their mode of use and methods of application.

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*The Protozoa.* By GARY N. CALKINS, Ph.D. Being Vol. VI. of the Columbia University Biological Series. New York: The Macmillan Co. 1901. Pp. xvi. + 347, with 153 figures in the text. 8vo. Price 12*s.* 6*d.* net.

THIS tall and slim volume is a natural sequel to a previous volume in the series dealing with the cell. The main objection to it is its slender size, for the quality of the book is more to be praised than the quantity. The group of the protozoa with which it deals is enormous in numbers and omnipresent. No drop of water, save that which is distilled, no speck of mud, no damp leaf, and no animal body are without some of these tiny creatures. To condense the immense mass of information that we possess respecting the "urthiere," as the Germans term these truly primitive animals, into so few pages does not appear to us to be quite adequate treatment. One result is that the author, conscientious in giving tables of classification of all the families and larger groups after the chapters dealing with each, is forced to retail name after name of protozoa which he has not even mentioned in the most casual way in the preceding letterpress. It may be freely conceded, however, that such matters as the author does lay before us are skilfully handled and amply illustrated. The reader will unquestionably derive the main outlines of a knowledge of the protozoa from a perusal of this work. It is also a work that is distinctly to be read. It is not sufficiently encyclopædic to form a work of reference; it will, however, be read with approbation. The style is easy and this ease is not acquired at the expense of depth and detail. Abundant illustrations further elucidate the text; all of these are clear and many are of really excellent execution. Some are from actual preparations made by the author, and the inclusion of such figures is legitimate on the part of a naturalist who has made a special study of the group and, moreover, tends to confirm the confidence which the reader will feel in his instructor. The bibliography is fairly full, but by no means exhaustive We find omitted, for example, Professor Geddes's researches on the "yellow cells" of radiolarians, and Professor Minchin's observations upon gregarines The author might also perhaps have said something about a curious form of gregarine, referred by M. Labbé to the genus monocystis, which Mr. Beddard described from the body cavity of an exotic earthworm some years since. However, as already implied, it is not possible to pack into 310 pages even the briefest mention of a host of interesting forms.

The entire correspondence between a single protozoon and a single cell of one of the higher animals is duly insisted upon by the author, a correspondence which is a comparatively new generalisation in zoology, but, curiously enough, was suggested in a dim way as long ago as in the days of

Peritoneal Cavity, followed by Diffuse Purulent Peritonitis; (9) Idiopathic Dilatation of the Stomach and Removal of a Large Stricture of the Lower End of the Ileum; and (10) cases illustrating the Common Errors in the Diagnosis of Lesions on the Right Side of the Abdomen.—At the close of the demonstration Mr. Parry received the cordial thanks of the society on the motion of the President.

**Dermatological Society of Great Britain and Ireland.**—A meeting of this society was held on Jan. 22nd, Dr. A. J. Harrison, the President, being in the chair.—Dr. A. Eddowes showed a case of Lichen Planus.—Dr. N. Meachen showed a case of Tuberculides.—Dr. P. S. Abraham showed: (1) A case of Parakeratosis Variegata in a young woman; (2) Lupus Erythematosus; (3) Lupus Vulgaris on the Elbow; and (4) Erythema ab Igne in a boy, aged 10 years.—Dr. Graham Little showed: (1) A case of Cutaneous Tuberculides; (2) Doubtful Eruption in an infant, possibly specific, but considered by some members to be a bromide eruption; (3) Comedones on the back and front of the chest in a young child, aged 12 months; and (4) a case of Œdema Neonatorum.—Mr. A. Shillitoe showed: (1) A case of Small Papular (Lichenoid) Syphilide; (2) Leukoplasia Cervicis; (3) Tertiary Tuberculated Syphilide; and (4) Secondary Eruption in a Much-tattooed Subject.—Dr. Little also showed microscopical specimens from a case of Syphilis with Keloid-like Eruption, exhibited by Mr. Shillitoe at a former meeting.—Dr. Eddowes also showed microscopical specimens: (1) Papule of Eczema; (2) Micro-bacilli on a Hair taken from a Leucodermic Patch; and (3) Epithelioma of the Face.

# Reviews and Notices of Books.

*The Surgical and Medical History of the Naval War between Japan and China during 1894-95.* Translated from the original Japanese Report, under the direction of Baron SANEYOSHI, F.R.C.S. Eng., &c., Director-General of the Medical Department of the Imperial Japanese Navy, by S. SUZUKI, M.R.C.S. Eng., L.R.C.P. Lond., &c., Deputy-Inspector-General of Hospitals and Fleets, Imperial Japanese Navy. Tokio: Printed by the Tokio Printing Company, Limited. 1901. Pp. 544.

THE Japanese are a very remarkable people. They have given so many proofs of their national courage, patriotism, enterprise, and energy—physical and intellectual—in their comparatively brief historical record that no one doubts their possession of these qualities or hesitates to form a high opinion as to the part which Japan is destined to play in the history of the future. It is not merely that the receptive faculties of the Japanese are so large and keen—for they share these with many Eastern peoples—but it is because they are so progressive and teachable that they assimilate and develop what they learn and turn it to account that they naturally excite a good deal of speculative interest as to their future.

The publication of this work, which is likely to prove valuable and to be frequently referred to hereafter, may be taken, for example, as a case in point. Japan proved herself to be no mean naval power in her war with China, and animated by a desire to put the medical history of that war on record her naval medical service has had the enterprise and industry to give effect to it by the preparation and production of the large and well-illustrated report before us. Its interest mainly consists in the fact that while so much has been written, and is still being written, about wounds received in wars on land we possess no medical history of naval warfare at sea. As is pertinently pointed out in the preface, the lessons of Trafalgar and of Lissa and of the war between Chile and Peru have been lost to us, and there has been no previous experience of the treatment of wounded on ships since the modern revolution in naval warfare. It is needless to say that a naval battle is a very much more formidable affair than a land fight. Apart from the fact that a ship may be suddenly sunk or destroyed, the damage effected by the explosion of shells is often wholesale and attended with fearful consequences to the ship and the gravest loss of life and injuries to those on board. In some of the naval engagements of this war the wounded could not be treated surgically because no surgeons were left alive to attend to them. We have only to turn to the illustrations in this volume showing the state of the *Matsushima* and *Hiyei* caused by the explosion of shells to see how this occurred. The subject is one which has a direct bearing upon the care and management of the wounded on shipboard, which is discussed by the authors. In the men-of-war of Nelson's time there was a wide hatch in the centre of the ship, extending virtually from the upper deck to the bottom and below the water-line, and this was well adapted for use as a spacious surgery. But nowadays, when the great object is to make naval vessels the most powerful, swiftest, and best possible engines of destruction of their kind afloat, the provision for the treatment and accommodation of the sick and wounded in the best and most suitable position is an infinitely more difficult matter. Ships are propelled by steam power and constructed in watertight compartments, and engine rooms, coal-bunks, and numerous other essential provisions have to be taken into account. The sick-bay or surgery of a ship of war should be conveniently placed for collecting the wounded and for securing, as far as practicable, their safety from shell-fire—desiderata which, however obvious, must frequently be unattainable. All the arrangements for the collection and removal of the wounded and for supplying them with surgical aid on shipboard during, or directly after, a naval action require to be carefully and systematically thought out, and should be held in remembrance in drawing up and designing plans of war-vessels. It would be interesting to learn what has been attempted or done in these respects in our own navy. In future naval wars some system will have to be organised for relieving ships of their wounded after an engagement by a fleet of vessels specially designed for the purpose—to act as bearer columns now do on land in stripping a battle-field of its wounded.

The book has been translated into excellent English. Reference is made in it to, and a brief description is given of, the naval battles of Phung-do and Yalû, the attacks of the Japanese upon Tan-chow, Wei-hai-wei, the Pescadores, and those upon Keelung, Takau, and Anping; also to the bombardments of Hwa-yuan-kow, Talien Bay, Port Arthur, and Yingching Bay. This is introductory, however, to the special subject to which the report is devoted—namely, the condition of the killed and wounded in the various actions and the diseases and injuries in the Japan-China war during 1894-95. In the description of the battle of Yalû the facts concerning the *Matsushima* and some other vessels are worth reading. A brief history of the killed and wounded is followed by the statistics of injuries and the causes and classification of wounds and their complications, this section ending with a chapter on the management of the wounded. This part of the volume also includes numerous surgical and clinical details and much curious and instructive information, together with a history of several remarkable cases of injury, and are illustrated by numerous large and coloured plates. Other sections deal with diseases and injuries (exclusive of the killed and wounded in the actions during the war), sanitary conditions, and the work done in the naval hospitals. The book is a little mine of information in regard to the surgical and medical history of the naval war between Japan and China and a variety of subjects connected therewith, and it is scarcely necessary to add that much time and labour must have been bestowed on the collection may precede the earliest inspiratory crepitations of pneumonia. The treatment of the disease is generally well described, but the majority of physicians will scarcely agree with Sir J. Moore's statement, "Many—probably most—pneumonic patients are better without stimulants." We are certainly of opinion that in the majority of cases of pneumonia stimulants are required and that alcohol is one of the most valuable drugs that can be employed in the treatment of this affection.

*Blackpool as a Health Resort.* By THOMAS CARR, M.D. Durh. Manchester: Abel Heywood and Son. 1901. Pp. 78. 1*s*.—The history of Blackpool is uninteresting. Much of the information given by Dr. Carr is taken from such obvious sources as the annual reports of the medical officer of health, while an elementary essay on climatology is padding, although the author suggests that the general principles of climatology are discussed so that we may understand the climate of Blackpool in particular. The vital statistics of Blackpool are dealt with in a few lines, Dr. Carr stating that "the practical conclusion that those of us who have studied these conditions (i e., age, sex, and occupation of the residents) have come to is that scores of people who would either be chronic invalids or have died under less favourable surroundings are living yet at Blackpool." What sort of value is Dr. Carr's pronouncement, backed by unnamed authorities and supported by no figures? In a chapter headed "Cases Specially Benefitted (*sic*) by Residence at Blackpool" it is claimed that residence in the Lancashire town will improve sufferers from (1) nervous diseases; (2) chest complaints; (3) troubles associated with the digestive organs; and (4) constitutional maladies. This is a large order. The last chapter contains notes on the Hôtel Métropole and other hydropathic and boarding-establishments, the names of the proprietors or managers being in several instances mentioned in an obliging manner. We are not favourably impressed with this *brochure*, for we cannot conceive that it will be of any use to anyone except to Dr. Carr, who places under his name on the title page 13 lines describing his past and present professional positions.

## JOURNALS AND MAGAZINES.

*The Journal of Anatomy and Physiology.* Conducted by Sir WILLIAM TURNER, K C.B., F.R.S.; D. J. CUNNINGHAM, M.D., F.R S.; G. S. HUNTINGTON, M.D.; A. MACALISTER, M.D., F.R.S.; and J. G. M'KENDRICK, M.D., F.R.S. Vol. XXXVI. New series. Vol. XVI., Part 2. January, 1902 With Plates and Figures in the Text. London: Charles Griffin and Co., Limited. Pp. 50. Price 6*s* —The articles contained in this part are the following: 1. The Relation of Structure and Function as Illustrated by the Form of the Lowest Epiphyseal Suture of the Femur, by Arthur Thomson, M.B. Edin, Professor of Human Anatomy, Oxford University. The conclusion arrived at by Professor Thomson from an examination of the specimens at his disposal is, that structure in this instance is determined by function. 2. The Form and Form Relations of the Human Cerebral Ventricular Cavity, by J. O. Wakelin Barratt, M.D Lond. The determination of the form of the ventricular cavities of the brain is shown in this paper to be more difficult than might at first sight appear and to require much attention to details. Many illustrations are given and the result of the method pursued seems to be very satisfactory. 3. The Peritoneum of the Pelvic Cavity, by A. Francis Dixon, M.B. Dub., Professor of Anatomy, University College, Cardiff, and Ambrose Birmingham, M.D. R.U.I., Professor of Anatomy, Catholic University, Dublin, with three plates. The description is clear and the plates are well executed. 4. Salmo Salar, the Digestive Tract in Kelts, by J. Kingston Barton, M.R.C.P. Lond., with two plates. This paper contains an account of the contents of the alimentary canal in a healthy kelt taken from the Hampshire Avon and of the histological characters of the intestinal walls. Many fat droplets were found in the lacteal system. 5. Some Observations on the Origin and Nature of the So-called Hydatids of Morgagni found in Men and Women, with especial reference to the fate of the Müllerian Duct in the Epididymis, by John H. Watson, M R.C.S. Eng., assistant demonstrator of anatomy, London Hospital. This is an excellent article in which the nature of the "sessile" hydatid and of the "pedunculated" hydatid is well worked out, the former being shown to be of Müllerian origin and the latter the true hydatid of Morgagni which usually springs from the anterior layer of the salpinx, occasionally from the fimbriated extremity of the Fallopian tube, and which can invariably be traced to the parovarium through the broad ligament. This pedunculated cyst is the homologue of the stalked hydatid attached to the epididymis of the male, both being derivatives of either the mesonephros or the anterior end of the Wolffian duct. The cyst occurring at the base of the fimbria ovarica is of doubtful origin, and is possibly a distended mucous gland or a cyst of the tubo-parovarian duct. 6. Hyoid Apparatus in Man in which a separate Epi-hyal Bone was Developed, by Professor Sir William Turner. 7. The last article is by Walter H. Gaskell, M.D. Cantab., LL D., F.R.S., on the Origin of Vertebrates, deduced from the Study of Ammocœtes, dealing particularly with the origin of the eighth cranial nerve.

# New Inventions.

## BILLROTH'S WATERPROOF CAMBRIC.

WE have received from Messrs. L. Paechtner and Co., of 40, Queen-street, Cheapside, a sample piece of a new waterproof material, called Billroth's waterproof cambric. It is said to be extensively used on the continent for purposes where a material is required which is impervious to water. Thus it can be employed to cover fomentations, or in place of mackintosh sheets for use in operations, and for aprons for surgeons and nurses. We have examined the sample sent to us; it is a yellowish material, apparently prepared by some method similar to that by which "oil-silk" is made We find that it is quite impervious to water, even after prolonged boiling; we may therefore conclude that the makers' claim that this material may be sterilised is well founded. This is a great advantage as ordinary mackintosh sheets cannot obviously stand sterilisation by heat. It is thin and somewhat translucent in appearance, but it seems to be strong. We consider that it is likely to prove of service in many uses for which rubber-covered materials are now employed. We understand that the wholesale price is approximately at the rate of 1*s*. a square yard; it is therefore considerably cheaper than mackintosh sheeting.

## IMPROVED VACCINATION SHIELD.

EXPERIENCE has shown the general practitioner that while some sort of protection should be afforded to vaccination vesicles the less they are interfered with by anything coming in actual contact with them the better, unless, perhaps, a discharging stage should require attention. And for all practical purposes the less cumbersome a vesicle-guard is the better. I have devised one which has been made for me by Messrs. Arnold and Sons of West Smithfield, London, E C., that seems to me to be as effectual as it is simple. It is made of aluminium and is fixed to the skin by means of oblong pieces of sticking plaster placed over the broadened end of it. Being fixed parallel to the long axis of the arm it meets with hardly any pressure or friction from clothing when applied. One or two turns of a bandage may complete adjustment if desirable. One of the greatest advantages of this form of guard is that the vesicles can always be seen, and treated when discharging, without removing the guard If it is placed in position after the operation has been performed the wound is kept from being irritated, and if the first

Oken. That naturalist held that the appearance of "infusorians" in water containing decaying animal or vegetable matter was due to the resolution of the animal bodies into their primordial "vesicles," and the same view was held by others at or about the same time. Of late years many and remarkable proofs of the justice of considering these minute creatures as each equivalent to a single cell have been added. Not the least remarkable of these is the occasional extrusion by protozoa of fragments apparently quite comparable with the "polar bodies" invariably extruded by the egg during its maturation. Even that mysterious and little-understood body, the "centrosome," has at length turned up in the protozoa. The earlier observers were baffled by the extreme complexity of the protozoan body as compared with any other animal or vegetable cell. A historical introduction deals with such matters, and the main problems, physiological as well as anatomical, of the group are dealt with after the systematic account of the varied forms which constitute this most ubiquitous order of creatures.

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*The Surgical Anatomy and Operative Surgery of the Middle Ear.* By A. BROCA, Surgeon to the Trousseau Hospital, Paris, and Supernumerary Professor to the Faculty of Medicine of Paris. Translated by P. MACLEOD YEARSLEY, F.R.C.S. Eng., Surgeon to the Royal Ear Hospital. London: Rebman, Limited. 1901. Pp. 62. Price *3s. 6d.*

PROFESSOR BROCA has divided his monograph into three parts—the Surgical Anatomy, the Operative Procedures, and an Atlas. *The anatomical part is very thorough. It is pointed* out that the supra-meatal spine is not developed from the tympanic ring, a fact which is often overlooked, but proceeds from a point known as the "epitympanal." The author passes severe strictures on those surgeons who divide the facial nerve and who expose the lateral sinus. We quite agree with him in thinking that division of the facial nerve is usually inexcusable and even culpable, but as to exposing the sinus that is entirely a matter of opinion, and Mr. Yearsley has added a footnote without due regard to the context. Professor Broca describes in detail (1) opening the antrum alone, or the so-called Schwartze operation; and (2) opening the antrum and tympanum. In the latter case incision of the external meatus at its upper and posterior part is advised, and Professor Broca still advocates non-closure of the post-auricular wound—a procedure which has gradually fallen into disrepute in England; we cannot help believing that the immediate suture gives better results. The pure Stäcke operation is described carefully and will help to fix in the mind the difference between this operation and that one which is so often called indifferently the Stäcke or radical operation. The radical operation as practised in England is Professor Broca's operation for making a mastoid-tympanic cavity, but the former is the more complete procedure. *The author passes on to describe the* methods of operating for intracranial lesions but is less explicit and enters less into detail than in respect to mastoid operations. The last third of the work is devoted to "The Atlas," the value of which would have been much enhanced had more attention been paid to the explanations of the plates; we also think that a short index would have been an advantage. Mr. Yearsley has attempted to adhere rigidly to the author's text and in consequence the language is somewhat obscure at times

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## LIBRARY TABLE.

*De l'Obésité.* By Dr GABRIEL LEVEN. Paris: G. Steinheil. 1901. Pp. 130 —This little *brochure* on the etiology and pathogenesis of obesity will well repay those who take the trouble to read a scientific article of this kind in a foreign language. We would particularly commend Dr. Gabriel Leven's work to those writers—and there are many of them—who venture into print on the subject of obesity. It is chiefly owing to the writings and work of Bouchard that we possess any pathology at all on the vexed question of abnormal depositions of fat in the human subject, and it is owing to the teaching of this great *savant* that his pupil, Dr. Gabriel Leven, is in a position to publish the learned and philosophic treatise which is now before us The author holds definite views on the subject of which he treats and he has made some very valuable investigations of a clinical, as well as of a laboratory, character, to support the hypothesis which he expounds. Briefly stated, the main contentions of Dr. Gabriel Leven may be summarised as follows. Obesity is a morbid symptom and not a *disease entity; it is, in fact, the outward* expression of a general disturbance of nutrition. Since nutrition is dependent on the energy liberated by the nervous system it is logical to assume that a disturbance of nutrition may be referred to a disturbance of nerve function. Clinical *evidence is strongly in favour of this view in the cases both of* localised and of generalised lipomatosis. Depositions of fat and fatty degenerations not infrequently occur as the direct result of local nerve lesion and general nervous disorders. As regards the etiology the author has collated a considerable mass of clinical evidence that dyspeptic symptoms almost invariably accompany the pathological deposition of fat. For our part, however, we cannot admit that he has established his claim *that dyspepsia* and obesity stand in the relationship of cause and effect; they may equally justly constitute pathological expressions of the same symptom-complex. A record of very carefully conducted experiments appears to prove, however, that in the case of obesity uncomplicated with renal, cardiac, or hepatic lesions, the urinary coefficients are the same as in normal conditions That obesity can occur independently of dietetic causes and of changes in the urinary coefficients is certainly a very strong argument in support of the nervous origin of this condition, at least in a very large number of cases. Intelligent and intelligible as are the arguments brought forward by the author to establish his views, we cannot help thinking that had he more carefully differentiated between the etiology and the pathogenesis he would have gained a larger following of adherents. There is something confusing in the idea that obesity is due to nerve disturbance and yet generally caused by dyspepsia. The causes of dyspepsia, according to a common-sense view, may be the same as those of obesity—namely, nervous exhaustion due to overaction of the nerve-centres which control nutrition. It is hardly possible to conceive that anything can be so effective in the determination of this condition as the prolonged intake of an excessive dietary. As we have already mentioned, Dr. Gabriel Leven's little book should be read by all who take an interest in the subject of obesity, as it reflects accurately the teaching of the Bouchard school and is not without many valuable and original suggestions.

*Pneumonia: Clinical Section.* By Sir J. W. MOORE, M.D. Dub. Reprinted from Vol. IX. of the "Encyclopædia Medica." Pp. 39 —As indicated by the title this pamphlet is a reprint from the "Encyclopædia Medica" of Sir J. W. Moore's article on Pneumonia considered purely from a clinical point of view. In accordance with modern views he considers pneumonia to be a specific general infection of bacterial origin analogous to the other infective or so-called "zymotic" diseases. A good account is given of the symptomatology of the disease, especial stress being laid on the atypical peculiarities which occur at the extremes of life In dealing with the diagnosis attention is drawn to the value of the myotatic irritability of the pectoral muscles as an early sign. Some observers (notably Dr. Kennan) claim for this sign that it

THE LANCET.

*LONDON: SATURDAY, FEBRUARY 1, 1902*

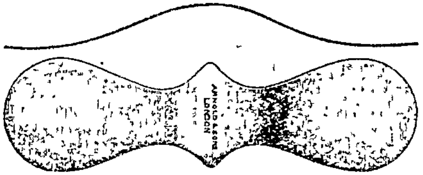
# The Edinburgh Scheme for a Psychiatric Clinique.

SCOTLAND is always to the fore in lunacy matters, and the scheme proposed by SIR JOHN SIBBALD and supported by the chief physicians of Edinburgh for promoting the treatment of early mental disease in the wards of the Royal Infirmary is not only excellent in itself but is worthy of the most careful consideration at other hospital centres. The conception is not entirely new in some of its essentials, but the Edinburgh proposal points to more complete developments than have hitherto been entertained. It proposes to apply general hospital treatment to those early cases of mental disorder where the patient cannot as yet be certified as insane, generally known as "borderland cases," but it is also to include acute insanity of a temporary nature. Of the value of treating the borderland cases in the proposed way there can be no question, but the difficulty is to get patients in this stage to offer themselves for treatment, partly because they do not always themselves recognise the condition in which they are, and partly because their friends do not know the importance of the premonitory symptoms The friends are therefore unwilling to interfere with the occupation of the bread-winner who is only, as they think, suffering from some trifling affection which will soon remedy itself.

The greatest difficulty is with the second class of persons—viz, those afflicted with acute insanity of a temporary nature It is hard to say when acute insanity is of a "temporary" nature, and this is just the class where a mistake may be made by not removing the patient at once to an asylum where he can have the special care and opportunity for outdoor treatment that few hospitals can give. Is there not a little tendency nowadays to let sentiment outrun discretion? It is quite true that, rightly or wrongly, the public does view with dislike and distrust the placing of persons in special institutions under certificates, putting the "stigma of insanity" upon them, as it is termed; but this feeling may be carried too far in the interests both of the patients and of the public, and unless the arrangements of a general hospital are more complete and elastic than is possible at most of them it will scarcely be found possible to treat acute insanity with due regard to the other inmates. It so happens that much of the acute insanity in Scotland is of the depressed or melancholic form, a kind especially suited for general hospital treatment, and if the hospitals are in touch with the asylum authorities there ought not to be any difficulty in transferring with ease and rapidity any turbulent or unsuitable cases that arise. At St. Thomas's Hospital, London, there has been for some time an out-patient department for the treatment of early mental symptoms, and the experiment, we are told, has been very successful; but let it be remembered that in bygone days insane patients were actually treated in the wards of at least one of the London hospitals, and that eventually the plan was given up as unsatisfactory. As to the value for students and for post-graduate classes of a clinique of psychiatry at a general hospital there can be no doubt. It is just in the early stages of mental aberration that the changes occur in conduct and disposition which lead to misunderstandings in families and subsequently to serious physical and moral developments, all of which might be capable of explanation and removal if the real nature of their existence was understood. There is scarcely any form of disease in which nervous symptoms of one kind or another are not present The association between neuroses and bodily states is a matter in which the student has been until lately uninstructed, but hospital physicians are now beginning to recognise the importance of the matter, as a proof of which we may mention the papers on nervous disorders now frequently read at strictly psychological associations by general physicians

A review of the prevailing practice of dealing with private insane patients points to this very striking fact that the owners of private asylums are complaining of the increasing tendency to place patients in homes or in the care of general practitioners; and there is no doubt that cases of early alienation are sent for advice to the "neurologists," and that those engaged in consulting lunacy practice rarely see people unless it has become a necessity for certification. The trend of public opinion appears thus to be confirmatory of the action of the Edinburgh physicians. If a complete development of this hospital system of early treatment becomes an accomplished fact it may have a real effect upon that burning question, in London at least, of future lunacy accommodation, for in London we appear to be running to the extreme of building beyond the necessities of the situation. It is certain that, however great the accommodation may be, there will always be found candidates to occupy it, and it is, perhaps, better to be undersupplied with lunacy accommodation than to have room always forthcoming on demand. Practical experience has established beyond question the fact that when room cannot be got it oftens turns out that it is not wanted. To apply directly to London the Edinburgh innovation is not possible because of the overcrowded state of our hospitals and because of the difficulty of securing the concerted action that is possible in a city of smaller dimensions Probably the best arrangement would be that each lecturer on mental disease—and there is already one attached to each medical school—should be appointed as physician to an out-patient department, to which all cases of early mental impairment would be referred. He would then either attend to them at his regular visits or, if necessary, advise their reception into a special hospital, for it would not be possible in London to keep a separate system of wards in the general hospitals for these cases More than this does not at present seem feasible Of course, this is carrying out only a part of the Edinburgh programme, and it is nothing more than an extension to all the hospitals of what is already done at St. Thomas's Hospital.

At the National Hospital for the Paralysed and Epileptic many borderland cases attend as out-patients, but by the operation has not been successful a second can be performed without removing the guard. The freest ventilation being allowed, the vesicles are permitted to come and go under



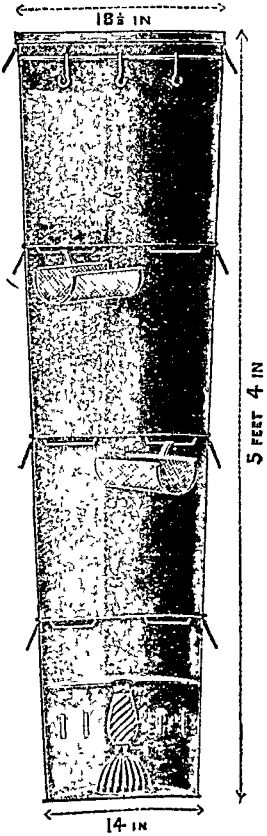
the most favourable and natural conditions, not being pressed upon or heated or sweated as they would be when smothered in cotton wool or kept under comparatively air-tight appliances

London. HAYDN BROWN, L.R C.P., L.R C.S Edin

## A PORTABLE DISINFECTOR FOR PRIVATE AND HOSPITAL USE

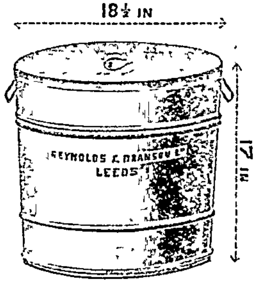
THIS apparatus, which is made of strong tin and built up in four sections (which fit inside one another for portability—see Fig. 2), is intended for disinfecting clothes, gloves, &c., after exposure to infection, and I am finding it so useful in my practice that I thought it would interest and be of similar use to others. Formalin is the disinfectant and the disinfection is carried out with little or no trouble and with no nuisance, for it can be used in a closed-up room without smell or perceptible change in the atmosphere of the room and without injury to clothes or furniture We all know the obvious disadvantage of sending clothes to be disinfected at a public disinfecting place.

FIG 1.



Apparatus open – in section

FIG 2



Apparatus closed.

The apparatus is intended to overcome this objection and will be found specially useful to medical men and nurses.

*Directions for use.*—1. Fix up the sections as shown in Fig. 1. 2 Hang up the clothes on the hooks of the rod. 3. Place smaller articles, such as gloves, &c., in the moveable racks as shown in the illustration. 4. Light the lamp and drop three formalin tablets into the receiver and slide the lamp into position (see Fig. 1).

The apparatus was skilfully made for me by Messrs. Reynolds and Branson, Limited, Leeds.

HERBERT J ROBSON, M.R.C.S. Eng., L.R.C.P. Edin.
Leeds

## PINE FIBRE FOR MATTRESSES, ETC.

FEATHER-BEDS are familiarly associated with the idea of luxury, but it has now for some years been recognised that mattresses stuffed with fibrous materials are equally comfortable and more wholesome. Horsehair has a well-established reputation as perhaps the best of these substances, and although it has competitors it is not likely to be superseded Another stuffing for mattresses, which is novel in this country, but is said to have been well tested in America, has been submitted to us by a firm of bedding manufacturers trading as Davis's Feather Mills, Limited, 61, 62, and 63, High-street, Whitechapel, London, E It is prepared from the long tufted foliage of the *Pinus australis*, the Georgia pitch-pine, or yellow pine of the southern portion of the United States The finished product to which the name of pine fibre has been given consists of tough, interlacing, flexible fibres, rather stouter than horsehair, curling naturally and averaging from six to eight inches in length and upwards. When in quantity it forms an open, porous mass, freely permeable to air, elastic, soft, and springy to the touch, and to all appearance admirably fitted for use as a stuffing for mattresses or cushions. It is of a dark-brown, somewhat glossy colour, possesses a slight odour somewhat resembling that of fresh pine-wood sawdust, and by reason of its vegetable origin will no doubt be free from any tendency to attract moths which are so destructive to hair or wool stuffings The makers state that the fibres do not break up or become lumpy, and that mattresses filled with this material have been in use for many years without sensible deterioration The fibre may be obtained either made up into mattresses, bolsters, or pillows, or in bales averaging about 2 cwt each

WESTERN DISPENSARY, BATH —The annual meeting of the subscribers to this institution was held on Jan 24th, under the presidency of the mayor (Mr. E. E. Phillips, M.R.C S Eng , L.R.C P. Edin , J P.) The financial statement was satisfactory and showed a favourable balance of £55. The medical report stated that during 1901 there had been 876 cases treated and 434 patients had been attended at their own homes can be kept apart from the other inmates of the dwelling, few discreet medical officers of health would care to force the situation to a legal decision unless a member of the household were concerned in the distribution of some article of food-supply such as milk. In a case of scarlet fever very similar arguments would have weight, but the presence of children at school ages, as also the carrying on of a business such as that of a dairy, would at once render home treatment unsafe, and it would always be wise in the case of scarlet fever to set apart two rooms for the use of the patient and the attendant. In short, the occupation and age-distribution of the invaded household must to a very material extent govern the decision to be arrived at. In dealing with small-pox we are face to face with a disease which possesses not only a very high degree of infectivity but also a fatality-rate of somewhat alarming proportions. Moreover, the disease, even when it does not kill, is liable to lead to serious disfigurement, and hence it is shunned in a manner which is certainly unique among our more or less endemic diseases. Small-pox, too, is perhaps the best type which we possess of what may be called air-borne diseases, and it possesses an attacking power not found in the case of any other infectious malady. Aerial convection is doubtless operative in some degree in several communicable diseases, but the evidence with respect to the resistance and viability of the small-pox virus is such as to place it almost in a class by itself. For these reasons the removal of all cases of small-pox to an isolation hospital specially set apart for the segregation of that disease is eminently desirable, and there are very few instances, more particularly under urban conditions, where the medical officer of health would care to accept the responsibility of allowing a patient with this disease to remain at home. Still, it would be altogether straining the position to assume that a case of small-pox must of necessity be removed in every instance. In a detached house where, perhaps, a whole floor or even a wing of the building could be devoted to the patient and his attendant, where money was practically no object, and where the householder was prepared to carry out all the suggestions of the medical attendant and the medical officer of health, it would, it seems to us, be unwise in the best interests of the public health service to *insist* upon the removal of such a patient to a general small-pox hospital. In the case of the modern blocks of buildings known as "flats," where there is often direct aerial communication between one suite and another, either by means of the staircase, the lifts, or the dust-shoot, it would appear to be very questionable if the patient could be regarded as having proper accommodation within the meaning of the Public Health Acts

It is, of course, much to be regretted that every town is not as well provided with hospital accommodation as is the case in the metropolis, where both public and private accommodation is available. If the medical officer of health can tell the relatives of the patient that a special ward will be provided he is, under certain conditions, in a far stronger position to insist upon removal than would be the case were he aware that the patient must be housed in the general ward with people occupying a much lower social and educational plane. Fortunately the educated classes are now learning to get themselves revaccinated at intervals, more particularly when small-pox threatens to prevail, and the more this custom obtains the less likely to arise are the difficulties as to isolation to which we have here drawn attention.

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# The National Hospital for the Paralysed and Epileptic.

THE medical staff of the National Hospital for the Paralysed and Epileptic are to be congratulated by the whole medical profession, and by all who are interested in the welfare of the hospital, on the happy result of their long and arduous struggle. This struggle, as our readers may remember, owed its commencement to the repeated refusal of the Board of Management of the hospital to allow the staff a very modest representation on that Board. The staff, despairing of redress from the Board, finally addressed themselves to the governors and brought forward instances of bad management and of defects in the diet and nursing of patients which ought never to have occurred in any well-ordered institution. They appealed to the governors to institute a thorough and searching inquiry into these matters and also into the whole management and constitution of the charity. It is needless to recapitulate the various devices to which the Board resorted in its attempts to evade such a demand Fortunately, after much time had been consumed in fruitless negotiations and prolonged newspaper controversy, the governors took the matter up energetically and appointed some of their own number to choose a committee consisting of legal, medical, and business men, to investigate the charges brought forward by the staff. This committee was appointed both to inquire into the general constitution of the hospital and into the position and acts of the secretary-director—an official created by the Board apparently to act as its delegate and one of whose functi seems to have been to keep the Board and the staff fi directly communicating one with the other. This c mittee was presided over by Sir EDWARD FRY, and recommended, amongst other things, that the staff sho have the representation on the Board for which they ha long contended, and that the office of secretary-dire should be abolished. Incidentally the report of the c mittee showed considerable remissness on the part of Board in carrying out the duties entrusted to it by rules, and that body did not escape censure for the appro and support which it had furnished to the secretary-direc in his autocratic dealings with the medical staff.

The immediate result of this report was that the secreta director resigned his office. It was a matter for surprise many people who had read the report that the Board not follow his good and proper example. At the meet of governors called to receive the report a commit containing representatives of the Board, the medical st and the governors, was appointed to frame a body rules giving effect to the recommendations of EDWARD FRY'S committee. These rules were next submit for adoption to a meeting of governors. An adverse propo was made by a member of the Board, who attempted get the four other votes necessary to take a ballot of whole body of governors, but the attempt failed and the ru rules of the hospital they cannot be admitted inside the wards, and so they are either relieved as far as possible or are sent to the authorities who certify them for asylums In most out-patient departments cases of this sort at times present themselves, and if the London hospitals possessed such an annexe to their work these patients could be drafted to the psychiatry department It is under the consideration of the London County Council to procure authority for the erection of "reception houses" for early cases of mental disease. The "reception houses" will be in the nature of hospitals where such patients may be kept until it is seen whether they are likely to recover in a short time or whether it is advisable to have them placed under certificates and sent to an asylum. To our mind, these "reception houses" form the solution of the difficulty, and we advise the authorities in Scotland to consider this plan before finally determining to use the general wards of the infirmary for acute cases of temporary insanity, or even borderland cases. The system of "reception houses" seems an ideal one, for it does away at once with the slur on the patient of having been in an asylum and it brings the general hospitals into direct *rapport* with the means of treating the cases which cannot with advantage be left at home It was the expense and the moral cruelty of sending to an asylum these early cases which only required a few days' care that led to the suggestion of receiving houses, which, perhaps would better be termed "hospitals," the words "asylum" and "certificate" being reserved for other cases. To proceed with the erection of these reception houses it is, we believe, necessary to have some legislation, and we sincerely hope that if it is necessary a new Bill drafted in a very liberal spirit will soon be brought forward and carried through When these new buildings are erected it is eminently desirable that they should be conducted upon the most advanced medical lines, with a due regard to the object of using them as places for clinical study and research. To carry out this object there should be a complete visiting medical staff, and no obstacle should be allowed to stand between the intimate relation of the institutions to the general hospitals which would act as feeders to them, while greatly relieving the strain on their resources. For general hospitals would then be spared having to treat cases of delirium tremens or early alcoholic insanity, to say nothing of other cases which at present cause much noise and inconvenience. If the sites of the proposed houses are well chosen the alliance with the hospitals should be complete, and the system of treatment of acute mental disease generally will in London be placed on a very satisfactory footing.

It is noticeable that in Scotland the scheme of the hospital treatment of acute mental disturbance was brought forward by a former Commissioner in Lunacy. It has not hitherto been the custom in this country for the Commissioners in Lunacy to pose as pioneers in the direction of lunacy reform their functions being apparently to see that the law as already expressed is carried out properly; but surely this is a matter in which we may fairly hope for some initiative from so experienced a body as the Lunacy Commission. In many particulars, such, for example, as the choice of site or form of asylum, public bodies are left to flounder without any aid from those who have the real opportunities of seeing all that is best and worst in the country. It is to be hoped that the influence and authority of the Commissioners in Lunacy may be brought privately to bear, if it is not thought advisable for them to act openly, in evolving a scheme which will allay the apprehensions of the public. It is necessary to bring mental diseases into line with other general diseases, whilst at the same time providing an opportunity for clinical teaching on the subject, the absence of which to-day is rather a cause of reproach The eyes of the medical world are at present upon what is being done in London towards attaining to the best form of treating mental disease, and we have already had occasion to point out some improvements which have been recently effected and which have been copied. The establishment of a system of combined treatment of mental and general diseases would most probably soon have imitators in the large provincial centres where the whole subject of the treatment of mental disease is also a very pressing one

# What is Proper Isolation Accommodation?

WITH the prevalence of small-pox the question of what is proper isolation may at any moment present itself in a somewhat inconvenient fashion, and hence it may be useful to discuss some of the phases that the problem is not unlikely to assume Fortunately the case of WARWICK *v.* GRAHAM, to which we referred last week (p. 241), has established the proposition that although a person suffering from a dangerous infectious disorder may have proper lodging and accommodation in so far as he himself is concerned he is, nevertheless, "without proper lodging and accommodation" within the meaning of Section 124 of the Public Health Act, 1875, and Section 66 of the Public Health (London) Act, 1891, in the event of his being a danger to his fellow creatures. The question therefore resolves itself largely into a matter of opinion on the part of the medical officer of health, and what may be feasible in the case of one disease is impracticable in the case of another. In a problem of this nature mathematical precision cannot be arrived at and due regard must therefore be paid to the relativity of the situation. In deciding what attitude he shall adopt in any specific instance, the degree of infectivity and the fatality-rate of the disease with which he has to deal must largely govern the actions of the medical officer of health. It might obviously be contended by an extremist that nothing short of isolation in hospital would meet the requirements, but such an extremist would find it difficult to establish the position that even isolation of this character was absolute There are few, however, who would reduce things to such an absurdity, and the medical officer of health will be found as a rule to take a reasonable view.

Assuming, for instance, enteric fever to be in question the prevailing opinion would probably be that in the homes of the poor, where the patient cannot be accorded the sole tenancy of an apartment, and where detailed supervision as regards nursing is impracticable, the necessities of the situation demand the patient's removal to hospital If, however, skilled nursing can be afforded and the patient of days spent by its shores and of work he did there in anthropology. Addresses also came from Zürich, Basel, and Berne. England, Scotland, and Ireland sent delegates and addresses, with Lord LISTER at the head of the first. From Italy came BACCELLI with a gift from his Government and the diploma of doctor from the medical faculty of Rome. Scandinavia, Finland, France, Belgium, Holland, and Russia were all represented, and he specially refers to Japan, whence many pupils have come to him and whence, he trusts, the methods of modern science will spread over the Far East. Then he speaks of Germany and tells how gifts and honours were showered upon him from the KAISER downwards. For all these exceptional honours he can, he says, do nothing else than repeat his heartfelt thanks. He is too old to promise any new performances worthy to be regarded as a return for such gifts; but he goes on to say, "I shall not weary of work so long as my strength shall last" He cannot expect to do more than bring to a fitting close labours commenced in his earlier years. The wonderful reception he had seems to have touched him deeply, and he relates how all the people seemed to share in it. For, he says, "when on returning home quite late from one of the *fêtes* I found my little street illuminated throughout," and he had to pass through ranks of children whose welcome followed him to his door; and daily as he passed along the street children would greet him with outstretched hands and a "Good day, Herr VIRCHOW." It is characteristic of the man and his wide sympathies that he should reckon as the most striking event of those stirring days the reception given to him by the Mechanics' Union which he himself had founded and in the work of which the late Emperor (then Crown Prince) FREDERICK and his gracious consort were deeply and personally interested. This body has given rise to numerous similar associations in all parts of Germany, and although many of these have been destroyed by the spread of Socialism the Berlin organisation remains. At the banquet which the members of the union gave him he says "the old songs were sung, once more I made them a speech, and hands were stretched out to me just like those of the children of the Schelling-strasse. It was the expression of the people's gratitude, and therefore I may say to everyone, Trust the people and work for them and you will not fail of reward, although the breaking up of many systems, the disappearance of many men, the complete transformation of public life, bring home to us the thought of our own evanescence. That is my confession of faith, and with this I hope to be guided so long as I live."

We have summarised this message which Professor VIRCHOW has sent forth to his friends in all parts of the world in order that we may gather therefrom the inspiration which has been his leading principle throughout life. He has shown how devotion to science in many fields is not incompatible with taking a prominent part in the practical life of the community and the promulgation of ideas for the bettering of mankind. He has never wearied of well-doing, and the multifariousness of his interests, as well as the singular simplicity of his aims, have made him to-day the most striking figure of his time. If the article we have dealt with may seem tinged with egotism, it is, we may be sure, not the conscious egotism of vanity, but that which springs naturally to the front when, surveying the experiences of a long and busy life, a man tells his friends of the part he has played in history. That the life of one who has accomplished so much in his day, and who deserves all the honours that have been bestowed upon him, may be prolonged to see the fulfilment of his projects is the fervent hope of all who have learnt to know and to appreciate his labours.

# Annotations.

"Ne quid nimis."

## THE ETIOLOGY AND TREATMENT OF CANCER.

IN the present number of THE LANCET we publish a case of cancer of the uterus treated by Professor Albert Adamkiewicz by injections of cancroin in which there occurred marked retrogression of the disease and a great improvement in the condition of the patient. Professor Adamkiewicz holds the view that cancer is the result of the action of parasites and he thinks that the poison produced by the growth of these bodies should be of value in arresting the progress of the disease. For this purpose, as the result of investigations carried out upon the poisonous products, he injects a substance which he terms "cancroin." This body appears to be chemically equivalent to neurin—that is to say, it is trimethyl-vinyl-ammonium-hydroxide. Professor Adamkiewicz uses a 25 per cent. solution neutralised with citric acid, saturated with phenol, and mixed with twice its quantity of water. His original observations and experiments were published as far back as 1893. It is curious, if the method is capable of giving such good results, that it appears to have been employed in so few cases by other surgeons and that we have heard comparatively little about it during the last eight years. For these reasons, although the present recorded case is undoubtedly a striking one, yet we are inclined to be a little sceptical as to the results to be obtained by a more extended use of this remedy. In THE LANCET of Jan. 11th (p. 126) our Paris Correspondent called attention to the paper submitted by Dr. Doyen to the French Academy o Medicine. Dr. Doyen announced the constant presence o a new microbe in cancerous tumours, a microbe which h had been able to isolate and to cultivate. It occurs in th form of motile diplococci which can be cultivated in tube of gelatin and gelose with the addition of a specia bouillon. The organism appears to be more easily found in the affected glands and secondary growths than in the primary tumour, and has been found in th blood itself. The ease with which cultivation can b obtained appears to vary directly with the malignancy of th growth. Subcutaneous injections of the toxin of thi microbe attenuated in some special manner brings about especially in the glands, a reaction similar to that produced in tuberculous glands by the injection of Koch's tuberculin Post-operative injections of the toxin appear to have given good results which have endured for six months, but further observations are necessary upon this and other points It will be interesting to hear whether the toxin of Dr. Doyen had any relationship to the "cancroin" of Professor Adamkiewicz. The view that cancer is primarily a disease of the epithelium is gradually gaining ground, but, so far the weight of evidence has appeared to be against the parasitic theory. It is possible that a considerable gain to our knowledge may result from the work of the commission which the German Government has appointed to consider the whole question. A very graceful compliment has been paid to British workers and pathologists by the appointment were adopted with only verbal alterations. These rules necessitated an election of a Board at an early subsequent meeting. This election was held on Jan. 9th and the two medical representatives having been already chosen by the staff 10 vacancies remained to be filled up. For these vacancies 10 names were proposed, and two members of the old Board sought re-election On a show of hands the latter were rejected, but a ballot was demanded on their behalf and the result of this ballot was declared at the meeting held on Jan 23rd It need only be said that the result of the ballot confirmed the vote of the previous meeting, the governors clearly indicating their determination no longer to utilise the services of any of the old Board of Management who had in their opinion endangered the very existence of the charity.

The hospital may now be regarded as "swept and garnished." It cannot be denied that much hard and energetic work lies before the new Board. In this it will be cordially and loyally assisted by the medical staff and, we doubt not, by the general body of governors. Everyone interested in the hospital must now feel that at last it is established on a broad basis, which will give it strength and stability and will enable it to extend its already large sphere of usefulness, not only in the cure and relief of suffering, but also in the acquisition and dissemination of medical knowledge.

# Professor Virchow's Message.

THE current number of *Virchow's Archiv*—the first part of the 167th volume—opens with an article by its venerable editor which cannot fail to awaken sympathetic interest at the present time when he is lying on a bed of sickness. It is addressed to "my friends" and is intended to convey to them collectively, since it was impossible to do so individually, his thanks for the share which they took in celebrating his eightieth birthday on Oct. 13th, 1901. He chose for this purpose "this old *Archiv* which for more than 50 years has been the medium for our mutual explanations" He says that his scruples against any such celebration were over-borne by his friends, so that he had to submit passively to their plans "like a patient in the hands of his physician," and he mentions with gratitude the kind services rendered to secure the success of the *fête* by Professor WALDEYER and Professor POSNER. The celebration took place—delegates and addresses flowed in; of telegrams alone he received 800; messages and gifts came from all parts of the world, especially from bodies concerned in subjects in which this many-sided man had interested himself, not only medicine and natural science, but also anthropology, archæology, literature, philosophy, and social science. He recalls how the sphere of his activities was first widened when in 1848 he was directed to investigate the causes of an outbreak of famine fever in Upper Silesia. He found that social imperfections were at the root of such evils, and he determined henceforth to press for reforms in this direction. Like experiences followed his acquaintance with similar outbreaks in Bavaria and Prussia, and he adds that it was in his wards at the Charité that his assistant OBERMEIER made his fruitful discovery of the spirillum of famine fever. These and other epidemic plagues convinced him that practical medicine was intimately bound up with social legislation and he preached this doctrine in the pages of *Medicinische Reform* in 1848-49. Since then, he says, hygiene has become a public duty and for a physician to be also a politician is no longer a reproach. Even yet he thinks the value of medicine in matters of the common weal is not fully recognised. He goes on to speak of his early inquiries into mortality from phthisis at Würzburg which set him on to prolonged study of the nature of tuberculosis and its relationship to phthisis. He described *Perlsucht* (bovine tuberculosis) and pointed out its differences from human tuberculosis, and although his descriptions did not prevent that affection from being termed tuberculosis and even regarded as a prime source of the human disease, yet in these latter days the question of their non-identity has been raised by Professor KOCH himself. Professor VIRCHOW rather caustically adds that this ought to be taken as a warning not to confound causes of disease with their nature (*Wesen*) by neglecting pathological anatomy.

He then alludes to the great sanitary advances which he has seen, and refers with manifest pride to the fact that as town councillor of Berlin for well-nigh 50 years he has shared in the task of improving the dwellings of that city and of converting it into one of the cleanest and most beautiful as well as the most healthy of great towns. This has only been done at vast expenditure, but the cost has been repaid in gain of health and life. He refers to other directions in which science has contributed to the public health and cites the regulation of the supply and inspection of meat, recalling the opposition which had to be overcome when such measures were set on foot, as, for instance, in the prevention of trichinosis, remarking that it came from those who with but half knowledge think that they can set aside the results of expert investigation This mention of his connexion with the municipal life of Berlin seems to recall to him other civic recognition that he has received. Bologna, the oldest university town of Italy, like Berlin, has enrolled him on the list of its honorary citizens, whilst streets have been called after him in Nuremberg and Wurzburg, and he mentions with great satisfaction that the new hospital in Berlin has received his name. Nor was his birthday forgotten by the inhabitants of the village of Virchow in Lower Pomerania, who sent an address mindful of the visit he had paid many years ago to show his sons this place. This personal recognition by communities has given him great pleasure, for they came unsought and without any other end to serve than personal homage He goes on to sketch briefly the special addresses and other marks of esteem for his scientific labours which the occasion of his birthday brought him. It is not possible to give them all here, and besides in the article itself he is only able to deal with them very summarily. There was a collective gift from the scientific and medical societies of Austria—a casket containing 80 special addresses The presentation was made by Professor TOLDT, and it will be a precious remembrance. There was also a collective address of Australian physicians, perhaps the first occasion in which a whole continent had united to send its greeting and testify to its common interest in general science. From Switzerland came an oil painting of the Walensee, a precious memento their small thefts are condoned or if presents of food are left out for them they will take them away at night and make a return by leaving skins or ivory. Occasionally they steal the children of other tribes and leave their own changelings in place of those stolen. Dwarf women marry men of the big races, but Sir Harry Johnstone does not mention the converse as happening, although folk tales are full of stories of women of the upper world being carried away by the dwarfs of the underworld. We have not space to pursue this subject further, but the curious reader will find a most interesting note appended to the version of "Childe Rowland" as given by Mr. Joseph Jacobs in his "English Fairy Tales."

## THE PAY OF CIVIL SURGEONS SERVING WITH THE ARMY AT HOME.

In our issue of Dec. 7th, 1901, p. 1598, we referred to the matter of the pay of civil surgeons serving with the army at home. The chief point upon which we commented was the refusal of the Secretary of State for War to allow the civil surgeons the gratuity specified in Army Order 136 of June, 1901. We now hear that the civil surgeons interested have received a reply on behalf of the Secretary of State for War to the effect that he has given full consideration to the claims of the civil surgeons for increase of salary and payment of gratuity but that he is unable to grant either So, we suppose, the matter rests, but we confess that we should like to know how Mr. Brodrick squares this decision with Army Order 136. True, the Order was only to apply to surgeons whom the Secretary of State for War considered eligible, but are none of the civil surgeons eligible?

## THE MANAGEMENT OF REFORMATORY AND INDUSTRIAL SCHOOLS.

Mr Edric Bayley, L C C, has embodied in a careful and instructive paper certain suggestions for the management of the London Reformatory and Industrial Schools. At the present time these schools are administered by three distinct authorities The Corporation of the City of London is responsible for 81 children in the city committed to reformatory or industrial schools, at an average cost of £16 17*s* 3½*d.* per head. The corporation has no schools under its own control but pays for the accommodation of these children in schools under other management. The School Board for London has an interest in the ordinary industrial schools in the county of London outside the city and in truant schools and day industrial schools established under special enactments both within and outside the city. It has no concern with reformatory schools It provides, partly in schools under its own direction and partly in other schools with which it has made arrangement, for 3945 children, at an average cost per head of £12 18*s.* 7¾*d.* The London County Council has under its charge in reformatory schools and industrial schools outside the city, but in the county of London, 1115 children, at an average cost of £18 12*s.* 2¼*d* per head It has also made provision for the further training and employment of boys by creating homes at Llandilo (Carmarthen), at Cardiff, and at Lowestoft, where the pupils are employed in farming or are enabled to follow a trade or a seafaring life It finds occupation for others in its own works department and makes arrangements with technical institutes to receive boys for instruction after leaving school. The greater cost per head of children under the supervision of the Council is largely due to the fact that two large industrial schools under its control at Feltham and Mayford receive a much less number of inmates than they are capable of accommodating. Consequently their expenditure is relatively high as compared with the educational work which they are allowed to do. This disproportion would be remedied with mutual benefit, both as regards economy and educational advantage, if suitable pupils under the care of the London School Board were consigned to the establishments under the control of the London County Council. Both of these bodies are supported by the same rate-paying constituency and they have not so far been organised so as to supplement one another and thus to husband the finances of both in the most efficient manner. This, in brief, is Mr. Bayley's argument, and he proposes in support of it that a joint committee should be formed representing these two now separate authorities with the object of enabling them to act in unison. He suggests also that the Corporation of the City of London, in so far as it is concerned with education, should be affiliated with them, and that the Poor-law authorities in London, who are responsible for the training of 18,000 children, should enjoy the same privilege in respect of refractory cases for which the discipline of industrial and reformatory schools is advisable. It must be admitted that there is a good deal to be said in favour of this proposal and there is no doubt that throughout his interesting paper Mr. Bayley has followed with commendable impartiality the logic of the facts on which his argument is based.

## THE TRANSMISSION AND PROPHYLAXIS OF MALARIA.

In an article which originally appeared in the *Giornale Medico del Re Esercito* for March, 1901, and which the writer has now republished in separate form, Lieutenant-Colonel Luigi Ferrero de Cavallerleone, director of the military hospital at Rome, gives an interesting account of a series of experiments which was carried out under his orders during the autumn of 1900 in order to elucidate as clearly as possible the rôle played by the anopheles in the transmission of malaria and at the same time once more to demonstrate the prophylactic virtues of quinine. Six of the most malarious forts on the Campagna having been placed, together with their garrisons, at his disposal by the authorities, Lieutenant-Colonel de Cavallerleone caused them to be fitted up according to his directions and issued detailed instructions for the occupants which were to be supervised and enforced by two specially selected medical officers. The investigation, which lasted for four and a half months, from July 15th to the end of November, was most strictly controlled, the results, briefly stated, being as follows: (1) soldiers protected against mosquito bites but not taking quinine, percentage of malaria cases 2·6; (2) soldiers protected and also taking quinine daily in doses of three grains, percentage of cases 1·7; (3) permanent residents, unprotected and not taking quinine, percentage of cases 33·3; and (4) permanent residents, unprotected but taking quinine daily, percentage of cases 20·0. Among 40 officers who were unprotected and took no quinine there was one case of malaria only, but in Lieutenant-Colonel de Cavallerleone's opinion this comparative immunity was due in the first place to a short period of residence (eight days on an average) and, secondly, to the fact that officers are far more cleanly in their habits than are private soldiers and consume more nourishing food. Among 1632 soldiers garrisoning the forts which were not included in the experiment the percentage of cases of malaria was 0·5 These men were not specially protected against mosquitoes but they all took quinine daily. In five out of the six forts where the experiment took place numerous specimens of the anopheles were captured and the same insect was also observed in four of the outside forts where cases of malaria occurred. In the forts, however, where malaria was unknown, not a single member of the species could be detected although mosquitoes belonging to other families were abundant. In conclusion, Lieutenant-Colonel de Cavallerleone discusses various products which have been of Mr. H. G. Plimmer to serve as a member of this commission. Quite recently a movement has been set on foot in this country to raise a sum of money sufficient when invested for the interest to pay the expenses of an investigation into the whole question of cancer. The scheme has received the approval of the Royal College of Surgeons of England and of the Royal College of Physicians of London, and the only thing needed to render it successful is the money. In view of the enormous benefits that would ensue to thousands of unfortunate sufferers if any certain cure for cancer could be discovered we have great hopes that such an appeal will not be allowed to go unanswered. When so much activity is displayed with regard to the solution of the problems connected with cancer not only in Germany and in this country but also in many other countries, the beginning of the new century may well see most important advances in our knowledge of the etiology and the treatment of this dread disease.

## THE THINGOE GUARDIANS AND THEIR MEDICAL OFFICER.

WHEN dealing with a forlorn hope at the bar of justice it is not an altogether unknown practice to endeavour to conceal the weakness of the position by abusing the opposing counsel, and it would seem that amongst boards of guardians and rural district councillors there is a general understanding that when difficulties and doubts assail them the wisest course to pursue is to abuse the medical officer. An instance of this practice occurred recently at a meeting of the Thingoe Board of Guardians, and the facts are worth recalling as an illustration of the unfair positions in which medical officers are placed at times. A tramp was admitted into the casual ward of the Thingoe Workhouse on the night of Jan. 7th, and as he was not feeling well on the following day the medical officer was asked to see him. The patient presented no very definite symptoms, but as on the next day he was found to be suffering from bronchitis he was removed to the proper place—i.e., the infirmary. Unfortunately, however, on Jan. 10th the patient developed a rash which was thought to be measles and he was isolated at once, but the rash becoming vesicular small-pox was recognised and all precautions against the spread of the disease were taken. As far as we are able to judge from the reports which have reached us, the medical officer acted properly and with commendable promptitude, but the chairman of the board of guardians, as also a non-medical Local Government Board inspector, thought otherwise. In their view the patient should at once have been sent to the isolation block and not to the infirmary, and the inspector went so far as to characterise the medical officer's action as "most reprehensible." It is to be deplored that in matters such as this a lay inspector should be in a position to make derogatory comments upon the conduct of a medical man in connexion with a question concerning which such inspector cannot possess the necessary training or knowledge to form a correct judgment upon. It is easier to be wise after the event than it is to diagnose a case of small-pox when all the data necessary for arriving at a conclusion are absent. To send a patient who was apparently suffering from bronchitis alone into an isolation block would, it seems to us, be most unwise, and we would remind the inspector, as also the chairman, that small-pox does not usually begin with bronchitis. The chairman stated at the meeting that small-pox "would have been the first thing which would have struck him," but if all tramps who present themselves at the Thingoe Workhouse, and who are unfortunate enough to be suffering from bronchial catarrh, are to be sent to the isolation block to keep company with the small-pox patient we trust that the chairman will persuade them to be revaccinated on arrival. Had the Local Government Board inspector taken the precaution to consult one of his professional colleagues he would doubtless have omitted his uncalled-for comments, but all this is a likely consequence of the employment of lay inspectors to deal with scientific matters. Now that a case of small-pox has actually occurred the guardians have resolved to purchase a wooden hut, and from this it is to be inferred that the Rural District Council of Thingoe has failed to provide the necessary isolation accommodation for small-pox, a reprehensible omission which does not seem to have called forth any criticism from the Local Government Board inspector.

## SMALL-POX IN LONDON.

THE returns of small-pox in London for the past week show the following figures. On Saturday, Jan 25th, there were 28 fresh cases notified and removed; on Sunday, the 26th, there were 23 fresh cases; on Monday, the 27th, there were 53 fresh cases; on Tuesday, the 28th, there were 58 fresh cases; and on Wednesday, the 29th, there were 71 fresh cases.

## EXPERIMENTS UPON THE CAUSE OF SUDDEN DEATH DURING THE ADMINISTRATION OF CHLOROFORM.

WE understand that Professor C. J. Martin of Melbourne will bring forward at the next meeting of the Society of Anæsthetists, on Friday, Feb 7th, at 20, Hanover-square, W., a highly interesting communication illustrated by lantern-slide demonstration. Dr. E. H. Embley of Melbourne has, with Professor Martin's assistance, been investigating the effect produced by vagus stimulation during chloroform narcosis. All medical men are invited to be present.

## PYGMIES OF THE CONGO FOREST.

THE February number of the *Pall Mall Magazine* contains a most interesting article by Sir Harry Johnstone, K.C.B., upon ape-like men and pygmies of the Uganda borderland. The average height of a male pygmy is four feet seven inches, and of a female four feet two inches. They are of two types, a red and a black. In many the fœtal down is persistent, while in addition there is a fairly thick growth of coarse black curly hair in the usual situations such as the axillæ, the pubes, and the chest. They are of an ape-like type, the nose being very flattened, while the alæ nasi spread out and project as far as the tip of the nose. Sir Harry Johnstone says: "In some of the dwarfs there is a great prominence in the nates or posterior which recalls, though it does not equal, the huge development in that direction of the Bushman and Hottentot. This feature in man is not a particularly simian sign, as the great apes are noted on the other hand for the very poor development of these hinder muscles." Sir Harry Johnstone is arguing here from mistaken premisses: the prominence of the buttocks in Hottentots and in some other races is due not to muscular hypertrophy but to enormous masses of subcutaneous fat. In the Hottentot Venus, "Dr. Somerville found on dissection that the size of the buttocks arose from a vast mass of fat interposed between the skin and the muscles, and that it equalled four fingers' breadth in thickness."[1] Sir Harry Johnstone is, of course, struck by the possibility that these pygmies and the like races which inhabited Europe at one time are the source of all the stories about gnomes, fairies, elves, brownies, pixies, and the like. The Congo pygmies, he says, can be good or bad neighbours to their black neighbours of a larger growth according to the treatment they receive. If in the East End of London, where some ill-feeling was caused by the importation of a large number of German workmen who were provided with dwellings at a nominal rent by the employers, the latter finding this the only practical means of introducing modern methods into an ancient trade. The report contains a good deal of information which will be new to most English readers, and it is pleasing to note that there is no doubt that the conditions of labour in Russia are in many respects improving, that the number of child-workers is diminishing, and that provision is now made for their education.

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[1] Quoted by Sir William Lawrence, Lectures on the Natural History of Man, third edition, 1823.

## THERAPEUTIC APPLICATIONS OF SPERMIN.

WE have received from Dr. G. von Hirsch of St. Petersburg a short communication on the therapeutic applications of spermin, a substance of animal origin first obtained by Professor Poehl, whose investigations were published in the Russian journal *Vratch*, 1892, No 21, and in the *Deutsche Medicinische Wochenschrift*, 1892, No 49. Dr. von Hirsch's article, which is a reprint from the Transactions of the Congress of Internal Medicine held in Berlin last year, is devoted principally to abnormalities in the frequency and rhythm of the pulse and their treatment by means of spermin; it also gives references to a series of cases of anæmia, tabes, and endarteritis obliterans treated by him with the same substance and already published in the *St. Petersburger Medicinische Wochenschrift*, No. 7, 1897. Spermin is given in the form of an "essentia" of which 20 drops are taken three times a day. Dr. von Hirsch quotes numerous favourable opinions regarding it expressed by various eminent medical authorities He says that its power of correcting irregular action of the heart depends on the fact that it is an active promoter of physiological tissue oxidation, especially in the case of neurin, xanthin, and other metabolic products which act as cardiac poisons but are by oxidation converted into inactive compounds

## THE ADVANCE OF NOSOLOGY.

THE first issue for 1902 of the Registrar-General's "Weekly Return of Births and Deaths in London and Seventy-four other Great Towns" prints certain old-established "causes of death" in italics on the ground that they are "the names of symptoms only" or are otherwise objectionable Medical men are thus warned against using in future such misleading terms as "tabes mesenterica" and the familiar "convulsions," "apoplexy," and "phthisis." Nosology becomes more and more scientific, and a stroke of the pen now bids fair to render obsolete much of the terminology, not only of extant medical literature, but of familiar conversation and popular fiction when these deal with disease. The names of illnesses used at different epochs and stereotyped in bills of mortality throw a flood of light upon manners and popular opinions Referring at random to a volume of the *Annual Register* for 1783 we find that "A General Bill of all the Christenings and Burials" in London from December, 1782, to December, 1783, contains the very epitome of a past which, though not far distant in point of time, yet differs widely from our own accurate and analytical present. Over 19,000 persons died in London in 1782–83, and of these, we are informed, more than 12,000 died from old age or "aged." By "apoplexy and sudden" 219 were carried off, 19 died "bed-ridden," three died from "bleeding," five from "bloody flux," and five were "bursten." "Cholic, gripes, twisting of the guts" carried off 37. "Spotted fever, purples, flux and strangury," "headach," "headmouldshot, horshoehead, and water in the head," "imposthume," "lethargy," "livergrown"—all figure as causes of death. "Tympany," "rising of the lights," and "scald head" claim no victims, and may be survivals of an older nomenclature like our own "tabes mesenterica," but, on the other hand, "St. Anthony's fire" has one death to its account, and "grief" as many as four. It is curious to find "canker" and "cancer" already differentiated, while "phthisick and asthma" are lumped together. "Evil" still figures in place of "scrofula," now disappearing in the larger category of "tuberculosis," and we are reminded that in this year (1783) old Dr. Johnson was still manfully battling with encroaching disease, and that he was one of the last people to have been "touched" by Queen Anne for the cure of king's evil. In remarkable contrast to this semi-barbarous bill of mortality are Johnson's lines "On the Death of Dr. Robert Levet" which appear in the same volume of the *Annual Register*:—

> "Well tried through many a varying year,
> See Levet to the grave descend;
> Officious, innocent, sincere,
> Of ev'ry friendless name the friend."

Among familiar names of disease we find, in this old account of London's deaths, that small-pox claimed about one in 12 of all persons dying in 1782–83, and that consumption and convulsions swept off more than half the 19,000 who actually died. 269 individuals perished by violence or casualty, and of these 15 were executed during the year, four were murdered, 110 were drowned, while others were overlaid, scalded, smothered, burnt, or carried off by "excessive drinking." The minute description of the cause of death in these latter cases suggests social horrors of more than Hogarthian intensity.

## THE DISTRIBUTION OF PLAGUE.

A TELEGRAM from the Governor of the Mauritius received at the Colonial Office on Jan. 24th states that for the week ending Jan. 23rd there were 14 cases of bubonic plague, of which 7 proved fatal.—The Local Government Board for Scotland has issued a memorandum with respect to plague, dealing chiefly with the matter of rats and the chances of infection by these animals. It is pointed out that every measure should be taken to prevent rats from leaving a ship which may reasonably be supposed to be infected with plague or on board of which exceptional sickness has been prevalent among rats, even although the ship has not come from an infected port and has had no cases of suspicious sickness among her crew. All rats on board should be destroyed, their bodies being at once cremated *Pari passu*, if sickness occurs amongst rats on land measu should be taken for the destruction of the survivors, preventing their entrance into houses or ships, and as far possible all places or articles that have been exposed infection should be disinfected. As regards Egypt, duri the week ending Jan. 19th, 17 cases and 14 deaths fr plague have been announced; these all occurred among native population.

## THE VOLUNTARY NOTIFICATION OF TUBERCULOSIS.

THE Committee of the London Reform Union at its l meeting unanimously passed the following resolution:—

> That the Executive Committee of the London Reform Union, recog ing the important part which a system of voluntary notification m play in the war against consumption which the people of this coun under the leadership of the King have entered upon, and the succ which has attended its adoption by many municipal authorit earnestly urges those metropolitan borough councils where this meth is not yet employed to introduce it at the earliest possible moment

The Union is also issuing a leaflet containing informati upon (1) "The Nature of Consumption," (2) "What Lo Authorities can Do to Deal with this Scourge," (3) "The A vantages of the System," and (4) "Where Voluntary Not cation is Adopted." The leaflet contains sound informati written in a plain and simple manner, so that everyo should be able to understand it. We commend the Lo Reform Union for its efforts in the cause of the prev proposed for the destruction of mosquitoes. Many of these preparations are inert, he thinks, and some merely put the insects to sleep for a few hours; but Zanzolina's powder he believes to be a genuine insecticide Burnt at the rate of half a gramme per cubic metre of space this compound proved most effective in completely freeing rooms from mosquitoes of every kind

## VISITING SMALL-POX PATIENTS.

AT a meeting of the Metropolitan Asylums Board on Jan 25th the Hospitals Committee reported that they had considered a letter from the Local Government Board asking for the observations of the managers upon a letter which they had received from Dr. F. J. Allan, medical officer of health of the City of Westminster, as to the vaccination of visitors to patients suffering from small-pox. The committee stated that although every visitor to a patient was strongly pressed to be vaccinated they did not think it possible for the managers to make vaccination a condition of being allowed to enter the hospital. They had now, however, taken the precaution of forwarding the names and addresses of all visitors, whether they accepted vaccination or not, to the medical officer of health in the district in which they resided. They recommended that a reply should be sent to the Local Government Board on the lines of the committee's report. Colonel R Bullock moved as an amendment that vaccination should be made a condition of visitors being allowed to enter small-pox hospitals The amendment having been seconded, the chairman of the Hospitals Committee pointed out that such a practice would never be tolerated in this country. The committee, he considered, had dealt with the question in a most humane manner. The amendment was rejected and the recommendation was adopted

## BLINDNESS ASSOCIATED WITH DEFECTIVE DEVELOPMENT OF THE BACK OF THE SKULL.

BLINDNESS due to defective development or absence of the occipital lobe of the brain is a rare and interesting phenomenon. The most striking anatomical appearance in this case is a characteristic formation of the back of the head marked by absence of the occipital development. In the *American Journal of the Medical Sciences* for January Dr. Charles Oliver reports the case of a girl, four years of age, who was born at full term with a "badly-shaped head and large, prominent eyes. She could see a little till she was three years of age, when she became totally blind and the protrusion of the eyeballs grew more pronounced." The mental condition of the child was good and she was free from epilepsy. Clinical examination showed that the head was disproportionately small and quite deficient posteriorly. The eyes were prominent, divergent, and in constant motion (rotatory nystagmus). The occipital protuberance was almost wanting and the cranial vault presented other interesting features. Thus the superciliary ridges were quite flattened and the forehead was elevated and dome-shaped in the pre-Rolandic region. The lower jaw was incompletely developed and showed a marked recession of the chin. Both ears showed faults of development. The eyelids were large and lax and the pupils were somewhat unequal but capable of reacting well both to light and accommodation. Ocular movements were free in all directions. The ocular media were clear and the fundus was normal on both sides. Repeated tests showed that the patient could not see even the brightest objects and was, in fact, totally blind. Adenoids were present in the nose and throat. The child died in her fourth year from intercurrent disease, but no necropsy could be obtained. Dr. Oliver points out that the posterior part of the skull was quite undeveloped, the bones extending in a plane upwards and forwards (from the cerebellar region) to meet the frontal protuberance which constituted the crown of the head Skulls of this type were rare, but examination of the few known skulls of this form showed that the orbits were shallow and that the anterior coronal region was elevated. The most marked ocular symptoms in such cases were loss of sight, which was total, or almost total, in both eyes, and some degree of exophthalmos. Ocular movements were retained, thus indicating that the ocular motor nerves and nuclei were unaffected. The lesion was one affecting the occipital lobes of the brain either as a defect of development or as the result of damage sustained in early infancy, and the prognosis was hopeless as regards sight. A condition of increased intracranial pressure has been suggested by Friedenwald as being present in such cases and as being one of the causes of the exophthalmos observed, but the causation of such increased pressure is still obscure

## THE RUSSIAN LABOUR LAWS.

A VERY instructive report concerning the Russian labour laws has recently been published by order of M. de Witte, the Imperial Russian Minister of Finance The report was drawn up by M E Dementief, and although it consists of no more than 20 pages the information is so condensed that it is impossible to give a digest of all the facts which it contains. It may be useful, however, to call attention to some of the matters which are dealt with in order to show that the book of which it forms part[1] deserves to be studied by all those who are interested in the labour laws. A point which has received much attention in Russia is the working of the insurance offices which have been started in view of the responsibility that had recently been thrown on employers to give compensation to their workmen or to their relatives in cases in which injuries have resulted either in temporary or permanent disablement or in loss of life. Having regard to the effects of the Workmen's Compensation Acts which have lately been passed in this country there is more than one point mentioned in the Russian report which will be found of interest. For example, the great value of the system of mutual insurance as opposed to that of the system previously in general use is clearly shown. It is also worthy of note that under the Russian system compensation is not given if an accident occurs through malicious design on the part of the sufferer, or in consequence of his being intoxicated or of his being mixed up in a brawl In regard to the control of unhealthy trades little has hitherto been effected. The only industry, indeed, which has been practically controlled is that of the manufacture of phosphorus matches, and this has been done indirectly by means of differential taxation. By this means it has resulted that safety matches are rapidly succeeding the old type of matches which were formerly in very general use. In Russia, as compared with this country, a striking difference exists as to the number of holidays obtained by the workmen Thus, in Russia a contract between an employer and his workmen must definitely contain the provision that all Sundays and 17 "great holidays," or days substituted for them, are to be free from work. Special contracts may, however, be made on occasion, but each special contract provides for only a single day. The wages paid to workmen appear, on the whole, to be low, but in many parts of the country the dwelling houses of the workpeople are provided by the manufacturers. In some districts over half the employés are housed by the manufacturers This fact is not without interest in view of the difficulties presented in England in this matter and the action recently taken by a large firm of glass manufacturers

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[1] Russia, Its Industries and Trade. Glasgow: Hay, Nisbet and Co 1901.

Pyridine is a poisonous base not so easily soluble in water as in alcohol. Pyridine bases can be easily traced in the mouth of an immoderate smoker, and especially the smoker of cigars. An alcoholic drink is therefore calculated quickly to wash out this poisonous oil and to carry it into the stomach, absorption of the poison ensuing, giving rise to definite toxic symptoms, due not so much to alcohol or pyridine bases alone as to the combined action of both in the manner indicated. Such symptoms would probably be avoided if smokers would abstain from drinking alcohol at the same time that smoking is being indulged in. Many a headache or malaise would thus be guarded against if at the time of smoking no alcoholic beverage were taken. An alternative plan would be to pass all the smoke through an absorbent, such as water, as in the hookah, and thus to exclude the poisonous oils. In such a case the accompaniment of an alcoholic drink would doubtless be much less injurious.

## THE FACULTY OF MEDICINE OF THE UNIVERSITY OF LONDON.

A MEETING of the Faculty of Medicine was held at the University Buildings on Jan. 24th, Mr. H. T. Butlin, the Dean of the Faculty, being in the chair. A communication was received from the Senate stating that in accordance with a recommendation recently presented by the Faculty a considerable increase has been made in the membership of the Faculty. The recommendation presented by the Faculty was as follows:—

> That the Senate should admit to the Faculty of Medicine in accordance with its powers defined in Statute 60 (iii.)—
>
> (1) Every person recognised as a teacher of one of the subjects of "Advanced Medical Studies,"
>
> (2) Every person recognised, or provisionally recognised, as a teacher of one of the subjects of "Intermediate Medical Studies," and
>
> (3) At least one recognised, or provisionally recognised, teacher in each subject of "Preliminary Medical Studies" from each school of the University in the Faculty of Medicine.

The Dean informed the meeting that the Senate had carried out the proposals made by the Faculty and that in consequence the membership had been increased from 158 to 359. He pointed out that the additional members consisted for the most part of the junior teachers on the staffs of the medical schools, upon whose efforts the future prosperity of the Medical Faculty of the University largely depended. At the same time adequate representation upon the Faculty was given to the teachers of anatomy and physiology and of the preliminary sciences. A report from a special committee appointed to consider the subject of the matriculation examination was received and adopted. In it the Faculty reaffirmed a resolution previously passed—

> That no scheme of matriculation will be satisfactory which does not permit a wide choice of subjects for examination so as to meet the requirements of candidates, whether from the "classical" or "modern" side of secondary schools—

and expressed its approval of the proposals made to the Senate by the University's Advisory Board for the admission of students. Dr Lauriston E. Shaw was reappointed honorary secretary to the Faculty.

THERE will be a general meeting of the Medical Officers of Schools Association on Thursday, Feb. 6th, at 4 P.M., at 11, Chandos-street, Cavendish-square, London, W., when Mr. W. N. Shaw, F R.S, late lecturer on physics in the University of Cambridge, will open a discussion on "The Ventilation of School Buildings," with special reference to its application to existing buildings. Other authorities on the subject are expected to speak and some special appliances connected with ventilation will be exhibited

A MEETING of the Sanitary Institute will be held at the Parkes Museum on Wednesday, Feb. 12th, at 8 P.M., when a discussion on the Prevention of Small-pox in the Metropolis will be opened by Mr. A. Wynter Blyth, medical officer of health of St. Marylebone. The chair will be taken by Sir James Crichton-Browne, and as the seating accommodation is limited admission will be by ticket only. Those proposing to attend should apply for tickets of admission to Mr. White Wallis, secretary.

THE Committee of the Charing-cross Hospital Festival Dinner which is to be held on March 19th has secured the support, amongst others, of the Archbishop of Canterbury, the Bishop of London, Earl Roberts, Lord Iveagh, and the Hon. W. F. D. Smith, M.P. Lady Wantage has given £1000 to the hospital fund in memory of the late Lord Wantage.

AT the first meeting of the new Board of Management of the National Hospital for the Paralysed and Epileptic, held on Tuesday, Jan. 28th, the Earl of Harrowby was elected treasurer of the hospital, the Rev. Prebendary Wace chairman, and Mr. J. Danvers Power vice-chairman. Sir Edward Fry and the members of his committee of inquiry were elected honorary life governors of the hospital.

OWING to the closure of half of the hospital for repairs and the necessary conversion of the entertainment hall into a ward for patients it is impossible to hold any lectures at Brompton Hospital for Consumption until after Easter. The list of lectures will be advertised in due course.

THE death of Dr. Edmund Gwynn, late medical officer of health of Hampstead, is announced. Dr. Gwynn graduated as M.D. of St. Andrews in 1862. He was the author of "Shakespeare and Sanitation" and of "The Jerry Builder in Relation to the Dwellings of the Poor."

THE annual meeting of the Neurological Society of London will be held at 11, Chandos-street, W., at 8.30 P.M., on Thursday, Feb. 6th. The President, Mr. H. W. Page, will deliver the annual address on Concussion of the Brain in some of its Surgical Aspects.

THE annual dinner of the West London Medico-Chirurgical Society will be held at Frascati's Restaurant on Wednesday, Feb. 19th, at 7 P.M. Intending diners should communicate with Dr. L. C. T. Dobson, honorary secretary, 59, Addison-gardens, W.

DR. JOHN SHIELDS FAIRBAIRN has been appointed assistant obstetric physician to St. Thomas's Hospital.

## Pharmacological Notes.

### IODINE LEAF OR PAPER PLASTER.

AN ingenious method for the local application of iodine as a counter-irritant has been devised by L. Tixier,[1] consisting of two sheets of filter-paper, one saturated with a solution of potassium iodide and potassium iodate, and the other with potassium acid sulphate. When these are moistened and applied to the skin a considerable amount of iodine is liberated; after placing the moistened sheet on the affected part it is covered with oiled silk or bound with a bandage. The application for 15 minutes has the same effect as a mustard leaf; applied for 25 minutes the result is equal to two or three paintings with tincture of iodine; for from 25 to 45 minutes, the effect is that of strong iodised wool; in one hour the action is vesicant. The slight pain occasioned by the application disappears in 10 minutes after the removal of the papers. Directions are given for the preparation of the papers. When dry an iodide paper is separated from an acid of tuberculosis and may inform our readers that copies of the leaflet for distribution can be obtained from the secretary of the Union, Trafalgar-buildings, Charing-cross, W.C. We may remark in addition that the London Reform Union could do another excellent work by pointing out how to avoid, or at all events to minimise, the effects of small-pox, a disease at present very prevalent in the metropolis. If the London Reform Union would issue a simple leaflet dealing with this disease and with the figures recently published by the Metropolitan Asylums Board as to the incidence of small-pox in vaccinated and in non-vaccinated persons respectively it would go far to do away with the honest if altogether foolish prejudice which exists against vaccination in so many quarters.

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[1] Pharmaceutische Centralhalle, vol. xlii., p. 582, quoted in Pharmaceutical Journal.

## THE FELLOWS' DINNER OF THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THE annual Fellows' dinner of the Royal Medical and Chirurgical Society will be held at the Whitehall Rooms of the Hôtel Métropole on Wednesday evening, Feb 26th, at 7.30. It used to be said that the premier medical society was inhospitable, but since the excellent precedent of inviting guests to the annual dinner was created by Mr. Timothy Holmes, when he filled the chair, the interesting series of Fellows' dinners has removed any ground, if it ever existed, for such a reproach. At the next dinner the chair will be taken by the President, Dr. F W Pavy, M.D, LL.D., F.R.S., and among the guests are included the President of the Royal College of Physicians of London (Sir William S. Church), the President of the General Medical Council (Sir William Turner), the Director-General of the Royal Navy Medical Service (Sir Henry Norbury), the Director-General of the Army Medical Service (Surgeon-General Taylor), the Principal of the University of London (Professor Rucker), the Secretary of the Royal Society (Sir Michael Foster, M.P.), Mr. Ouless, R.A., and Dr. Conan Doyle.

## THE PROPOSED UNIVERSITY FOR LIVERPOOL.

THE public meeting of the citizens of Liverpool held at the Liverpool Town-hall on Jan. 27th to consider the desirability of establishing a separate university for that city was a pronounced success. The meeting was presided over by the Lord Mayor of Liverpool (Mr A. O. Petrie) and was attended by a thoroughly representative and influential gathering, which included the Earl of Derby, K.G., the Lord Bishop of Liverpool (Dr Chavasse), Sir John Brunner, Bart., M.P., Sir William H Tate, Bart., Sir William Mitchell Banks, Sir William Forwood, the principal of University College, Liverpool (Mr. A. W. W. Dale), Archdeacon Madden, the Rev Dr Watson (Ian MacLaren), and others The Lord Mayor announced that £80,000 had already been subscribed towards the realisation of the project, and pointed out that, although differences of opinion existed in Liverpool on many subjects in connexion with the "omnibus" Bill of the Liverpool Corporation about to be promoted in Parliament, not a single vote had been recorded against that part of it which asked for power to assist the proposed university. The motion relating to the establishment of a university for Liverpool was proposed by the Earl of Derby, who said that they wanted to bring university facilities within the reach of all they possibly could. Dr. Chavasse seconded the motion in an eloquent speech and said that University College, Liverpool, with its 26 professors and some 60 readers, had surely a claim to be recognised as a university which would be a coping-stone of the educational system for which Liverpool was famous It would help on merchants, engineers, and men of science to compete with those of the continent. The motion was supported by Principal Dale, Sir William Mitchell Banks, and others, and was carried. The keystone of all the speeches was progress; there was no thought of rivalry with the old universities.

## THE NEW WARRANT FOR THE ARMY MEDICAL SERVICE.

MR. BRODRICK has announced in Parliament that the speedy appearance of the new warrant for the Army Medical Service may be expected. We hope and indeed believe that when it appears it will be found that due consideration has been given to the objections urged against the original scheme by the subcommittee of the British Medical Association and by ourselves.

## THE NOTIFICATION OF CHICKEN-POX.

THE London County Council have issued an order pursuant to a resolution of the Council passed on Jan. 28th The order was advertised on Jan. 30th and comes into force at the expiration of one week from that date. Our readers will remember that in our issue of Jan. 25th we noted that eight metropolitan boroughs had already declared chicken-pox to be a notifiable disease. The London County Council order runs as follows :—

> The London County Council do hereby resolve and order that Section 55 of the Public Health (London) Act, 1891, with respect to the notification of infectious disease shall apply in the administrative county of London, for a period of three calendar months, to the disease known as chicken pox, and the Council do hereby declare that the case is one of emergency owing to the prevalence of small pox in London, and the fact that the failure in many cases to distinguish between chicken pox and small pox has led, and is leading, to the spread of the latter disease.

## THE SANITARY INSTITUTE LECTURES.

THE thirty-third course of Lectures and Demonstrations for Sanitary Officers will be delivered during the months of February, March, and April, 1902, at the Parkes Museum, Margaret-street, London, W. The lectures, which will be given at 7 P.M., are divided into two courses, the first dealing with Elementary Physics and Chemistry in relation to Water, Soil, Air, Ventilation, and Meteorology, Public Health Statutes, By-laws, Municipal Hygiene, &c, together with practical demonstrations of measurements and drawing plans to scale The second course embraces lectures on Meat and Food Inspection and the taking of Samples of Water, Food, and Drugs for Analysis. Arrangements have also been made for the inspection of disinfecting stations, soap-works, common lodging-houses, sewage-farms, waterworks, dairy farms, and such like places, practical demonstrations being given at the same time where necessary. Among the lecturers are Dr. E J. Steegmann, Dr. J. Priestley, Mr. A. W. Harris, Dr. E Petronell Manby, and Dr. H. R. Kenwood. The fee for Part I. (25 lectures) is £2 12*s.* 6*d.*, and for Part II. (seven lectures) £1 1*s* The fee for the complete course is £3 3*s*

## THE POISONOUS COÖPERATION OF ALCOHOL AND TOBACCO.

IT cannot be doubted that when evil effects ensue upon smoking tobacco they are very much intensified by indulgence in alcohol Further, though even after a more than moderate indulgence in tobacco no toxic symptoms such as headache and stupor may supervene yet such would probably be the case if alcoholic drinking was practised at the same time. The powerfully solvent action of alcohol is sufficient explanation of this. It is, of course, well known in pharmacology that the active constituents of drugs are, as a rule, readily soluble in alcohol though not in water, and hence the class of preparations known as tinctures. Similarly nicotine and the pyridine bases are very easily soluble in alcohol. The chief poisonous constituent of tobacco smoke is pyridine and not nicotine important to note that the number of single-room tenements containing more than two occupants declined from 57,000 to 41,000, while the number of one-roomed tenements with six or more occupants declined from 4000 to 1800. The tenements of two rooms showed a slight, and those of three and four rooms a marked, increase upon the numbers returned at the previous census.

The proportion of single-room tenements (which averaged 15 per cent. in all London) showed wide variations in the several boroughs, ranging from 3·5 per cent. in Lewisham, 4·1 in Wandsworth, and 6·4 in Hampstead, to 24·8 per cent. in Shoreditch, 26·3 in St. Marylebone, 26·4 in Finsbury, and 27·0 in Holborn. In the borough of Stepney, consisting of the Whitechapel, St. George's-in-the-East, Stepney, and Mile End Old Town registration districts, which during the last intercensal period received a large number of foreign immigrants, the proportion of one-room tenements did not exceed 21·7 per cent, showing a marked reduction from the proportion in 1891.

The occupational statistics now published are very complete, and as they are separately given for each of the metropolitan boroughs, as well as for the county as a whole, they will be appreciated by those who have at heart the welfare of the poorer classes in these areas respectively. In the county of London there were "engaged in occupation" 1,400,000 males and 719,000 females over ten years of age. Of "unoccupied" persons above the age of 10 years there were enumerated 274,000 males and 1,205,000 females. At the census of 1891 the proportion of the population engaged in occupation was 82·8 per cent. in the case of males, and 38·4 in the case of females. At the recent census the percentages were 83·6 and 37·4 respectively. Among occupations employing large numbers of persons commercial clerks have increased by 181 per cent. and therefore more rapidly than any others. Sick nurses, domestic indoor servants, and printers come next, with rates of increase ranging from 74 to 78 per cent On the other hand, there has been a slight falling off in the number of seamstresses and of boot, shoe, &c. makers, and a great falling off in that of artificial flower makers amounting to 42 per cent.

As a means of estimating the degree of prosperity enjoyed by the several classes of the community the proportion of domestic servants employed is usually considered a safe guide. Taking the metropolis as a whole the proportion of domestic servants of both sexes is rather less than one servant to four houses The proportion to 100 separate houses varies in the metropolitan boroughs from 5·7 in Shoreditch and in Bethnal Green to 65·8 in Westminster, 80·0 in Kensington, and 81·4 in Hampstead.

A very full description is given in the report of the occupations followed by foreigners now resident in London who at the date of the census numbered more than 135,000. Of these, not fewer than 54,000 in round numbers, or 40 per cent., were enumerated in the borough of Stepney, of the population of which borough foreigners constitute more than 18 per cent

The number of persons in London who were returned as blind was 3556, almost identical with the number so returned at the previous census. Deaf and dumb persons numbered 2057, or 71 less than in the year 1891. Lunatics now number 3562, and imbecile or feeble-minded, 3496. The total of these is now 7058, against 5771 at the previous census. Of the 3556 blind persons 140 were below 10 years of age, and 2558 were retired or unoccupied, leaving about 858, or about one-quarter of the whole, engaged in work. Of these, 673 were males and the rest were females. Of the latter, 110 were unmarried and 75 were married or widowed. Those described as blind from childhood include 88 "occupied" males and 42 "occupied" females.

## PROFESSIONAL UNION.

FROM time to time particulars of a dispute between the Teversal Colliery Club and their surgeon have been published. In view of recent developments we give the following brief *résumé* of the matter which has been furnished to us by the honorary secretary of the Midland Medical Union.

In 1901 Dr. W. C. Rainsbury of Skegby, who held a colliery appointment to the Teversal Colliery Club, commenced to charge the fee of 21*s.* for midwifery cases. This was an increase from 10*s.* 6*d.* In consequence Dr. Rainsbury was threatened with dismissal from his appointment. A deputation from the Midland Medical Union waited upon the club committee to point out the reasonableness of the fee and to ask them to give the matter their careful consideration. However, they sent Dr. Rainsbury an agreement to sign in which he should bind himself to charge a sum of 10*s.* 6*d.* for members' wives attended by him in their confinements. This he refused to do, and in consequence was served with three months' notice. The colliery club then advertised for a surgeon; the Union advertised warning men not to accept the post, and advertisements from the colliery club were not inserted in the medical journals. The club, however, managed to secure a medical man who agreed to accept the appointment; but from knowledge which came to the club committee a letter was sent to him asking him to come at once and inclosing him three months' notice; in consequence of this he never came to take up his appointment. The result was that after Dr. Rainsbury's notice expired on June 25th, 1901, the club was without a medical officer, and Dr. Rainsbury continued to attend the men and their families, but at private rates.

In November, 1901, the club secured the services of Dr. Alexander David Crawford who took Dr. Rainsbury's appointment on condition that he should also be given the appointment of a neighbouring practitioner under the same club committee—a practitioner who had been asked to accept Dr. Rainsbury's post and had refused. This practitioner (Dr. E. Mitchell of Sutton-in-Ashfield) was forthwith dismissed by the committee and Dr. Crawford introduced a partner—Mr. Robert James Farman—into Sutton-in-Ashfield to carry on that part of the work.

This step on the part of Dr. Crawford and his partner was taken after the case had been fully explained to them, and after the Midland Medical Union, acting on behalf of the local medical men, had begged Dr. Crawford to have nothing to do with the appointment. These two medical men are now carrying on the work for these collieries.

The Midland Medical Union wish to place this statement of facts before the profession generally and ask for expressions of opinion with regard to the action of Dr. Crawford and Mr. Farman.

The council of the Midland Medical Union at a meeting held in Nottingham on Jan. 17th, 1902, declared Dr. Crawford and Mr. Farman to be opposed to the objects and interests of the Union and by a previous resolution of this Union every member is pledged to abstain from giving such practitioners any professional assistance by consultation or otherwise.

## Looking Back.

FROM

### THE LANCET, *SUNDAY, FEB.* 1, 1824.

*The case of* C. A. DEMPSTER, *who swallowed a case-knife.*

This unfortunate man died at Middlewick on Friday the 14th, ult. The public will recollect that in attempting some juggling tricks at Carlisle, he swallowed a table knife rather more than nine inches long, which remained in his stomach without exciting any very acute pain, or producing any serious consequence until within a few days of his death. He left Carlisle, with the intention of proceeding to London, where his mother resides, for the purpose of consulting SIR ASTLEY COOPER. During the journey to Manchester he suffered much pain from the jolting of the coach; when finding himself unable to bear the motion of the carriage, he embarked in a canal boat, but being taken very ill in the boat, he was prevented from pursuing his journey further than Middlewick. This case having excited considerable interest in the public mind as also in that of the profession, it may be proper to observe that the body was opened the day after his death, and the knife found in the stomach, which with the other viscera was in a state of inflammation and gangrene. The handle of the knife (which was of bone) was dissolved, as likewise a considerable portion of the blade; so powerful indeed had the knife been acted upon by the juices of the stomach, as to impress very forcibly on the minds of the medical men who opened the body, a belief that had the man continued at paper by a sheet of plain filter paper and the three sheets are fastened together with a composition consisting of paraffin oil, prepared chalk, resin, and oil of turpentine. They are then wrapped in gutta percha tissue to keep them from moisture.

### NATURAL AND ARTIFICIAL PERFUMES.

In an article on Natural and Artificial Perfumes a writer in *Nature*[2] brings forward many points of pharmacological interest. Thus, the oil of bitter almonds, highly esteemed as a flavouring agent and in perfumery, has sometimes been replaced by benzaldehyde, the highly poisonous so called oil of mirbane, which has a similar odour. This substance is prepared from benzyl chloride, small quantities of which are retained by the benzaldehyde with great tenacity and impart to it a penetrating and unpleasant odour. To take another example, oil of turpentine consists essentially of a hydrocarbon of similar molecular type to irone and ionone, the synthetic substances which form the artificial violet perfumes. It is a noteworthy fact that turpentine when administered internally imparts a strong odour of violets to the urine. Little has yet been accomplished towards ascertaining the relation between the odour and the chemical constitution of substances in general. Hydrocarbons as a class possess considerable similarity in odour, so also do the organic sulphides and, to a smaller extent, the ketones. The subject waits for some investigator to correlate the physiological, psychological, and physical aspects of the subject in the same way that Helmholtz did in the science of sound. It seems, as yet, impossible to assign any probable reason for the fact that many substances have a pleasant odour. It may, however, be worth suggesting that certain compounds, such as the volatile sulphides and the indols, have markedly unpleasant odours because they are normal constituents of mammalian excreta and of putrified animal products; the repulsive odours may be simply necessary results of evolutionary processes.

### TEST FOR INDICAN IN URINE.

A. Klett[3] recommends the following test for indican in urine. 10 cubic centimetres of urine are mixed with five cubic centimetres of 25 per cent. hydrochloric acid and a few drops of ammonium persulphate solution. An excess does not matter. If chloroform, on being added, is coloured blue the presence of indican is detected. The ammonium persulphate yields a precipitate with albumen, and the presence of bile pigments produces a green ring where the liquids meet.

## THE LONDON CENSUS OF 1901.

THE first instalment of the detailed abstracts of returns for the census of 1901 has just been issued as a blue-book. It relates to the county of London and occupies 175 pages of closely printed matter.

From the preface we learn that a departure has on this occasion been made from the plan of publication adopted at previous censuses. In 1891 certain groups of facts, such as area, population boundaries, &c., for each of the English counties were collected and issued in one volume, and in subsequent volumes certain other groups of facts relating to the ages, occupation, infirmities, &c., of the people were similarly dealt with.

On the present occasion however, all the statistical data relating to each separate county will be published together, the object apparently being to secure that persons desirous of obtaining information respecting any particular area may find it under the same cover instead of having to search through several volumes for the different series of facts required. Opinions will probably differ as to the wisdom of this change. It is but natural that those who are specially interested in the statistical details of certain localities should feel aggrieved if the turn of their particular county does not come until late in the order of publication, although this order may have been determined, as we believe it has been, strictly on a population basis. There will, however, be no dispute as to the superior claims of the metropolis to priority of publication and the authorities of less important counties may fairly be reminded that in the preliminary report already issued the main facts of area, population, &c., for all the principal divisions and sub divisions of England and Wales have been given in full.

The first thing which attracts attention in the volume before us is a coloured chart of London on a large scale which very clearly shows the several registration, municipal, and Parliamentary areas of the county. As a specimen of modern cartography we scarcely think it equal to similar productions that find their way into this country from France and other parts of the continent. Nevertheless, for the purposes which it is intended to serve it is perhaps sufficient, and it will certainly be appreciated by medical officers of health and the authorities whom they serve as a useful key to the complex and, for different purposes, overlapping areas into which the metropolis is still sub divided, notwithstanding the simplification of areas which is said to have been effected by recent legislation.

The "London" of to day—in which the administrative and registration counties have at last been made co terminous—contains an area of 74,839 statute acres, according to the revised returns of the ordnance survey, and has a population of 4,536,541. In the year 1801 the population of London did not exceed 959,310; it has therefore increased in the course of the last century nearly five fold. The population of the county of London, however, is not now increasing at the rapid rate which prevailed during the earlier decades of the century. Between 1841 and 1851 the rate of increase was 21 per cent., whereas during the last intercensal period the rate was only one third of that amount. The rate of growth of population within the metropolitan area still continues to diminish. This is proved by the fact that from 1891 to 1896 (the year of the quinquennial census) the population had grown at the rate of 4·8 per cent., whereas from the latter year to 1900 the percentage rate of growth did not exceed 2·4.

In the City of London and in six of the central metropolitan boroughs the population has been actually declining, and that very rapidly, for the last 40 years, dwelling-houses having been demolished in large numbers in order to make room for the extension of warehouses and other business premises. Within the decade just closed the population of this area has diminished by 70,000. In "Greater London" however—i.e., the area included within the City and metropolitan police districts—the population has increased during the last 10 years by little short of 1,000,000, the exact rate of increase having been 17 per cent. It is into the outer zone of this area that the displaced population of central London has migrated and thereby caused a local accession to the total in recent years which must be enormous, but which cannot be measured even approximately until the census returns for the counties of Surrey, Kent, Essex, and Hertford are available for analysis.

Passing over, as of little interest to our profession, those sections of the report which deal with Parliamentary, ecclesiastical, and judicial matters, we come to a consideration of those details which relate to the public health and to the sanitary administration of the metropolis. For example, we are especially interested in what the census has to tell us concerning the ages, the housing, and the occupational condition of the labouring classes, concerning their overcrowding on area as well as in rooms, and also concerning the destitution and the infirmities which exist in the several parts of the metropolitan area. At the time of the recent census the county of London was divided into 30 registration districts which are mostly co extensive with Poor-law unions; in 14 out of the 30 cases the areas of the registration districts correspond with those of the newly constituted metropolitan boroughs, so that in these cases the means still exist of comparing the vital statistics of the new areas with those of the old London vestries. Medical officers of health will be glad to note that the present report contains full particulars for each of the metropolitan boroughs concerning the number of tenements occupied by each family and also concerning the occupational condition and the distribution by age and sex of the population. In London as a whole the total number of separate tenements has increased since the previous census by 8·7 per cent. But whilst the tenements containing more than five rooms have increased by 13 per cent., the increase of those with less than five rooms has been only 6·6 per cent. The reduction in the smaller class of tenements was most marked in the tenements of a single room only, which declined from 18 per cent. of the total in the year 1891 to 15 per cent. in 1901. It is further made the fundamental discovery upon which serum diagnosis rests, and that Dr. Grünbaum performed the first actual agglutination by means of human typhoid serum in March, 1896. That he really did so has been certified to by the best authorities—namely, by Gruber and by Nothnagel and Maunaberg.[1] Lastly, it is equally evident that Professor Widal did not publish his first results until some months after Dr. Grünbaum's success had been obtained and published by Professor Gruber.

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[2] Nature, vol. lxiii., p. 212.

[3] Schweizerische Wochenschrift für Chemie und Pharmacie, vol. xxxix., page 31 (from the Chemiker Zeitung).

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I venture to call attention to the matter once more because I see that this injustice continues to be committed in spite of all protests against it As a rule, the victims of such mistakes have little or no means of redress. If they stand up for themselves they are accused of egotism or pretension; if not, they are forgotten. But the matter is not merely a personal one; the fact that the credit for years of important and honest work can be lost in a moment in this manner scarcely tends to encourage the cause of scientific research. It is not possible to conceive that we should be grateful for pathological discoveries, but we might endeavour to be just in regard to them I am not making any attempt to minimise the valuable work of Professor Widal, but am writing only to call attention to the generous remarks of Professor Gruber and to the claims of those who cannot easily speak for themselves.

I am, Sirs, yours faithfully,

Liverpool, Jan. 23rd, 1902. RONALD ROSS.

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*To the Editors of* THE LANCET.

SIRS,—The letter under the heading of "The Personal Factor in Tuberculosis" in THE LANCET of Dec. 28th, 1901, p. 1843, is far from encouraging to those of us who have been doing what we can to promote the sanatorium treatment of tuberculosis. Strong language has been used, for one finds the following expressions—"a national misfortune," "a world calamity," "absurd pretensions," "'cured' dying on all hands," "Abandon hope all ye that enter here" (viz., sanatoriums), besides others with which I need not burden you or your readers. I quite agree with Mr. J. O. R. Braine-Hartnell of the Cotswold Sanatorium who, with other experienced men, recommends prolonged treatment on the lines of the so-called "open-air treatment."

Our sanatoriums, if they are anything, are schools of hygiene; the principles there laid down are, in as far as they are common to the majority of the inmates, intended to be maintained more or less constantly. It is no wonder that some of those who have received most manifest benefit in a sanatorium should break down after their return to their homes, for, instead of observing the rules under which they have so greatly improved, they virtually abandon fresh air, surplus feeding, &c., and follow the manner of life which predisposed them to their primary attacks.

It seems doubtful whether your correspondent has ever spent a week in a properly conducted sanatorium. Had he done so he would have learned that the patients therein are not exposed to a bacillus-contaminated atmosphere, but that by night and by day the treated are breathing air far purer than that which is to be found in most of the sick rooms of Nottingham. Comparison is drawn between sanatoriums for tuberculosis and infectious diseases hospitals. The arrangements of these two kinds of institutions are totally different for the most part. I only refer to one in sanatoriums: the patients are segregated at night time and during the day they are seldom together unless in the open air. The reverse is the rule in fever and such like hospitals. Would your correspondent wish to do away with our hospitals for diphtheria and scarlet fever and to return to the old days when whole families were laid low with these infectious diseases because the first case was not removed from, it may be, the overcrowded room or house?

No, Sirs, we shall continue our works of sanitation, our isolation hospitals, and our sanatoriums, all on "common-sense" and scientific lines. Some day it may please God that we shall be able thereby to stamp out the most dangerous of our epidemic diseases. Mr. E. D. Marriott goes on to assert that want of cubic space and defective drainage are the causes of consumption. Doubtless both these conditions tend to the predisposition to, and aggravation of, tuberculosis, and patients flock to sanatoriums to escape from such insanitary surroundings. One great value of sanatoriums is that they are teaching the public the great importance of fresh air and other advantageous environment. Our hospitals, barracks, poorhouses, prisons, and other public institutions are still suffering not so much from want of cubic space as from lack of fresh air. Other diseases than those due to the tubercle bacilli would be benefited by the so-called "open-air treatment." It is very seldom necessary that a window in a sick-room or a hospital should be entirely shut. The remedy for low temperatures is not shutting out the fresh air, but the supply of warm air, extra clothing, and in many cases extra food.

Since I have been practising in the Italian Riviera I have grieved to see how apparently curable cases of tuberculosis have, to say the least, failed to improve because the virtues of "sanatorium treatment" have not been appreciated by at least the sufferer and I fear occasionally by the patient's medical adviser. Let the National Association for the Prevention of Tuberculosis pursue its beneficent mission, keeping well in view the opening of the "windows of *earth*," of cottage and palace alike, and thereby will come in "a blessing that there shall not be room enough to receive it."

I am, Sirs, yours faithfuly,

San Remo, Italy, Jan. 15th, 1902. W. SOLTAU ECCLES.

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## THE DOSE AND LENGTH OF INCUBATION IN MEASLES AND VACCINATION.

*To the Editors of* THE LANCET.

SIRS,—On Christmas Eve a lady and her two children arrived at a country house for the holiday season. Their hostess seemed to have a heavy influenzal cold, but next morning she was manifestly in measles. The children were sent back to London, the mother remaining to

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[1] THE LANCET, April 21st, 1900, p. 1169.

Carlisle, and been kept in a quiet state, the whole of the knife might have been dissolved, and the case terminated favourably. The public prints having stated that Sir **ASTLEY COOPER** had recommended an operation for extracting the knife, we deem it but justice to the above mentioned gentlemen to state, that they saw the man only about three hours prior to his death, when inflammation and mortification had already commenced.—*Chester Courant.*

# VITAL STATISTICS.

### VACCINATION AND SMALL-POX.

THE Registrar-General's return for the current week contains a table of the deaths from small-pox which have been registered from the beginning of the present epidemic down to Jan. 11th, 1902. The table shows that out of those children and young persons under 20 years in the population of London who were not protected by vaccination, 100 have recently died from small-pox; whilst only four deaths from that disease have occurred among those of the same ages who were ascertained to have been vaccinated in infancy. There are also five cases in which the evidence was insufficient to warrant a definite statement as to vaccination. If the extreme course be taken of counting these five cases with the vaccinated, the figures will show at least 100 deaths from small-pox among the unvaccinated section of the population under 20 years of age, and at most nine deaths among the vaccinated section at the same ages.

### HEALTH OF ENGLISH TOWNS.

THE number of towns dealt with in the Registrar-General's weekly return has now been increased to 76 by the addition of Bournemouth, which has been recently extended, and, as at present constituted, contained a population exceeding 50,000 at the recent census In these 76 large English towns, the aggregate population of which is estimated to be 14,862,003 persons in the middle of the year, 8394 births and 5048 deaths were registered during the week ending Jan. 25th. The annual rate of mortality, which had been 20·1, 18·2, and 17·7 per 1000 in the three preceding weeks, was again 17·7 last week. In London the death-rate was 17·9 per 1000, while it averaged 17·6 in the 75 other large towns. The lowest death-rates in these towns were 6·2 in Walthamstow, 7·1 in Barrow-in-Furness, 7·5 in East Ham, 10·2 in Bournemouth, 10·3 in Derby, 10·8 in Ipswich, 11·2 in Rotherham, and 11·3 in Burton-upon-Trent; the highest rates were 22·0 in Preston, 23·3 in Aston Manor, 23·6 in Liverpool and in Rhondda, 24·1 in Swansea, 26·2 in Stockton-on-Tees, 27·3 in Merthyr Tydfil, and 30·3 in York. The 5048 deaths in these towns last week included 512 which were referred to the principal zymotic diseases, against 482 and 534 in the two preceding weeks; of these 115 resulted from measles, 112 from whooping-cough, 100 from diphtheria, 64 from scarlet fever, 50 from diarrhœa, 38 from small-pox, and 33 from "fever" (principally enteric) No death from any of these diseases occurred in Bournemouth, Burton-on-Trent, Walsall, or Barrow-in-Furness, in the other towns they caused the lowest death rates in Tottenham, Portsmouth, Derby, Halifax, and Swansea, and the highest rates in Willesden, Handsworth, St Helens, Preston, Middlesbrough, Stockton-on-Tees, Rhondda, and Merthyr Tydfil. The greatest proportional mortality from measles occurred in Handsworth, St. Helens, Preston, Rotherham, and Merthyr Tydfil; from scarlet fever in Leyton, St. Helens, and Middlesbrough, from diphtheria in Willesden, Walthamstow, Reading, Northampton, Oldham, Burnley, and West Hartlepool; from whooping cough in Devonport, Leeds, Stockton-on-Tees, and Rhondda; and from "fever" in Bootle, York, and Middlesbrough. 34 fatal cases of small-pox were registered in London, and one each in Willesden, Tottenham, Leyton, and Reading, but not one in any other of the 76 large towns. There were 870 cases of small-pox under treatment in the Metropolitan Asylums hospitals on Saturday, Jan. 25th, against 754, 873, and 877 at the end of the three preceding weeks; 203 new cases were admitted during the week, against 261, 306, and 213 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 2987, 2864, and 2760 at the end of the three preceding weeks, had further declined to 2658 on Saturday last; 299 new cases were admitted during the week, against 313, 250, and 288 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 452, 366, and 307 in the three preceding weeks, rose again last week to 357, but were 144 below the corrected average. The causes of 55, or 1·1 per cent., of the deaths in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Leicester, Nottingham, Salford, Bradford, Leeds, Newcastle, and 45 other smaller towns; the largest proportions of uncertified deaths were registered in Handsworth, Birmingham, Liverpool, Warrington, Blackburn, Preston, Sheffield, Middlesbrough, Stockton-on-Tees, and South Shields.

### HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 19·6 and 20·8 per 1000 in the two preceding weeks, declined again to 20·3 per 1000 during the week ending Jan 25th, but exceeded by 2·6 the mean rate during the same period in the 76 large English towns. Among the Scotch towns the death-rates ranged from 11·2 in Leith and 18·2 in Greenock to 21·9 in Perth and 22·1 in Glasgow. The 656 deaths in these towns included 31 which were referred to measles, 20 to diarrhœa, 13 to whooping-cough, five to diphtheria, four to scarlet fever, and three to "fever." In all 76 deaths resulted from these principal zymotic diseases last week, against 56 and 63 in the two preceding weeks. These 76 deaths were equal to an annual rate of 2·4 per 1000, which was 0·6 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of measles, which had been 23 in each of the two preceding weeks, increased last week to 31, of which 23 were registered in Glasgow and six in Dundee. The deaths from diarrhœa, which had been 19 and 13 in the two preceding weeks, rose again to 20 last week, and included 13 in Glasgow and four in Edinburgh. The fatal cases of whooping-cough, which had been five and 11 in the two preceding weeks, further rose last week to 13, of which 10 occurred in Glasgow. The deaths from diphtheria, which had been five, four, and six in the three preceding weeks, decreased again to five last week, and included three in Aberdeen The fatal cases of scarlet fever, which had been two and six in the two preceding weeks, declined again last week to four, of which two occurred in Greenock. The three deaths from "fever," showed a slight decline from the number in the preceding week, and were all registered in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 142 and 176 in the two preceding weeks, declined again last week to 128, and were 17 below the number in the corresponding period of last year. The causes of 15, or more than 2 per cent., of the deaths in these eight towns last week were not certified.

### HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 29·4, 25·0, and 23·4 per 1000 in the three preceding weeks, further declined to 20·9 per 1000 during the week ending Jan. 25th. During the past four weeks the death-rate has averaged 24·7 per 1000, the rates during the same period being 18·8 in London and 19·7 in Edinburgh. The 152 deaths of persons belonging to Dublin registered during the week under notice showed a decline of 18 from the number in the preceding week, and included eight which were referred to the principal zymotic diseases, against nine, 10, and six in the three preceding weeks, of these four resulted from diarrhœa, two from whooping-cough, two from "fever," and one from measles These nine deaths were equal to an annual rate of 1·1 per 1000, the zymotic death-rates during the same period being 1·9 in London and 1·1 in Edinburgh. The fatal cases of diarrhœa, which had been three, one, and two in the three preceding weeks, further rose last week to four The mortality from "fever" also showed a slight increase over that registered in the preceding week. The 152 deaths in Dublin last week included 21 of children under one year of age and 48 of persons aged upwards of 60 years, these numbers were respectively 16 and four below those recorded in the preceding week. Four inquest cases and five deaths from violence were registered; and 42, or nearly a third, of the deaths occurred in public institutions The causes of six, or nearly 4 per cent., of the deaths in Dublin last week were not certified.

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I am, Sirs, *yours faithfully*,

San Remo, Italy, Jan. 15th, 1902. W. SOLTAU ECCLES.

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*To the Editors of* THE LANCET.

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[1] THE LANCET, April 21st, 1900, p. 1169.

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Lieutenant-Colonel A. M. Davies is ordered to Portland to investigate the recurrence of enteric fever among the troops there.—Lieutenant H. W. Long is held in readiness for service in India.

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*Royal Garrison Artillery*: 1st City of London: Surgeon-Captain A. Allport resigns his commission, 1st Worcestershire: George Herbert Rutter to be Surgeon-Lieutenant. *Royal Engineers*: 2nd Cheshire (Railway): Surgeon-Lieutenant-Colonel J. Atkinson retires under paragraph 111 Volunteer Regulations, with permission to retain his rank and to wear the uniform of the corps on retirement. *Rifle*: 1st Roxburgh and Selkirk (the Border): Surgeon-Lieutenant W. Doig to be Surgeon-Captain. 1st (City of Dundee) Volunteer Battalion, the Black Watch (Royal Highlanders): Robert Thornton to be Surgeon-Lieutenant. 7th (Clackmannan and Kinross) Volunteer Battalion, Princess Louise's (Argyll and Sutherland Highlanders): Surgeon-Lieutenant G. T. Sinclair resigns his commission.

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WHAT with the increased pace at which the "wearing-down" process has been going on of late among the Boer forces in the field and the general belief that great efforts will be made to bring the war in South Africa to an end before the King's coronation occurs, a more hopeful tone seems to prevail. Mr. Balfour's very guarded announcement in the House of Commons that a communication had been received from the Dutch Government came somewhat as a surprise. This announcement, together with other signs of failing power and resolution on the part of the Boers, has been seized upon as indicating that their cause is tottering to its fall. But in the absence of any Boer Government or of anyone armed with the requisite authority to speak on its behalf it is difficult to see how the British Government is to take any steps, and it would be premature to form any opinion as to whether the Dutch note will be followed by any result. In the meantime there is an increased activity on the part of the various British columns in the field; forced marches with fighting on a small scale are taking place in numerous directions.

Our troops have of late been subjected to great exposure and much fatigue. There has been much heavy rain and there is still a good deal of sickness from enteric fever, dysentery, and diseases incidental to field service under such conditions.

It probably did not escape the attention of our readers that in the debate on the war raised in the House of Lords by the Earl of Wemyss on Jan. 27th the Army Medical Service came in for its share of attention. The strictures of Lord Tweedmouth on the shortcomings of the Government in its conduct of the war led Lord Raglan, in replying to them, to speak among other things in highly favourable terms of the services of the medical department and its officers. What Lord Raglan said is somewhat differently reported in different journals, but all agree in stating that he spoke in eulogistic terms of the work that had been done. As regards the alleged deficiency of the army medical service, it had, he said, been agreed on all sides at the beginning of the war that the effective number of men that should be sent out was about 70,000, and considering that they had subsequently to deal with the wants of 200,000 men the efforts made by the army medical service could hardly under the circumstances have been surpassed. Lord Raglan at the same time added that he fully recognised the services rendered to the army and to the Boers and the natives by the voluntary associations which supplemented the efforts of the army medical staff. It will be seen that all we have contended for is officially admitted by Lord Raglan. The late Director-General was obviously not responsible for the fact that his department was, and for years had been, an undermanned department; but he nevertheless sent out all the necessary medical staff and hospital equipment which he was called upon to provide for the force originally fixed upon by the military authorities and War Office. He had no power to do more than was thought necessary at the time.

It is stated that scarlet fever has broken out on board the training ship *Impregnable* at Devonport. There are some 1250 boys on board and 100 of these have already been sent to the Royal Naval Hospital, Stonehouse.

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## WHO DISCOVERED SERUM DIAGNOSIS?

*To the Editors of* THE LANCET.

SIRS,—I was glad to hear Professor Gruber declare himself at his first Harben Lecture, delivered at King's College on Jan. 13th, on the question of priority in connexion with serum diagnosis. If I remember his words aright he said that he was most surprised to find people in this country giving the credit for the discovery of serum diagnosis to a foreigner when this credit really belongs chiefly to two of our own countrymen—namely, Dr. H. E. Durham and Dr. A. S. Grünbaum. The history of the discovery appears to be as follows. After some preliminary observations by Pfeiffer and Bordet, Gruber and Durham, in 1895, ascertained by extensive and careful experiments the fundamental fact that immune serum can agglutinate the bacteria concerned. This was undoubtedly the fundamental discovery upon which serum diagnosis rests and it now became necessary to apply it to the cases of special diseases. The first application was made by Dr. Grünbaum in March, 1896. Dr. Grünbaum was at the time working in Gruber's laboratory in Vienna. He applied the reaction to several cases of typhoid fever obtained from Nothnagel's clinic and obtained positive and genuine results. The first test was made on March 14th on a case of typhoid fever of 27 days' duration; the second was obtained on March 22nd on a case of typhoid fever of 11 days' duration; and the third on March 23rd on a case of 17 days' duration. All these were positive; and numerous control experiments made at the same time sufficed to establish the utility of serum diagnosis in typhoid fever and also to demonstrate the feasibility of using serum in large dilutions. Unfortunately, no more cases were available in Vienna after the third case just referred to until the following June. Meantime, on April 9th Professor Gruber attended a medical congress at Wiesbaden and announced there that positive agglutination results might be obtained by the serum of convalescent cases of typhoid fever. This announcement was made very briefly and did not mention Dr. Grünbaum's or any other person's name. Owing to the continued paucity of cases and to the wish of Professor Gruber and Dr. Grünbaum not to publish the discovery until more material had been collected no further record was put before the profession. Suddenly, however, Professor F. Widal described before the Société Médicale des Hôpitaux, Paris, some successful agglutinations by serum from typhoid patients. This was followed by a succession of papers by Professor Widal reporting many more successful cases; and the result of these publications was that Professor Widal has obtained throughout the world the credit for having discovered serum diagnosis. Owing to continued paucity of cases of typhoid fever in Vienna and to other unavoidable causes Dr. Grünbaum was not able to publish his first paper until September, 1896.

It is clear from this history, which cannot be disputed, that Professor Gruber and Dr. Durham (and perhaps Bordet) made the fundamental discovery upon which serum diagnosis rests, and that Dr. Grünbaum performed the first actual agglutination by means of human typhoid serum in March, 1896. That he really did so has been certified to by the best authorities—namely, by Gruber and by Nothnagel and Maunaberg.[1] *Lastly, it is equally evident that Professor* Widal did not publish his first results until some months after Dr. Grünbaum's success had been obtained and published by Professor Gruber.

In the *Annales Pasteur*, 1897, p. 670, *Professor Widal, in* discussing this question, has endeavoured to maintain that as his first publication appeared before the first publication of Dr. Grünbaum, the priority, therefore, belongs to him (Professor Widal), on the ground that priority in discovery goes with priority in publication. Evidently, however, this claim cannot be admitted, because it is not correct to say that priority in discovery goes with priority in publication, since priority in discovery is open to being established by all the rules of evidence which hold in regard to all matters in which evidence is considered. By the evidence of Gruber, Nothnagel, and Mannaberg, to whom the facts were well known, Dr. Grunbaum's work was done before Professor Widal's first publication, and therefore the profession is bound to consider Dr. Grünbaum as the original discoverer, or at least as a simultaneous one. It is necessary to add here that Professor Widal has absolutely refused to mention the date of his first successful agglutination, and therefore we may assume, in default of any evidence to the contrary, that his first agglutination was made just prior to his first publication—a view which is further suggested by the fact that Professor Widal evidently published his experiences *as soon as they were made* (his first paper was based on only six cases). Moreover, it is evident that Professor Widal may have quite easily obtained a hint, sufficing for the basis of the whole of his work, from Professor Gruber's statement at the Wiesbaden Conference. Professor Widal also maintains that Professor Gruber referred on that occasion only to agglutination with serum taken after convalescence and that he himself was the first to work with serum taken during the course of the disease. But Dr. Grünbaum's second and third experiments were made on the eleventh and the seventeenth days of the disease—that is, during its course; and it is evident that Professor Gruber's brief remark might be justifiably held to include this *self-evident extension of* the *general principle. In my* opinion Professor Widal's objections do not even touch the main contention in favour of Dr. Grünbaum—namely, that Dr. Grünbaum's first serum diagnoses were certainly carried out months before Professor Widal's first publication. The priority, therefore, rests with Dr. Grünbaum, or at the best *Professor* Widal can claim only to share the credit with him. Moreover, the work both of Dr. Grünbaum and Professor Widal was based on the fundamental researches of Professor Gruber and Dr. Durham. It is unjust, therefore, to talk of "Widal's test" as if he had made the entire discovery.

I venture to call attention to the matter once more because I *see that this injustice* continues to be committed in spite of all protests against it. As a rule, the victims of such mistakes have little or no means of redress. If they stand up for themselves they are accused of egotism or pretension; if not, they are forgotten. But the matter is not merely a personal one; the fact that the credit for years of important and honest work can be lost in a moment in this manner *scarcely tends to encourage* the cause *of scientific research.* It is not possible to conceive that we should be grateful for pathological discoveries; but we might endeavour to be just in regard to them. I am not making any attempt to minimise the valuable work of Professor Widal, but am writing only to call attention to the generous remarks of Professor Gruber and to the claims of those who cannot *easily speak for themselves.*

I am, Sirs, yours faithfully,

Liverpool, Jan. 23rd, 1902. RONALD ROSS.

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## THE SANATORIUM TREATMENT OF CONSUMPTION.

*To the Editors of* THE LANCET.

SIRS,—The letter under the heading of "The Personal Factor in Tuberculosis" in THE LANCET of Dec. 28th, 1901, p. 1843, is far from encouraging to those of us who have been doing what we can to promote the sanatorium treatment of tuberculosis. Strong language has been used, for one finds the following expressions—"a national misfortune," "a world calamity," "absurd pretensions," "'cured' dying on all hands," "Abandon hope all ye that enter here" (viz., sanatoriums), besides others with which I need not burden you or your readers. I quite agree with Mr. J. O. R. Braine-Hartnell of the Cotswold Sanatorium *who, with other experienced men, recommends prolonged* treatment on the lines of the so-called "open-air treatment."

Our sanatoriums, if they are anything, are schools of hygiene; the principles there laid down are, in as far as they are common to the majority of the inmates, intended to be maintained more or less constantly. It is no wonder that some of those who have received most *manifest* benefit *in a* sanatorium should break down after their return to their homes, *for*, instead of observing the rules under which they have so greatly improved, they virtually abandon fresh air, surplus feeding, &c., and follow the manner of life which predisposed them to their primary attacks.

It seems doubtful whether your correspondent has ever spent a week in a properly conducted sanatorium. *Had he* done so he would have learned that the patients therein are not exposed to a bacillus-contaminated atmosphere, but that by night and by day the treated are breathing air far purer than that which is to be found in most of the sick rooms of Nottingham. Comparison is drawn between sanatoriums for tuberculosis and infectious diseases hospitals. The arrangements of these two kinds of institutions are *totally different for the most part. I only refer to one in sanatoriums:* the patients are segregated at night time and during the day they are seldom together unless in the open air. The reverse is the rule in fever and such like hospitals. Would your correspondent wish to do away with our hospitals for diphtheria and scarlet fever and to return to the old days when whole families were laid low with these infectious diseases because the first case was not removed from, it may be, the overcrowded room or house?

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# THE DESTRUCTOR NUISANCE AT TORQUAY

(BY OUR SPECIAL SANITARY COMMISSIONER.)

*(Continued from p. 264.)*

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### TESTIMONY OF RESIDENTS.—THE ILL HEALTH AND ACUTE SYMPTOMS ATTRIBUTED TO THE DESTRUCTOR.—NUMEROUS AND BITTER COMPLAINTS.

HAVING given the history of the circumstances which resulted in the construction of a destructor at Torquay and the unfortunate selection of the site which it now occupies, it is necessary to consider the complaints that have been made. It was, as already stated, in September, 1898, that the burning of the town refuse commenced. Individual complaints soon followed but it took some time before the dissatisfied inhabitants began to organise more systematic protests. By the summer of 1900 the agitation against the destructor had assumed *formidable* dimensions. If reference is made to the local papers it will be found that the matter was discussed by the Marychurch District Council, which was at that time a separate local authority. Mr. G. M. Winter, M.R.C.S. Eng., then read to the council a memorial signed by from 30 to 40 ratepayers and occupiers of St. Margaret-road, St. Marychurch road, Westhill, and Daison. This memorial stated that:—

> In consequence of the injurious effects of the smoke, fumes, and gases ejected from the destructor your petitioners respectfully call the attention of the district council to the serious effects upon personal property caused by the said destructor, and request them to take steps effectually to prevent the nuisance.

Mr. Winter, according to the newspaper reports published at the time, is represented to have urged upon the council, of which he was a member, that this was a serious complaint. The matter had been brought before it during the previous month of September and representations were then made to the Torquay Council. A reply was received in the following month of November to the effect that certain alterations would be made which would effectually stop the nuisance. These alterations, however, had not secured the desired result. Mr. Winter then protested that this was in no wise a mere sentimental grievance and he regretted to notice that the officials at Torquay strove to belittle the complaints they had received. At a recent meeting of officials connected with sanitary departments which had been held at Dartmouth they had even stated that the destructor worked well and that no complaints had been received. Such a statement was not justified, for the Marychurch Council had complained, and Mr. Winter went on to say that the fumes from the destructor affected the health and comfort of the inhabitants. The smell was foul and nauseating. There was no doubt that the destructor was placed in a ridiculous position. He added:—

> No one knowing anything about wind and gases would place such a thing in the bottom of a pit, where the wind could not possibly take the fumes away. Possibly the destructor was faultily constructed, or perhaps the fumes were not properly cremated. He had said sufficient added to their own personal knowledge to show that a nuisance existed, and a very serious one which affected many ratepayers. He would move: "That the St. Marychurch District Council, recognising the real nuisance emanating from the Torquay refuse destructor, regret that effectual means have not been taken to abate it after the communication of Sept. 26th last and trust that the town council will at *once* take steps to do away with the nuisance and its attendant risk to health."
>
> Mr. C. Taylor seconded.
>
> The Chairman, Captain Hill Lowe, said the destructor was a very decided nuisance and he was exceedingly glad that the matter had been brought forward.
>
> The motion was unanimously agreed to.

In consequence of the adoption of the above resolution a deputation waited on the Torquay Town Council and were informed that the council would construct a Jones's patent coke cremator in the main flue so as to render the fumes and gases innocuous. The *Torquay Directory and South Devon Journal* of Sept. 5th, 1900, reports the discussion held by the council in regard to this deputation. A letter was read from Mrs. Ridley, of Vane Hill, complaining of the smells from the destructor, but the borough surveyor stated that on the night complained of the destructor was not at work. Councillor Pike said that he lived within 150 yards of the destructor and had never smelt it, and that sentiment was at the bottom of all the complaints. Alderman Kerswill named people living near who had never smelt anything objectionable, but Councillor F. J. Crocker admitted that there had been cause for complaint, and the discussion was brought to a close by the Mayor who declared that the cremator which they were about to build would destroy the last germ of every reasonable complaint. The local paper, after giving these details, comments on this discussion in the following terms:—

> An even worse feature was the frequent attempt to pour ridicule upon those who have addressed complaints either to the council or the public press. A lady was several times held up to ridicule, and one member went so far as to speak of ratepayers who have been prominent in the agitation about the destructor as lunatics. This sort of thing only brings the council into disrepute and is to be regretted by all who value the good name of the borough. By their action the council admit that there has been cause for complaint. Then why throw dust in the eyes of the public? And why insult those who have felt compelled to call attention to the matter?

Shortly after this the boundaries of Torquay were extended so as to include the districts of Marychurch and Chelston. Consequently the Marychurch District Council, which it has been seen was a centre of agitation against the destructor, ceased to exist, and Mr. Winter, who had been a leader in this movement, became a member of the Torquay Town Council and was thus jointly responsible with his fellow members of the council for the destructor. There were two good reasons to hope that the nuisance would be abated: firstly, the construction of the cremator, and, secondly, the fact, which has been already explained, that with the addition of a population of 12,000 there would now be refuse enough to keep the destructor working at night as well as in the day, as it was argued that the nuisance arose through the cooling down of the cells when the fires were not kept fully alight. That these hopes were not realised is, I think, fully demonstrated by the evidence I personally was able to collect.

A portion of the Marychurch road passes over one of the hills that dominate the destructor. Here my first visit was to Dr. H. Humphreys who has taken a leading part in the agitation against the destructor. To him the matter is of personal as well as of general interest. He would long since have left the district, but having purchased the freehold of his house he is compelled to remain. He could not sell his house except at a considerable loss, for he conceives that it would not be honest to do so without warning the intending purchaser of the nuisance to which he would be exposed. Some of his neighbours, however, have been less scrupulous. After taking part in the agitation against the destructor they have succeeded in selling or letting their houses and are now silent. Others are seeking to follow this example or to let out some of their rooms to lodgers and are therefore also anxious not to say too much about this grievance. But there still remain a considerable number of persons who have nothing to lose and much to gain by bringing such public pressure to bear as will result in the abolition of the nuisance. Dr. Humphreys explained that the odour varied considerably. Sometimes it seemed like the smell of a tallow candle, at other times it was more like that of a burnt shoe. It was stifling, caused a choking sensation, and there was an irritation of the throat as if produced by fine dust. The windows were dirtier than they used to be before the destructor was built. When the smell had thoroughly penetrated a room it hung about for hours after the wind had changed and the fumes of the destructor were blown in another direction. The odour was of such a penetrating character that it had been noticed at a great distance, even out at sea off Petty Tor. Mrs. Humphreys complained of a nasty taste in her mouth, of nausea followed by salivation, and of sore or spongy gums. The family were often driven out of their garden by the odour and obliged to take refuge indoors and to shut all the windows, which was very unpleasant on a hot summer day.

My next visit was to neighbours of Dr. Humphreys, the Misses Tapper, whose house overlooks the valley in which the destructor is built. They explained that they were away when the destructor was erected and on their return they were surprised to find their house invaded by strange odours. Later, when the summer came, these odours were so strong that if the wind came from the direction of the destructor they would be obliged to get up in the night so as to shut all the windows. At the risk of suffocating themselves they even shut down the dampers of their stove and closed up their fireplaces. They complained that the odour made them feel sick and provoked headaches. A lady invalid who could get fresh air only in the garden was on these occasions obliged to remain indoors. They had not only felt a sensation of nausea but this had produced nurse her hostess. After 10 days this lady (the mother) felt so ill that she returned home and went straight to bed, carefully avoiding her children; and next day it was clear that she was beginning measles. The children, meanwhile, had been threatening the troublesome cough that might precede measles, but not until the fifteenth and seventeenth day after their exposure did they show manifest signs of measles Now, it would seem that the extra dose received by the mother distinctly led to a shorter length of the incubation stage. Again in August and in the early days of September I was using lymph of the Jenner Institute (*not* the Jenner Institute of Preventive Medicine) which failed to take at all. Later, in the month of October, I found that the vaccine would take effect in a mild sort of way on the twelfth day, showing that there probably was but a very mild dose of the vaccine virus in the glycerine I had always been able to prophesy that in revaccination one could look with certainty for the local reaction on the third or fifth day (at least this always happened when I used lymph from Dr. Renner's establishment). So I took to using Dr. Renner's lymph again and always find that I can guarantee a good pock-mark or an abortive one equally surely about from the third to the fifth day, showing, I suppose, that the dose is fairly equal.

These facts would seem to prove that if lymph is over-glycerinated it is either inert or very slow in incubation, all which would show that there might be some standard of strength established by the authority of those who make lymph for the Government. For we non-public vaccinators are entirely dependent on the private companies who advertise their goods. They, on the other hand, deny all responsibility for the uncertainty of their lymph, I have lately revaccinated and caused to be revaccinated many who were done with Jenner lymph and find that 30 per cent. when done again with Dr Renner's lymph give excellent vaccine vesicles. This shows how our unfortunate patients are entirely at the mercy of the trade supply in lymph.

I am, Sirs, yours faithfully,
Courtfield-road, S.W, Jan. 21st, 1902. J. KINGSTON BARTON.

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## EXCISION OF GASTRIC ULCER.

*To the Editors of* THE LANCET.

SIRS,—I notice that in THE LANCET of Jan. 25th, p. 275, you refer a correspondent signing himself "E N. B." to a case of mine recorded in your issue of March 2nd, 1895, p. 544. As that case occurred early in the history of operation for perforated gastric ulcer and was my first experience of operating for it, will you allow me to say that in four or five subsequent cases (one of which was published in 1896) I have not thought it advisable to excise the ulcer before suturing? I think that perhaps your correspondent may find the information he seeks in the excellent lectures by Mr. A W. Mayo Robson published in THE LANCET of March 10th (p 671), 17th (p. 747), and 24th (p 830), 1900, and in an address by Mr. Robson in THE LANCET of Feb 9th, 1901, p. 375.

I am, Sirs, your obedient servant,
Brighton, Jan. 25th, 1902. R. F. JOWERS.

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## FIRST AID FOR PRIMARY HÆMORRHAGE: THE WRONG INSTRUCTION GIVEN TO AMBULANCE CLASSES. A CORRECTION.

*To the Editors of* THE LANCET.

SIRS,—In my letter which appears in THE LANCET of Jan. 25th, p. 256, the words "severely burnt" have been omitted from the account of the infant who was carried over two miles to a hospital.

I am, Sirs, yours faithfully,
Plymouth, Jan. 25th, 1902. C. HAMILTON WHITEFORD.

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## FEEDING ON GOAT'S MILK.

*To the Editors of* THE LANCET.

SIRS,—If any of your readers have had experience of the suckling of children by goats I should be greatly obliged if they would let me benefit thereby. The child who has come under my care quite recently is four months old, and has been suckled since birth by a goat, taking at present four meals daily from the goat and two from the mother. The child is large, firm-fleshed, mottled, but has a scurfy patch covering the lower part of the forehead, the nose, and the left cheek. There is no irritability, flatulence, vomiting, or loss of weight. There has been a little diarrhœa which passed off without treatment; curds are frequently passed in the stools. There is no loss of weight. The udders of the goat are well cleaned before each meal and the animal is healthy.

Would it be wiser to advise a change in the method of feeding than to leave well alone?

I am, Sirs, yours faithfully,
Albareda 49, Seville, Jan. 21st, 1902. JOHN DALEBROOK.

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## HIGH FREQUENCY CURRENTS IN THE TREATMENT OF PHTHISIS.

*To the Editors of* THE LANCET.

SIRS,—I trust that you will afford brief space for an indignant repudiation of certain sensational statements concerning the treatment of phthisis by currents of high frequency which have appeared in the columns of the daily press, and in which my name has been used to my great annoyance and entirely without my knowledge or consent.

On Jan. 23rd, as a matter of courtesy, I saw a representative of the *Daily Mail*, who called on me with an introduction from a well-known member of our profession, a personal friend, for the alleged purpose of reporting on the subject which had been dealt with in the Gresham lectures. I explained to him impersonally the *modus operandi* of the electrical treatment in question, allowing him to test for himself the physical properties of the current from an ordinary Oudin resonator which stands in my room without any adjuncts of elaborate finish, mystery, or impressiveness, and is indeed in all its surroundings eloquent of makeshift arrangements and purely experimental use. I pointed out that I personally was interested in the matter from a purely scientific point of view, and had had an extremely short and small acquaintance with its alleged therapeutic effects.

Before consenting to afford him any information I had obtained his assurance that my name should not be used at all in connexion with the matter, so that its use in the published paragraph is entirely unjustifiable and a grave breach of confidence.

I have written a letter to the *Daily Mail* pointing out my extreme annoyance, and I feel confident that those who know me and my work will at once see how I have been made an unsuspecting victim to the peculiar "principles" of modern sensational journalism.

I am, Sirs, yours faithfully,
Devonshire street, W., Jan. 28th, 1902. T. J. BOKENHAM

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THE ROYAL UNITED HOSPITAL, BATH.—Mr. Arthur Roberts, the comedian, who was performing at the Theatre Royal, Bath, gave an entertainment at the Royal United Hospital, Bath, on Jan. 24th. Mr. Roberts was assisted by several members of his company and the performance was much appreciated by the patients.

THE ROYAL INSTITUTION.—The Friday evening discourse at the Royal Institution on Jan. 24th was delivered by Mr. H. G. Wells, the title of his address being "The Discovery of the Future." He thought that along certain lines and with certain limitations it was quite possible to forecast the future and that the time for commencing investigations in this direction had, in fact, now arrived. In support of his arguments he referred to the calculation of planetary movements many years in advance of the actual occurrences, to the predictions of chemists as to the properties of bodies which were unknown at the time but have since been discovered, to the results of medical prognosis, and to the anticipations of palæontologists at first founded on scanty data but afterwards verified when more abundant fossil remains came to light. The human race as at present existing was not, he said, the last stage in the evolution of the highest form of animal life, and speculation as to what type of creature would succeed man on the earth was exceedingly interesting. He believed that within the next few hundred years the human mind would undergo great development and would accomplish things compared with which all its achievements in the past would be only as the dawn before the day.

## BIRMINGHAM

(FROM OUR OWN CORRESPONDENT )

### *A Rowton House*

A PRACTICAL attempt to solve the difficulties of the housing question among the poor of Birmingham has just been made by the promotion of a Rowton House scheme. It is announced that a company (the "Rowton Houses ') has been formed with a capital of £50 000, in ordinary shares of £1 each, to further this object. It is stated in the prospectus that no contracts have been entered into, that none of the capital has been underwritten, and that no promotion money will be paid "Rowton Houses,' if carried out, will supply a great social want especially among the artisan class and if successful will materially relieve the pressure in the overcrowded parts of the city At the same time it is estimated that it should be a financial success if the project is realised on the lines laid down by the promoters One house will be first erected capable of accommodating 600 men, for which the charge will be 6*d* per day , this includes for the 24 hours, separate sleeping accommodation the use of cooking ranges and appliances, dining smoking and reading rooms library, and foot-baths, unlimited use of hot and cold water, and, at nominal charges, the use of a locker and hot and cold baths Surely this is a tempting programme to a working man not *only to wash and be clean but to enjoy comforts, and even* luxuries which it is at the present time beyond his power to possess From a health point of view the scheme is deserving of all the encouragement and support that can be given to such a praiseworthy object

### *Hospital for Children*

On Jan 27th the annual meeting of the governors of this institution was held under the presidency of Mr C F Matthews In the report which was read (the forty first) it was stated that during the past year the number of in patients treated had been 943 of out-patients 15 451, and of casualties 264 The death rate calculated on the in patients had been 7 08 per 1000 as compared with 7 9 per 1000 on 1060 patients in the previous year The expenditure had exceeded the income by £307 The chairman gave some interesting figures comparing the hospital with its position 40 years ago, stating that the governors now had £20,000 invested compared with nothing at that time. Various votes of thanks were passed

### *Sanatorium for Consumption*

Some discussion has arisen in the county of Worcester as to the proposed plan to establish a sanatorium for consumption A protest has been issued by the ratepayers of Malvern, in which they desire to submit to the county council that however desirable it may be to establish a sanatorium for the open air treatment of consumption in Worcestershire—which in the absence of the information which ought to be, but is not, at the disposal of the ratepayers is neither affirmed nor disputed—no such charge as the maintenance of the sanatorium ought under any circumstances to fall upon the rates It is considered that the object is a national rather than a local one, and the ratepayers' association deems that the expenses should not be allowed to fall upon the already overburdened ratepayer From an argumentative point of view there is much to be said upon the question but it would be well to bear in mind that the greatest good to the greatest number should influence public opinion and practical philanthropy

### *An Interesting Adulteration*

"Self raising flour is a common form of advertisement in describing the qualities of flour sold at many shops and places. It is in itself a misnomer, the effervescent qualities being produced by the admixture of certain chemicals In a case tried at the Dudley Police court on Jan 22nd the point was raised with regard to a sample taken of the flour in question which contained a quantity of potato starch and 63 grains per pound of tartaric acid with 26½ grains per pound of bicarbonate of soda In proportion to the bicarbonate of soda the quantity of tartaric acid was double what was required It was stated that the acid was really cream of tartar and the presence of potato starch was denied. Much expert evidence was called for the prosecution and for the defence, and this evidence, as usual varied considerably. In view of this difference the bench decided that a sample should be sent to Somerset House and adjourned the case accordingly The decision is looked forward to with interest.

Jan 28th

## MANCHESTER.

(FROM OUR OWN CORRESPONDENT )

### *Salford and Small Pox*

AT their next meeting the Salford Town Council will be asked by the Health Committee to proceed at once with the building of the small pox hospital A site was secured several months ago at Drinkwater Park, and the scheme was submitted to the council, but held over for six months, as it was thought that Manchester might cooperate with Salford However, Manchester did not agree to the financial proposals and nothing has been really done by either council Possibly the recrudescence and threatening aspect which small pox has assumed may quicken the action of both councils in providing isolation hospitals

### *Mid Cheshire and Vaccination Charges*

With small pox threatening the country at large it seems a curious time to complain of expenditure on vaccination , but at the meeting of the Northwich Board of Guardians on Jan 24th "Mr J Holland appealed for retrenchment and economy ' He said that the charges under the Vaccination Acts were £280 a year more than they were 10 years ago He said that in the rural districts money was hard to get, &c , and 'that steps should be taken to get rid of the present system It is not clear from the report whether or not he would put a stop to vaccination, but as he wishes for economy he had better study the statistics of expenditure in those places that have suffered from even a slight invasion of that loathsome and dangerous disease small pox

### *The Royal Eye Hospital*

At the annual meeting of the subscribers to the Manchester Royal Eye Hospital held on Jan 23rd it was stated that at the hospital in Oxford street 10,736 out patients were admitted during the year, and 12 237 at St John street, a decrease of 1162 on the previous year The in patients at Oxford street were 1334 being 22 fewer than in 1900 The excess of expenditure over income which is so common with hospitals, was a little under £30 The Lord Mayor, who presided said that the decrease in the number of patients treated looked as if the hospital had overtaken the requirements of the district. The accident cases showed an increase, and this had been going on for several years Many of them were from bits of iron chippings getting into the eye, which is not to be wondered at, as there are so many iron and engineering works in the district A pleasing instance of gratitude was mentioned at the meeting More than 30 years ago a young man was treated at the hospital, and his elder brother Mr A. Greenhalgh, wrote to the board saying that he should never forget the kindness and courtesy of Dr D Little who was then house surgeon and that he had determined when he had the ability, to subscribe to the funds of the institution, and he said, 'I have now pleasure in sending you a cheque for £1000 '

### *Poisonous Preservatives in Milk*

One of the inconveniences resulting from the advances in chemistry and the spread of knowledge is that various articles of food become more and more 'suspect' from objectionable methods of applied science Two milk-dealers were summoned at the instance of the Lancashire County Council, on Jan. 21st, to the county police-court, Strangeways for selling milk containing an injurious ingredient.' It was found on analysis to contain one part of formaldehyde to 100 000 parts of milk. Mr Wingate Saul, who prosecuted said that the county council was very anxious that the practice of adding formaldehyde to milk should be stopped and the committee appointed by the Local Government Board had advised its complete prohibition Some people said that it might be hard on the retailer as it could not be proved that the wholesale dealer did not put the formaldehyde in There was a suspicious point, however, against the retailers if it were true, as Mr Saul understood it to be that travellers go round and sell formaldehyde to them for it would scarcely be bought unless it was used A fine of 20*s* and costs was imposed in each case Mr Yates K C. the magistrate, asked if these actual vomiting. In the Shirburn-road Mrs. Hill told me that she slept in a little house-boat on the Dart so as to escape the fumes and only came up to her house so as to attend to the fruit and other matters. When at home she lost her appetite and suffered from dryness and irritation of the throat. The smell seemed to her like the burning of old shoes; the air felt oppressed and as if there was not enough of it. This gave Mrs. Hill a pain that commenced at the back of the head and then spread to the front and especially over the eyebrows. Mr. Hill, being absent when I called, sent me a written statement in which he says that the odour, "especially at night, is absolutely unbearable. The smell is peculiar and quite unmistakeable. It resembles somewhat that which would be caused by a smouldering greasy rag in a small confined room in which there was also present a bucketful of coke fire and a handful of brass chips being dissolved in aquafortis." Returning home late at night from sea he found the atmosphere about his house "so dreadful" that he doubted if he could exist in it till the next morning. "In fact, my wife and I have often passed many nights on board of our yacht in the harbour between our long cruises rather than return home and be poisoned." Mr. Hill adds: "It is interesting to note that while there is apparently very little brown smoke issuing from the destructor stack when viewed from the shore, yet from the sea at a distance of a few miles, when the destructor can be seen against the dark background of the hills, there always appears an impalpable blue vapour which extends for miles, tending ever downwards until it merges into the thin haze which is always present more or less in the valleys of the town if the wind is in that direction."

Miss Leney of Bronshill-road explained that at first she did not notice the smell very much, but it was very bad in the winter of 1900 and in April and May. The previous year Miss Leney was away at that time. The odour made her retch and produced pains in the abdominal region. On one occasion she awoke at 5 A.M. with a sensation of swelling in her mouth. It was necessary to close all the windows and her sister was nearly sick. Miss Leney soon felt so depressed and anæmic that she consulted her medical attendant, with the result that she determined to leave Torquay for a while, and then she speedily recovered. This was all the more distressing as four years ago Miss Leney bought her present house and came to live at Torquay on account of her health, and at first the place agreed with her very well. Now she can only keep herself in health by occasionally leaving Torquay. Last August when entertaining friends in her garden all the guests had to rush indoors and shut the windows in spite of the heat on account of the odour that came upon them. Formerly they would live in their garden up to 10 o'clock in the evening and this was the chief charm and benefit of the place. Now they had to go indoors and shut all the windows. Some persons, I was told, say they can notice the destructor smell when they wash their faces if the water is taken from a cistern placed in an exposed position.

The owner of a little shop in the Marychurch-road told me that at times she felt inclined to tie a handkerchief across her face. Many of her customers complained of the smell and inquired as to its cause. It was generally worse in the evening and produced a sensation of sickness. Entering another shop close by I heard much the same complaint. Other shopkeepers in this neighbourhood, either because they are less sensitive or because they fear to injure their business interests, strive to belittle the grievance, and some even declare that they do not notice the smell at all. But Mr. Taylor, who lives in the same road, stated that he had seen people going about holding handkerchiefs to their noses, and that on one particular Wednesday the odour was so bad that several people declared that they would have to leave. Several visitors lodging in the neighbourhood had got up in the night thinking there was a fire or that the drains were out of order, and had to be pacified by their landlady. Two persons living in Sudbury-terrace stated that they had to bar their doors and windows in the hope of keeping the smell out. A medical practitioner described the smoke as of three colours, black, brown, and pearl-grey. It made him sick, ill, and cross, and, he added, "we doctors have quite enough to irritate us without that."

Mr. H. Bedford of Shirburn-road called on me and also sent me a written statement. This gentleman was so much affected that he had appealed to the Local Government Board offering to bear witness and to be medically examined. "I am described," says Mr. Bedford, "by the medical men I have consulted as physically strong and without any organic disease and have been advised by them that my only remedy is to leave the neighbourhood." When possible he had done so and his symptoms gradually subsided, but returned again when he came back to Torquay. These symptoms, Mr. Bedford writes, are constant nausea, giddiness, and headache, with darting pains following on the breathing of the fumes. When there is no odour he is oppressed with a nervous dread lest it should return. He complains further of swollen lips, a bearing-down sensation in the legs, a sense of suffocation, and general physical prostration. Mrs. Bedford, however, though living in the same house, is not so sensitive. This lady is inconvenienced but feels no acute symptoms. Another complainant, Mr. Wilson, who lives at Marychurch, told me that he had spent the greater part of his life in Canada where he had practical experience of the malodorous skunk, but he thought that the fumes of the Torquay destructor were worse. He was convinced also that this odour did not readily mix with the atmosphere. Thus, when the wind changed and the air became pure again he found that after opening his doors and windows the smell was still perceptible in the corners of his rooms. If this is correct it is important, for it would show that the fumes come in a comparatively compact volume instead of being diluted by expansion. They gave Mr. Wilson pains in the head, temples, and throat. In her youth Mrs. Wilson had been struck by lightning and this had deprived her of her sense of smell, but she felt the fumes in her throat and they produced a sense of sickness. Mr. Heavens related that he remembered the old refuse deposit near Windmill Hill, and the nuisance caused by the rats, especially in the neighbourhood of the racecourse. But it was easier to keep the rats away than the fumes of the destructor, and he was obliged to keep his windows shut in the hot summer days. Following upon an attack of typhoid fever his sister had suffered greatly from indigestion; but when she went to stay with some friends living near the Bristol Channel she felt much better. On her return to Torquay, however, a relapse occurred. Her medical attendant treated her for dyspepsia, but still she could not recover her appetite. At last she went to London and resided at Balham. In two days she recovered and was quite well again. Torquay is supposed to be a health resort and yet here is a case of a patient who only recovers on going to London. A neighbouring family named Bolton gave notice and left their house in consequence of the nuisance, but most of the residents are leaseholders or freeholders and cannot get away. It used to be most enjoyable to sit out in the garden and benefit by the cool breezes coming from the vast expanse of moorlands that stretch north of Torquay. But as the destructor is in this direction when the wind blows from that quarter those persons who are susceptible dare not sit out in their gardens.

Finally, I went to the Roman Catholic convent at Marychurch. Here there are 70 orphans, eight servants, 26 young lady boarders, 30 sisters, and a day-school. The late lady superior had signed a petition against the destructor. Several of the sisters had complained and the lady superior who received me said she was under the impression that the general opinion was that the destructor was a serious nuisance. Had I continued these visits I could have collected much more evidence of the same description, but doubtless the above will suffice to give a general idea of the sort of complaints which were made. Of course, it will be said that they are grossly exaggerated, and in some instances wholly imaginary, and that other witnesses could be produced who have no complaint whatsoever to make. But it must be borne in mind that many persons are materially interested in striving to minimise the grievance. It is quite certain that there would never have been so much agitation, so many petitions presented, and so many complaints made if there had been no nuisance whatsoever. The very efforts made by the Torquay Town Council to alter and to improve the working of the destructor prove that the existence of a grievance is acknowledged. It remains for me to describe the latest modifications that have been made in the construction of the destructor. Then I will attempt to point out how the difficulties which have arisen at Torquay are of great interest to all towns which have to face the problem of refuse disposal.

(*To be continued.*)

there was a population in these three counties of 284 000 persons

### *Cardiff Workhouse*

Hitherto the resident medical officer at the Cardiff Workhouse has acted as dispenser to the institution, but the board of guardians recently decided to appoint a separate officer Among the nine applicants for the position were four ladies one of whom has been elected to the post at a salary of £30 per annum

### *Rabies in Pembrokeshire*

A case of rabies has occurred among the foxhounds belonging to the Pembrokeshire hunt The pack is kenneled near Haverfordwest, and on Jan. 15th the dog affected attacked a group of persons in the town, tearing their clothes and, in the case of a boy, aged nine years, inflicting a wound on his forehead The dog, which was secured, died on Jan 20th, when its brain was sent to the Brown Institution for examination The boy went to Paris on Jan 21st for treatment at the Pasteur Institute

### *Duties of Poor-law Medical Officers*

At a recent meeting of the Helston Board of Guardians a discussion arose in reference to some of the medical officers neglecting to send to the meetings of the guardians their reports of attendances on pauper patients Eventually one of the members gave notice of a motion that in contracts with the medical officers a clause should be inserted to the effect that the medical officers would be debited with a sum of money for each omission to send in their report At the meeting on Jan 18th the proposition was brought before the guardians, but the clerk expressed his belief that the Local Government Board would not sanction such a clause and the motion was not seconded

### *Vaccination Prosecution.*

At Truro Police court on Jan 20th a man was summoned for disobedience to an order made by the court for the vaccination of his child Evidence showed that when the police attempted to enforce a warrant of distress the defendant locked the door and defied them Eventually he was fined £1 and in addition was ordered to pay costs and advocates' fees or to undergo a month's imprisonment. He preferred the latter alternative and becoming noisy was removed from the court, protesting that he was the victim of a conspiracy

*Jan 27th*

## SCOTLAND

(FROM OUR OWN CORRESPONDENTS )

### *Glasgow Royal Infirmary*

THE annual report of the Glasgow Royal Infirmary, which was issued on Jan 25th, contains in addition to the usual statistics an allusion to the proposed reconstruction scheme which has for so long been in a state of suspended animation A determination is expressed to adhere to the larger proposal to rebuild the entire hospital at an estimated cost of £250,000 As the sum already in hand amounts only to £80,000 a balance of £170 000 is still required The managers explain that in view of the numerous other appeals which have been made to the public they have deemed it advisable to postpone their own claims, but they indicate that ere long the question will assume an active phase The report contains an appreciative note of the services rendered by Dr Moses Thomas who retires from the position of superintendent after a tenure of office extending to 34 years In the financial statement attention is drawn to the fact that the ordinary expenditure for the year exceeded the income by upwards of £10,000 and that the managers have been compelled to draw to this extent on the capital account.

### *Small-pox in Glasgow*

The total number of small-pox patients now in hospital is 58 Four new cases were notified on Jan 26th

### *Scottish University Students*

The annual conference of the Students' Representative Councils of the Scottish Universities has been held in Glasgow during the past week. Principal Story, in welcoming the members made reference to the proposed rearrangement of the academic year, and described the proposal to substitute three terms in each year for the present prolonged session as one needing careful consideration by the students themselves, the question whether such a change was adapted to the circumstances of the students was one of vital importance The Principal also alluded to the Carnegie bequest and stated that it was within his knowledge that applications had been made for the payment of fees by those whose circumstances rendered them altogether unsuitable for such assistance he advocated the cultivation of a healthy public opinion on this point Among the various subjects discussed by the conference was the reorganisation of the medical curriculum and a unanimous vote was recorded in favour of a rearrangement of certain of the subjects of the institution of three terms of 11 weeks each instead of the present winter and summer sessions, and of the complete removal from the fifth year of all classes other than those involving clinical work It was also decided to request the senates of the several universities to institute two final examinations for graduation in medicine in each year —The Liberal students of the University of Glasgow have announced the name of the Right Hon John Morley, M P, as their candidate for the lord rectorship, the election to which will take place in November

Jan 28th

## IRELAND

(FROM OUR OWN CORRESPONDENTS.)

### *University of Dublin*

A MEETING of the Senate of Dublin University was held in Trinity College on Jan 25th for the purpose of electing a representative for the "Classis Quarta" in the place of the late Dean of St. Patrick's Cathedral Sir John William Moore and Mr William Cotter Stubbs were nominated to fill the vacancy, and it was announced that ballot papers would be sent out as soon as possible

### *Danger of Small-pox in Dublin*

A letter from Sir Charles Cameron, C B, the medical superintendent officer of health of Dublin, has recently appeared in all the Dublin daily papers warning the public to take every possible precaution against attacks of the loathsome disease of small-pox, and earnestly requesting all who have not been revaccinated and who are over 12 years old "to have that trifling (as regards pain or inconvenience) operation performed on them as soon as possible" As already stated in THE LANCET, if small-pox should come to Dublin as an epidemic there exists no suitable place in which its victims could be treated, the recommendation of the Cadogan Commission, that an isolation hospital should be provided for it outside the city boundary, having proved inoperative

### *The Nursing in Armagh Workhouse*

The Local Government Board has written to the Armagh Board of Guardians requesting them to comply with the terms of the order of Dec. 4th, 1901, and to appoint, as soon as practicable, a qualified nurse and two wardmaids for duty in the infirmary The matter was, on Jan 21st, at a meeting of the Armagh guardians, referred to the special nursing committee of the Board who are to report

### *County Antrim Infirmary*

The friends in Lisburn of this most useful institution are making strenuous efforts for the coming bazaar and with this object a conversazione was held on Jan 21st.

### *North of Ireland Branch of the British Medical Association*

The winter meeting of the North of Ireland Branch of the British Medical Association was held in the Belfast Museum on Jan 23rd the President, Dr J S Darling, being in the chair Mr Robert Campbell read notes on the Operative Treatment of Hernia in Children and showed specimens illustrating the anatomy of spina bifida, talipes equino-varus and genu recurvatum Dr J McLiesh read notes of a case of Lymphatic Leukæmia with a condition of skin resembling pityriasis rubra, and showed a specimen of Pneumothorax lasting six months and one of Loculated Empyema. Mr H. Norman Barnett read notes of two cases of Bubonic Plague occurring on Board Ship and showed photographs and microscope slides illustrating his paper Professor J W Byers and Professor T Sinclair gave details of a case in which a Volvulus of the Sigmoid Flexure causing Intestinal Obstruction had been twice successfully relieved in the same patient at intervals of four years by abdominal section Mr G L St. George (Lisburn) showed two cases of Spina Bifida, both successfully treated, one by Morton's fluid and the other by excision Dr T A Vesey (Rostrevor) read notes travellers could not be proceeded against for a misdemeanour for selling the drug, and Mr. Saul thought they could, "as it was an irritant poison."

*The Christie Library.*

The department of the Christie Library, Owens College, which has recently been enriched by the gift of Mr. Christie's own collection of books numbering nearly 7000, was formally opened by his brother, Mr. Hector Christie, on Jan 22nd. It is the library of a scholar and though not appealing specially to busy practitioners passing and re-passing day by day, these may sometimes heave a sigh of regret that their avocations prevent them revelling in its treasures, like Professor Wilkins, who said that Mr. Christie's favourite study was the period of the Renaissance of classical learning. It is specially rich, among other treasures, in editions of Horace, the collection of which was one of Mr. Christie's hobbies.

*The "Triplets."*

The feeling in favour of the disintegration of the Victoria University grows apace. Liverpool and Yorkshire are in earnest as to each having a university of its own. Manchester would no doubt have remained content with the *status quo*, but now, seeing that the break-up is inevitable, she looks to the future without dismay. The graduates of the Victoria University, however, are disturbed as to the effect these impending changes may have upon the value of their degrees, and it would be unjust as well as unfortunate if they should suffer. Each of the disintegrating colleges is animated by the highest regard and affection for the others, with whom, however, it is impossible to remain associated any longer, and as the parting is to be accomplished with goodwill all round it is to be hoped that there may remain something of a "triple alliance."

*A Park for Hyde.*

The town of Hyde has just received the munificent and specially valuable free gift of a park of 30 acres of grass-land and shrubbery as a pleasure ground for all time. It was offered in the Diamond Jubilee year by the Misses Ashton, of Little Onn, Staffordshire, with certain conditions, however, that the corporation felt unable to accept. All difficulties have now, happily, been overcome and Hyde will have its park. There is a roomy mansion which would serve for a museum or art gallery. Anyone who knows the cheerless aspect of such manufacturing towns as Hyde, with their smoke-begrimed, mean-looking, dingy streets will be able to appreciate the value of such an open space to the inhabitants. The gift is valued at £10,000, and perhaps the corporation may spend on it a like sum.

*A Pest-house.*

It may perhaps be worth while to put on record the following revolting and deplorable case as an illustration of the difficulties sometimes met with by those who are striving to safeguard the public health. At Barrow, on Jan. 17th, a man was sent to prison for four months for neglecting his eight children, and a man and wife living in the attic of the same house were each sentenced to two months' imprisonment. The first set of children were in a dreadfully filthy condition and practically starving. The house had only five rooms and 23 people lived in them. Mr. J. Settle, the medical officer, said that the small-pox epidemic broke out there. "The family were all unvaccinated, and owing to the outbreak of small-pox in the house the disease spread to no fewer than 30 people in the town, and it might just as easily have spread to 30,000. Through these people it was carried to Staffordshire and Blackburn. The authorities put new furniture and bedding into the house, but these were soon in as filthy a condition as those destroyed" What chance is there for children brought up in such surroundings?

*Rainfall in 1901 at Longdendale and Thirlmere.*

At Longdendale, from which valley the whole supply of water for Manchester came till 1894, the average daily contribution last year was 21,922,260 gallons. The total rainfall was 40 01 inches. From Thirlmere the average daily quantity was 8,353,284 gallons. This was more than that of previous years, but as the pipe has a capacity for the passage of 10,000,000 gallons daily it shows that there is serious leakage. The rainfall for the year at Thirlmere was 74·3 inches, as compared with an average of 86·2 for the same locality during the last 25 years. The sooner that Manchester completes the second pipe from Thirlmere the better.

Jan. 28th.

## WALES AND WESTERN COUNTIES.

(From our own Correspondents.)

*Penmaenmawr Isolation Hospital.*

North Wales is not at all well provided with isolation hospital accommodation, though the Llandudno and Colwyn district councils have set a good example in this direction. The Urban District Council of Penmaenmawr, where there is a population of 3500 persons, has decided to erect a hospital on the mountain side at a cost of about £4000. There will be a separate administration block and two pavilions with accommodation for 12 patients, and two diseases can be treated at the same time.

*Society of Medical Officers of Health.*

At the meeting of the West of England and South Wales Branch of the Incorporated Society of Medical Officers of Health held at Bath on Jan. 22nd, Dr. W. H. Symons (medical officer of health of Bath) opened a discussion upon the Distribution of Phthisis. He stated that the death-rate from phthisis in Bath had fallen from 2·5 per 1000 in 1867 to 1·1 in 1900 and that while the death-rate of Bath among females had always been lower than that of England and Wales, among males the former had always exceeded that of the rest of the country. The advantages of sanitary surroundings were strikingly shown in a selected locality of Bath where a private improvement scheme was carried out nearly 20 years ago. During the 10 years prior to the demolition of the insanitary dwellings there were 84 deaths from consumption; in the next decade, when the improvements were being made, there were 31 deaths; and in the last 10 years there were only five deaths. When commenting upon the statement that the highest death-rate from phthisis among the counties of England and Wales was in Cardiganshire and the lowest in Monmouthshire and Rutland Mr. J. Tubb-Thomas (medical officer of health of Wiltshire and formerly of Rutland) expressed the opinion that the low mortality in Rutland was in great measure accounted for by the excellent sanitary condition of the county, and he said that phthisis only prevailed in those portions of the county where insanitary surroundings existed.

*Small-pox in Bristol.*

Bristol has been singularly free from small-pox during the past few months, although it is open to attack either through land-borne or sea-borne travellers. There was one case in December, 1901, the patient in question being discharged from the hospital ship in the middle of January, and a man who had lately come from Boston, Massachusetts, died from the disease on Jan. 7th, having only arrived in Bristol on the previous day. The isolation accommodation is quite insufficient for the needs of the city. The Novers Hill Hospital, which may be used for small-pox, is habitually full with convalescent scarlet fever patients from the Ham Green Hospital where extended accommodation is urgently required.

*Notification of Pulmonary Tuberculosis.*

The Llangyfelach Rural District Council has decided to invite notifications of cases of pulmonary tuberculosis occurring within the Llandilo Talybont portion of their district.

*Inquests in Public-houses.*

The standing joint committee for the county of Brecknock has given instructions that whenever practicable coroners' inquests shall be held elsewhere than in public-houses.

*New Isolation Hospital in Somersetshire.*

It is proposed to establish a joint isolation hospital for the borough of Chard, the urban districts of Crewkerne and Ilminster, and the rural district of Chard. The total population of these four districts is nearly 25,000.

*Small-pox near Swansea.*

Two more cases of small-pox have occurred which are traceable to the patient who travelled from London to South Wales at Christmas, making 10 cases altogether. One patient is in the Swansea Hospital and the other is at his home in Ystalyfera.

*New Home for Inebriates.*

The Carmarthenshire County Council has decided to take steps to establish a home for inebriates in conjunction with the counties of Cardigan and Pembroke. At the last census and thus are interested in the continuance of the conflict, came to the assistance of the members. The system adopted was as follows. The compound medicines, the sale of which is by law exclusively reserved to the licensed pharmacies, were either purchased from them by the proprietors of the unlicensed drug-stores and the price afterwards recovered from the clubs, or money was advanced to the members who were thus enabled to buy what they wanted from the licensed pharmacies. The inconveniences are, of course, very great for all parties concerned, whether clubs, pharmacies, or medical officers. Attempts which have been made on several occasions to settle the question have hitherto been without success. The pharmacies are now willing to allow a discount, but they require that the club members shall cease to purchase from the unlicensed druggists—a stipulation which has caused negotiations to fail, because the clubs decline to forsake the unlicensed druggists who are their most useful allies in the campaign. It remains to be seen whether the Government, which has the control of pharmacies as well as of sick clubs, will interfere. There is at present but little hope of a voluntary agreement being arrived at.

### *"Christian Science" in Berlin.*

The craze which has for some time been known as "Christian Science" in America and England has at length been imported into Germany. Several Berlin periodicals have announced that the apostles of Mrs. Eddy have arrived in Berlin and that they have already a fine practice, especially among the classes who, from want of knowledge of the elementary principles of natural science, have been, and will continue to be, victims of any clever impostor. It is stated that the Christian Science consultation rooms are frequented by the upper classes, the nobility included, and that at certain hours of the day many carriages may be seen waiting at the doors. The subject will be discussed in the municipal council because the believers in Christian Science use for their evening meetings the great hall of a municipal college. One of the members of the council has therefore asked the mayor and magistrates of Berlin whether they will take measures to prevent municipal premises from being used for such a purpose. The medical press is also devoting some space to the subject, and in the *Deutsche Medicinische Wochenschrift* Dr. Sobotta has drawn attention to the mischief worked by Eddyism in England and America, where the number of "the faithful" is now rapidly decreasing. Meanwhile orders have been given by the mayor that municipal buildings are no longer to be used for the holding of "Christian Science" meetings.

### *Rats and the Bacillus of Danysz.*

Dr. Abel, a medical officer of the city of Hamburg, has published in the *Deutsche Medicinische Wochenschrift* an account of his attempts to destroy rats by means of the bacillus of Danysz Some years ago Dr. Danysz of Paris discovered a bacillus which has been called the bacillus typhi murium (Danysz) It is strongly pathogenic for rats and, according to its discoverer, may be used instead of other poisons to kill these animals Dr. Abel obtained cultures of it from Dr. Danysz himself, and administered portions of them in the laboratory to grey and white rats, the result being that the animals died in from six to 12 days. The necropsy showed enlargement of the spleen, swelling of Peyer's glands, partial necrosis of the liver, and the presence of the bacilli in all the organs. Other rats were then fed with the livers and spleens of the first series with an equally lethal effect. In this way the toxic action could be continued through six generations. The method was then practically used to destroy rats in some localities where they happened to be abundant, pieces of bread treated with cultures of the bacilli being laid down. The localities selected were the premises of the municipal institution for disinfecting, a large transatlantic steamer, stables accommodating from 30 to 40 horses, the depôt of the customhouse, and another large building used for storage purposes. The results presented considerable variety, being most effective in the stables where the rats completely disappeared for one and three-quarter years In the steamer and in the stores there was no apparent effect, whilst in the customhouse and in the municipal establishment the number of rats was reported to have considerably decreased. It was remarkable that very few dead bodies of rats were found, even in the instances in which the most effect seemed to be produced. Dr. Abel considered that the method, though not invariably efficacious, was worthy of a trial, and that it might be valuable when plague was imminent and when rats had to be destroyed as much as possible.

Jan. 27th.

# Obituary.

## PROFESSOR HUGO VON ZIEMSSEN.

OUR Berlin correspondent writes:—Dr. Hugo von Ziemssen, professor of clinical medicine in Munich University and one of the most popular men in the city, died there on Jan. 20th. He was born in Greifswald, Pomerania, in 1829, and studied medicine at the universities of Würzburg, of Berlin, and of his native town, where he graduated in 1854 In 1856 he was recognised as *privat-docent* after having been an assistant at the Greifswald Medical Clinic In 1863 he was appointed ordinary professor at Erlangen University and in 1874 at Munich University, where he remained till his death. His works are very numerous. When still in Greifswald he published essays on complications of measles, on diabetes, and on electricity in medicine. Afterwards at Erlangen and Munich he studied the cold water treatment of enteric fever, gastric ulcer, Bright's disease, &c. Considerations of space prevent an enumeration of all his works, as there were, in fact, few subjects connected with clinical medicine on which he did not write. He was also the editor of two great encyclopædias—the "Handbook of Special Pathology and Therapy," and the "Handbook of General Therapy"—consisting of articles written by the leading clinical teachers of Germany, and in which the chapters on croup, on epidemic meningitis, and on the diseases of the œsophagus were contributed by himself. He also, in association with his friend the late Professor von Pettenkofer, edited a "Handbook of Hygiene." Both of them did much to improve the health of the towns where they lived—Professor von Ziemssen especially by reorganising the Munich General Hospital and by founding homes for convalescents and for consumptive patients. Engrossed as he was in his literary work, in his enormous practice as a consultant, and in his duties as clinical lecturer he was nevertheless not unmindful of the general interests of the medical profession and on various occasions he took part in the meetings of the German Practitioners' Association.

## METCALFE JOHNSON, M.R.C.S. ENG., L.S.A., J.P.,

SURGEON-MAJOR, MILITIA MEDICAL DEPARTMENT.

THE death of Mr. Metcalfe Johnson, which occurred on Jan. 18th, has removed the oldest member of the profession in Lancaster, who, although nearly 79 years of age, possessed a wonderfully bright intellect and genial humour. He was the son of a medical man and was born at Wisbech in 1823. Writing of his father he said: "He was an ardent student of dietetics, and I recollect a corn-mill which he had erected in his back-kitchen, where he ground wheat by a large hand-mill and had biscuits made from the proceeds which were so hard as to require a hammer to break them. On these and water he was living at the time of his death—perhaps not the best diet for a man attending cholera patients. He was a daring inventor and at the time of his death—which took place in 1836 from Asiatic cholera—he owned a piggery of over 1000 pigs from which he expected to supply salt pork to the navy by injecting into the arteries or veins of the animals strong acetic acid."

In 1838 young Johnson was apprenticed to Dr. Muriel of Ely and he went to Guy's Hospital in 1843. Amongst his fellow-students was Sir Samuel Wilks and the friendship thus begun lasted for the rest of his life. In 1845 he was given a free dressership, his house surgeon being Mr. Cock. He became qualified in 1846 as M.R.C.S. Eng. and L.S.A., and at once bought a practice in Lancaster where he settled down. Shortly afterwards he was appointed medical officer to the workhouse and later police surgeon. In 1852 he was given a commission as surgeon to the 1st Royal Lancashire Militia, subsequently promoted to be surgeon-major, and then put in medical charge of the regular troops stationed at the depôt. In Lancaster he formed the acquaintance of Richard Owen and they were on terms of intimate friendship for many years He was at one time a prolific writer and articles by him appeared in THE LANCET entitled "Borderland, a Study of the Relation of a case of Pernicious Anæmia treated successfully by Anti-streptococcic Serum. Interesting discussions followed the reading of these communications.

Jan. 28th.

## PARIS.

(FROM OUR OWN CORRESPONDENT.)

### *Illness of Professor Duclaux.*

PROFESSOR DUCLAUX, the Director of the Pasteur Institute, has just been struck down by an attack of hemiplegia. In the middle of a lecture he experienced a sensation of vertigo which gradually increased in severity. He sat down and, feeling himself getting worse little by little, wrote on a piece of paper the word "hemiplegia." He then lost consciousness and was taken to his home where he lay for many days in a very critical condition. At present, however, he seems to be on the high road to recovery. It is a curious coincidence that Pasteur himself fell a victim to the same malady when he was in the midst of his work on the diseases of silkworms. The research was finished by his pupils. For many months Pasteur was ill, and for the remainder of his life he was partially paralysed on the right side and could only write with difficulty. However, he lived for 25 years longer, dying eventually from bronchopneumonia.

### *Milk Adulteration in Paris.*

The daily press has just undertaken an active campaign against the custom of milk adulteration which has reached enormous proportions, and the various reporters of the different journals have brought to light some extraordinary facts which have created great excitement. Milk is adulterated everywhere—at the farm, by the wholesale agent who buys up milk from the different farms, then by the milkmen who take the cans from the railway-stations to the various retail dealers, and then by the retail dealers themselves in their shops. The most common method of adulteration is that of adding water, and, as the water comes from anywhere, say, from dirty streams or from ordinary public standpipes, it is not astonishing that milk has become the vehicle for the dispersion of a number of infectious diseases. During the night the reporters have seen milkmen stopping their vans at a public standpipe and drawing water from this and pouring it into the milk-can, while the vans carry various empty cans which can be filled up with the milk which is thus increased in bulk. Seals of wax or of lead put on the cans at the point of departure are but an illusory protection, for the milkmen have made false ones copied from the real ones, which they put on. Better still, from their point of view, so as to escape the surveillance exercised by policemen who look after every milk-van which stops at night near a public standpipe, the milkmen have organised a sort of syndicate, and have confederates posted at the corners of dark streets or in gateways. These confederates, as the van drives through, throw in receptacles full of water prepared beforehand which is mixed with the milk while the van continues its journey. The Municipal Chemical Laboratory, which looks after the analyses of food products consumed in Paris, has started an organisation of its own to supervise these frauds. Every night various chemists betake themselves to the railway-stations at Paris, board the railway vans on the arrival of the trains, and seize a certain number of samples either directly from the train itself or from the milk-vans which have already been loaded up. These samples are taken to the laboratory and analysed and legal proceedings are at once taken against the senders of any milk which is adulterated; but, as it is not possible for them to go to every station at once, the chemists and their assistants start every night from the Prefecture of Police and go to some particular station pointed out by the head of the laboratory. However, the syndicate of milkmen possesses a large number of accomplices who wait before the door of the Prefecture of Police, and as soon as the chemists start in their carriage, these agents rush off on bicycles to the station to be visited, and arriving before the chemists, warn the milkmen, so that the chemists find nothing but samples which are quite irreproachable. The authorities of the Municipal Laboratory are now going on another tack, and their chemists will start each evening at midnight from their own houses for a destination which has been pointed out to them by telephone at the moment of starting. But, despite every precaution, the number of samples found to be defective is enormous, and the reasons for this are many. The chief of these is the very inadequate penalties inflicted by the courts. Out of 700 samples of milk declared to be adulterated by the Municipal Laboratory the law took no note of 500, and those persons who were found guilty were sentenced to altogether insignificant penalties, such as a paltry fine of some 10 francs. The milkmen are well organised, and when any of their number is fined a whip round is made to pay the money. If after they have been fined several times they are sentenced to two or three days in prison the syndicate pays their wages during the time that they are in prison. When the prosecuted adulterator happens to be a large commercial firm the sentence is worked out by a manager with an annual salary whose sole business it is to go to prison on behalf of the incriminated society. He has a certain sum of money allotted to him during his time in prison and leads a comfortable existence which many poor people envy. When adulterators are not found guilty by the court it is generally on account of political influences, for the milkmen take care, with a view to protection, to act as electoral agents. Finally, the courts take no notice of frauds which are not exceedingly serious, and when, as a rule, the amount of adulteration is not quite double that which is allowed by the law. "Fraud" consists in the addition of water and in the existence of less than 38 grammes of fat to the litre; but the court, as a rule, takes no notice of any deficiency of fat until there is less fat than 20 to 25 grammes a litre, so that when the Municipal Laboratory says that any milk contains a deficiency of fat between 38 and 25 grammes per litre, its work is quite useless. The estimation of salts which used to be employed is quite insufficient, for the adulterators used to add not water but skimmed milk, and the estimation of fat itself is in no way a real check, for the adulterators took to adding margarine to the milk so as to bring up the proportion of fat. One paper, the *Echo de Paris*, has organised a competition with a view of discovering a simple apparatus by which any member of the public can test the milk supplied to him, for at present the Municipal Laboratory takes no less than 24 hours to report on a given sample. This competition is open up to May 15th to any French or foreign inventor and the prize of 5000 francs will be allotted by a jury of chemists, hygienists, and eminent medical men. The committee is already appointed and the president is Professor Brouardel.

Jan. 28th.

## BERLIN.

(FROM OUR OWN CORRESPONDENT.)

### *The Accident to Professor Virchow.*

PROFESSOR VIRCHOW'S condition, which immediately after his accident was reported to be quite satisfactory, is apparently now not so good as might be desired. According to the *Berliner Klinische Wochenschrift* the subcutaneous hæmorrhage is nearly absorbed and callus has begun to develop; the state of the circulation and respiration is also said to be normal, but the patient does not sleep well. The surgeons in attendance have recommended him to abstain from work of any kind and from receiving visitors.

### *Pharmaceutical Chemists and Sick Clubs.*

The conflict between the pharmacies and the united sick clubs of Berlin to which allusion has already been made in THE LANCET of May 18th, 1901, p. 1435, has not yet come to an end. The immediate cause of the dispute was a financial one, the clubs requiring a discount of 10 per cent. to be granted to them, but the real causes, as I have explained in the passage above referred to, are more deeply seated and depend on the somewhat obsolete laws relative to the pharmaceutical profession. Owing to the strong organisation of the pharmaceutical chemists it was generally believed that the boycott of the majority of pharmacies would be a failure. On the other hand, the organisation of the clubs and the *esprit de corps* of the working population to which the club members exclusively belong have been strong enough to maintain the boycott and even to extend it. For instance, the pharmacists some months ago discontinued the granting of credit to club members, so that they (the members) had to pay for their medicines at once. As the majority of the members were not always provided with sufficient ready money the pharmaceutical chemists hoped by this means to coerce the clubs, but the proprietors of the unlicensed drug-stores, who in this controversy hold the position of "tertius gaudens," Mr. Taylor The annual report showed that during 1901 there were 3039 in-patients admitted, of whom 2645 were discharged as improved and only 258 as being no better Dr R O G Bennet and Mr Arthur Shipton, the former of whom has had 43 years', and the latter 24 years', service on the honorary medical staff, have resigned and have been appointed honorary consultants The honorary medical staff has been increased by the election of Dr John Braithwaite, Mr T B Flint, Dr George Lorimer, and Mr Herbert Shipton The Earl of Derby and Mr Frank Drewry were unanimously elected respectively chairman and vice-chairman of the committee of management

NEW SMALL-POX HOSPITAL—At the meeting of the Plymouth (Devon) Rural District Council held on Jan 24th it was decided to erect a small pox hospital to contain 12 beds The structure is to be of corrugated iron and the estimated cost is about £1000

DR JOHN SHIVES was called to the Bar at the Middle Temple on Jan 27th

# Parliamentary Intelligence.

## NOTES ON CURRENT TOPICS

### *The Shop Hours Question*

A BILL dealing with this subject framed on the lines of the report of the House of Lords Committee of last session, has been introduced in the House of Commons by Sir Charles Dilke. Instead of leaving the initiative to a two thirds majority of the shopkeepers, as was proposed by Lord Avebury's Bill, this measure simply confers on local authorities the power to fix hours of closing for each day of the week. Provision is, of course made for certain special classes of shops, such, for instance, as shops for the sale of drugs, and for public houses There is a clause which proposes to enact that no child under 14 years of age shall be employed in a shop and another that no person shall be employed in a shop for more than 60 hours including meal times, in any one week Several sanitary clauses appear in the Bill One of these says that every shop shall be provided with sufficient and suitable accommodation in the way of sanitary conveniences, having regard to the number and sex of the persons employed

### *Proposed Amendment of the Vaccination Acts*

Mr BROADHURST one of the Members for Leicester, has introduced a Bill to amend the Vaccination Acts

### *The Midwives Bill*

Mr GRIFFITH BOSCAWEN has given notice that when the second reading of the Midwives Bill is moved he will move the rejection of the measure Since the introduction of this Bill many petitions in its favour have been presented in the House of Commons

### *Laundries and Factory Legislation*

When the Factory and Workshop Bill of last session was presented to Parliament by the Government it contained a clause bringing laundries within the scope of this class of legislation Objection, however, was taken to the proposed treatment of conventual institutions and rather than risk the passage of the measure the Government withdrew the whole clause Mr RITCHIE intimating that in another session he would endeavour again to deal with the subject Questioned on the matter at a recent sitting of the House of Lords the Prime Minister said that he hoped that the Government might find an opportunity for legislation during the present session, but he gave nothing in the nature of a definite pledge

### *The Case of Dr Rendall of Great Yarmouth*

On Monday, Feb 3rd, the Home Secretary will be asked by Dr Macnamara whether his attention has been called to the case before the General Medical Council of Dr R Rendall of Great Yarmouth, and whether he will take the opinion of the Law Officers of the Crown as to the legality of the proceedings

## HOUSE OF COMMONS

### THURSDAY JAN 23RD.

### *The Supply of Lymph.*

Mr BARTLEY asked the President of the Local Government Board whether private medical practitioners were now able to purchase Government lymph for those who were prepared to pay for vaccination or whether they had to obtain it as they could, chiefly from abroad—Mr LONG replied: The statutory duty of the Local Government Board as regards the supply of glycerinated calf lymph is limited to supplying it to public vaccinators for purposes of primary vaccination only, and their lymph establishment was formed with this object Arrangements were, however made to extend the supply so as to enable lymph to be provided for use by these officers in revaccinations and a very large amount has been supplied for this purpose. The organisation of the establishment is not such as would enable me to furnish lymph to private medical practitioners.—Mr BARTLEY: May I ask the right hon gentleman whether, in view of the present state of things, this lymph could not be supplied to private practitioners all over the country so that there might be a guarantee that the lymph used is really efficient?—Mr LONG: It would be a very serious thing to suggest that lymph should be supplied gratis—Mr BARTLEY: I did not mean gratis—Mr. LONG: Well or sold to private practitioners There is, however, no necessity for it, because I have ascertained that there is ample glycerinated lymph to be obtained outside that which is supplied by the Local Government Board—Mr BARTLEY Is it the fact that it nearly all comes from abroad?—Mr LONG Some of it no doubt, comes from Paris, but there are other sources of supply and I have no doubt that there is an abundant supply to be obtained in the market at the present time—Mr AMBROSE: Is it not the case that much of this lymph is inefficient?—Mr LONG: I do not think that that can be said. I have reason to believe that it is most efficient Perhaps the Local Government Board lymph is stronger, but I do not think that the other lymph is less efficient

### *The Small pox Epidemic*

Mr BARTLEY asked the President of the Local Government Board whether he could state what progress had been made, especially in London, in vaccination and revaccination during the present epidemic of small pox—Mr LONG replied I am not at present in a position to give any estimate of the extra number of vaccinations and revaccinations performed during the present epidemic. The returns as to the vaccination of infants born in 1901 and as to revaccinations by public vaccinators will be received in due course but there is no record of revaccinations performed by private medical practitioners I have, however, reason to believe that there have been a very large number of vaccinations in the last few months in London and the neighbourhood Since the beginning of September I have caused lymph to be issued to public vaccinators for 480 000 vaccinations—that is, about [illegible]00 000 in excess of the normal supply for this period A very considerable portion of the excess has been issued to the metropolis

### *Lead-Poisoning*

Mr COGHILL asked the Home Secretary (1) whether he was aware that, on Dec 19th a coroner's jury found that Alfred Jagger, of No 4, Back Williamson Buildings, Dewsbury road, Leeds, a painter's labourer, died from the effects of lead poisoning, and (2) whether, in view of the cases of lead poisoning occurring amongst house painters, he proposed this session to introduce any special legislation for their prevention—Mr RITCHIE replied that the facts were as stated in the first paragraph of the question, but the man was not a house painter as his hon friend would seem to imply He was one of the workmen employed by a firm of manufacturers who were now, at the suggestion of the factory inspector, introducing improvements in their works As regards the second paragraph he was of the same opinion as on March 5th last, when he said that he did not see his way to introducing the legislation suggested

### FRIDAY, JAN 24TH

### *Treatment of an Irish Harvester*

Mr. T M HEALY asked the Home Secretary if his attention had been called to the verdict of the coroner's jury in Dublin on Nov. 20th, in the case of a man named Moore who returning from England to his home near Castlebar was removed in a dying condition to Jervis street Hospital, Dublin on the arrival of the boat from Holyhead, whether he was aware that the guard Mr Keogh, swore that Moore was examined at Holyhead station by a doctor and refused admission to the Holyhead Hospital and was brought across in the *Cambria*, whether he would ascertain who was responsible for refusing this man admission to Holyhead Hospital and compelling him while dangerously ill to undertake a rough sea journey, and whether he could state whether this hospital was a voluntary or a rate aided institution—Mr RITCHIE replied I am not aware of the verdict referred to or of the evidence given at the inquest but from inquiries which I have made I find that Moore who was one of about [illegible]00 harvesters who arrived at Holyhead on the same morning, was not refused admission to the Holyhead Hospital That hospital is supported by voluntary contributions If Moore had been taken there I am informed that he would have been admitted As regards the sea journey, I understand that after remaining at the station and being attended by two medical men Moore, under medical advice, resumed his journey in the afternoon a telegram being sent to Dublin for an ambulance to be ready on his arrival

### *The Supply of Lymph*

Another question on the subject of the supply of lymph was addressed to Mr LONG at this sitting and the right hon gentleman repeated his reply that the organisation of the establishment of the Local Government Board was not such as to enable the department to supply lymph to private medical practitioners—Mr BARTLEY asked whether it was not possible to enlarge the establishment—Mr LONG replied that it had been very nearly doubled within the last few weeks and it was impossible at present to supply all the lymph required for primary vaccinations To supply private medical practitioners would task the resources of the establishment beyond its powers. They were doing everything that they possibly could, but if they could add to the supply they would do so

### *Researches on Cancer.*

Mr ARTHUR LEE asked the First Lord of the Treasury whether he would consider the desirability of advising the appointment of a royal commission on cancer on similar lines to that which had been appointed to inquire into tuberculosis—Dr FARQUHARSON asked the First Lord of the Treasury whether his attention had been directed to a scheme backed by the leaders of the medical profession for organised research in cancer and whether he would wait till this was formulated before committing himself to the costly and dilatory process of a royal commission.—Mr BALFOUR replied: In answer to the last question I have to say that my attention has been called to the passage in a newspaper to which the hon member refers I have no other information as to the progress which this interesting experiment in organisation is making. I am sure I wish it all success. As regards the other question I entirely agree with my hon friend as to the great importance of this subject of medical investigation, but I confess that my instinct is not in favour of attempting to deal with it by means of a royal commission I do not think that the cases of cancer and tuberculosis are at all parallel I will not develop my reasons for holding that opinion but I think that there is no parallel and I also think that the number of great scientific discoveries which have been made by royal commissions has been very limited, and that it would probably be better to leave this subject in the hands of the medical profession in all countries whose attention is, and has been for some of Pathology to Pauperism and Crime," and "Sane or Insane"; and in the *Medical Times and Gazette* he published papers on "Hedonism" and "Cerebral and Ganglionic Disorders of Mentation." He also did much good work with the microscope, his contributions being published in the Transactions of the Royal Microscopical Society. In 1872 he published a little book on invalid cookery which was favourably reviewed in THE LANCET of Sept 28th, 1872, p. 450.

He held advanced views on sanitation and on the compulsory notification and isolation of infectious diseases. When arguing in favour of treating habitual drunkards as lunatics he uses these forcible words: "The one great obstacle to the consideration of this subject may be said to be that bugbear of society known under the misnomer 'the liberty of the subject.' In what does it consist? Liberty to rob your neighbour's pocket by poor-rates; to destroy your family's peace of mind by eccentricity; to injure the public health by engendering syphilis. scrofula, rickets, and consumption; to cultivate epidemic disease in filthy and inhuman hovels; and to shorten the lives of the State's tax-producing subjects by dirt, drink, and debauchery."

Metcalfe Johnson was one of the old school—a gentleman by birth, by education, by instincts, always courteous, always kindly, and of conspicuous honesty and purity of purpose and life.

### JOHN MANLEY, J.P., M.R.C.S. ENG., L.S.A.

ON Jan. 21st, after a cerebral seizure, Mr. John Manley died peacefully at his home, the Highfields, West Bromwich, in the seventy-seventh year of his age. Mr. Manley was an active member of the social and municipal life of the town in which he lived and by his strong personality and force of character he exercised an influence upon all with whom he was associated. Born at Tortola in the West Indies, the son of a Wesleyan missionary, on the death of his parents he was brought to England to be educated for the medical profession. He became a Licentiate of the Apothecaries' Society in 1853 and a Member of the Royal College of Surgeons of England in 1864, and entered into partnership with Dr. Abercrombie at West Bromwich, shortly afterwards acquiring the practice. Destined to figure prominently in public matters he commenced by becoming a member of the old Board of Commissioners, an office which he resigned to become medical officer of health. This position he filled with tact and vigour for a term of 17 years. As one of the founders of the Free Library he displayed a keen interest in the duties connected with that institution, at the time of his death being chairman of the committee. He was also one of the council of the Queen's College, and one of the representative governors of the University of Birmingham. Public life had as many attractions for him as professional prominence, although he was President of the Midland Medical Society and a member of the board of management of the district hospital. He was made a Justice of the Peace for the borough, his decisions and opinions being highly valued and respected. Mr. Manley married a daughter of the Rev. Benjamin Wood, who died in 1888, leaving one son, Dr. J. H. H. Manley, the present medical officer of health of West Bromwich. At Mr. Manley's request his remains were cremated at Manchester and the ashes interred in his wife's grave at West Bromwich Cemetery. As a man of wide culture and one who had strong convictions on matters of varied interests Mr. Manley will be long remembered and his memory regarded with esteem.

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UNIVERSITY OF CAMBRIDGE.—Mr. W. E. Johnson, M.A., of King's College, has been appointed the first Sidgwick Lecturer in Moral Science under the new foundation in memory of the late Knightbridge Professor.—The Balfour Studentship, value £200 a year, in Animal Morphology, will be vacant at the end of the present term. Candidates are to apply to Mr. J W. Clark, secretary to the managers, not later than Feb 28th.—In recognition of his services to the University the degree of M.A. *honoris causâ* has been conferred on Dr. Walter Ernest Dixon, Assistant to the Downing Professor of Medicine.—Dr. A. Hill, Master of Downing College, has been appointed by the Council of the Senate a representative member of Girton College; and Dr. W. H. R. Rivers, of St. John's College, an additional member of the Special Board for Moral Science.

## Medical News.

VACCINATION EXEMPTION CERTIFICATES.—At the Exeter Police-court on Jan. 23rd two applications for vaccination exemption certificates were refused.

THE Council of King's College, London, have elected the Rev. T. B. J. Parker, M.A., Worcester College, Oxford, and formerly Canon of Rockhampton, Queensland, to the office of Chaplain of King's College Hospital.

THE BRITISH MEDICAL BENEVOLENT FUND.—In accordance with the will of the late Mr. Robert Webb Watkins, F.R C.S. Eng., of Towcester, his executors have paid a legacy of £100, duty free, to the British Medical Benevolent Fund.

THE SEWAGE OF TROWBRIDGE.—The Local Government inspector (Mr. R. H. Bicknell) held an inquiry on Jan. 24th into the application of the Trowbridge (Wiltshire) Urban District Council to borrow £35,960 for the purposes of sewage and sewage disposal.

AT the meeting of the Okehampton Borough Council held on Jan. 23rd it was reported that the Charity Commissioners would favourably consider an application for permission to apply the income of £80 per annum, derived from non-ecclesiastical charities, for the maintenance of a cottage hospital, provided that there was a prospect of a hospital being founded on a sound basis. The council decided to take steps to secure a suitable site for the proposed hospital.

THE seventh annual dinner of the Mirfield and District Medico-Chirurgical Society was held at the Masonic Hall, Mirfield, on Jan. 31st, Dr. John Stewart, the President, being in the chair. Covers were laid for 42. Amongst those present were Professor W. Japp Sinclair, Mr. B. G. A. Moynihan, Dr. E. O. Croft, Dr. A. Bronner, Mr. T. B. Fairclough, Dr. A. Anderson, Mr. T. W. Sproulle, Dr. L. J. Milne (honorary secretary), Dr. W. Brander, Mr. C. Clay, Mr. C. A. Mitchell, Mr. T. Oates Halliwell, Mr. P. MacGregor, Mr. G. W. K. Crosland, Mr. Bruzaud, Dr. T. A. Green, Mr. J. A. Erskine Stuart, Dr. N. H. Pike, Mr. R. H. Shaw, Dr. G. de J. Patterson, Mr. A. T. Griffiths, Mr. W. Shaw, Mr. G. D. Crowther, and Dr. J. F. Hodgson. The dinner was preceded by an address by Professor Sinclair on "Early Abortion in General Medical Practice." The next meeting will be held at Dewsbury Infirmary on Feb. 12th at 8.30 P.M.

RECEPTION AT THE BOVRIL FACTORIES.—In response to the invitation of the Bovril Company a very considerable number of medical men attended an inspection of the company's new factories on Jan. 23rd. The visitors were received by Viscount Duncannon, the chairman. The many processes concerned in the production of bovril were watched each in its own department with great interest. Demonstrations were also given of the way in which the albumin and the fibrin of the meat are retained in the extract. Not the least interesting section of the demonstration was that relating to the production of various rations and specialities supplied by the Bovril Company to the army, to the navy, and to exploring expeditions. Some interesting statistics were supplied bearing upon the enormous quantity of extract made and the amount of meat required. The machinery for the purpose is of an ingenious description and is specially designed in order that bovril may not be touched by the hand at any stage in the manufacture. The new premises are well lighted, well ventilated, and commodious. A large space on the roof is reserved for the employés for recreation purposes.

DEVONSHIRE HOSPITAL, BUXTON.—The annual meeting of the committee of management of the Devonshire Hospital, Buxton, Derbyshire, was held at the hospital on Jan. 11th, the Duke of Devonshire presiding. Before the ordinary business of the meeting commenced the Duke of Devonshire, speaking in the name of the committee, presented Mr. Joseph Taylor, the late secretary of the hospital, with a silver inkstand. Mr. Taylor, who had filled the office of secretary for 36 years and had in this capacity rendered most important services to the institution, was then elected a member of the committee of management. At a later stage of the business Mr. William Stevenson was elected secretary in succession to

**County Asylum**, Chester.—Third Assistant Medical Officer, unmarried. Salary £160 per annum, with board, lodging, and washing.

**County Asylum**, Rainhill, near Liverpool.—Assistant Medical Officer, unmarried. Salary £150 per annum, rising to £200, with apartments, board, attendance, and washing.

**District Infirmary**, Ashton-under-Lyne.—House Surgeon. Salary £120 a year and board and lodging.

**Durham County Asylum.**—Junior Assistant Medical Officer. Salary £140, rising to £160, with board, laundry, and attendance.

**Easington Union and Rural District Council**, Castle Eden, Durham.—Medical Officer, &c. Salary £150 per annum.

**Essex and Colchester Hospital**, Colchester.—Assistant House Surgeon (unmarried). Salary at rate of £50 per annum, with board, lodging, and washing

**Fisherton Asylum**, Salisbury.—Assistant Medical Officer. Salary £150 per annum, with board lodging, and washing

**General Hospital**, Wolverhampton.—Assistant House Physician, also Assistant House Surgeon, both for six months, with honorarium at rate of £75 per annum, and board, lodging, and washing.

**Hastings, St. Leonards, and East Sussex Hospital.**—House Surgeon, unmarried. Salary £75 per annum, with residence, board, and washing.

**Kent County Asylum**, Barming Heath, Maidstone.—Fourth Assistant Medical Officer and Pathologist, unmarried. Salary £175 per annum, rising to £200, with quarters attendance, &c.

**Kent and Canterbury Hospital.**—House Surgeon, unmarried. Salary £100 a year, with board and lodging.

**Lancashire County Asylum** Winwick, Newton le-Willows.—Assistant Medical Officer, unmarried Salary £150 per annum, rising to £200, with apartments, board, attendance, and washing.

**Lincoln County Hospital.**—Junior Male House Surgeon for six months, eligible for re-election Honorarium of £25 for each period of six months, with board, residence, and washing.

**New Sanatorium for Phthisical Patients of the Poorer Classes**, Blue Mountains, New South Wales.—Resident Medical Officer, unmarried. Salary £300 per annum, with board and residence.

**North Staffordshire Infirmary and Eye Hospital**, Hartshill, Stoke-upon-Trent.—Assistant House Surgeon for six months. Board, apartments, and washing, and at least £25 as honorarium.

**Paddington Green Children's Hospital**, London, W.—Surgeon to the *Throat and Ear Department.*

**Poplar Hospital for Accidents**, Poplar, E.—Resident House Surgeon. Salary £135 per annum, with board and residence.

**Queen Adelaide's Dispensary**, Pollard row, Bethnal Green-road, E.—Resident Medical Officer, unmarried. Salary £100 per annum, with apartments, coal, gas, and attendance.

**Radcliffe Infirmary**, Oxford.—House Physician for six months. Salary at rate of £80 per annum, with board and lodging.

**Royal Dental Hospital of London**, Leicester-square.—Lecturer on Materia Medica in Relation to Dental Surgery.

**Royal Halifax Infirmary.**—House Surgeon, unmarried. Salary £120 *per annum, with residence, board, and washing.*

**Royal Hospital for Diseases of the Chest**, City-road, E C.—House Physician for six months. Salary at rate of £60 per annum, with apartments, board, and washing.

**Royal National Hospital for Consumption and Diseases of the Chest**, Ventnor.—Assistant Resident Medical Officer, unmarried. Salary £100 per annum, with board and lodging.

**Royal Southern Hospital**, Liverpool.—Junior House Surgeon. Salary 63 guineas per annum.

**St. George's Retreat**, Burgess-hill, Sussex.—Resident Assistant.

**Seamen's Hospital Society** (Branch Hospital, Royal Victoria and *Albert Docks, E*).—House Surgeon Salary £50 per annum, with board and residence.

**Suffolk County Asylum.**—Second Assistant Medical Officer. Salary £130 per annum, rising to £150, with board, lodging, laundry, and attendance.

**Victoria Children's Hospital**, Park-street, Hull.—Lady House Surgeon. Salary £50 per annum, with board and laundry. Also a Lady Assistant House Surgeon Salary £40 per annum, with board and laundry

**West Bromwich District Hospital.**—Resident Junior House Surgeon. Salary £50 per annum, with board, lodging, washing, and attendance.

# Births, Marriages, and Deaths.

## BIRTHS.

**Anderson.**—On Jan. 25th, at Faversham, Kent, the wife of Charles Macdonell Anderson, M.D. Edin., of a daughter.

**Copeman.**—On Jan. 21st, at the Parade, Cowes, I.W., *the wife of* Alfred Heathcote Copeman, M A., M.D. Dub., M.R.C.S., L.R.C.P. Lond., of a daughter.

## MARRIAGES.

**Bidwell—Fichardt.**—On Jan 2nd, at the Cathedral, Bloemfontein, South Africa, Charles Hugh Bidwell, M.R.C.S., L.R.C.P. Lond., to Maude Geraldine, daughter of the late G. A. Fichardt.

**Davies—Scott.**—On Jan. 22nd at the Church of St. Michael, Teignmouth, S Devon, S H Battray Davies, M.R.C.S., L.R.C.P. Lond., to Mary Douglas, daughter of Lieutenant Colonel Scott.

## DEATHS.

**Nelson.**—On Dec. 25th, at 15, Bootham terrace, York, George Dawson Nelson, M.D., M.R.C.S.E., L.S.A. formerly of Bridlington Quay, aged 79 years

**Stockton.**—On Jan. 25th, at King's Sutton, near Banbury, Arnold Stockton, M.R.C.S., L.R.C.P. Lond., aged 29.

**Weir.**—On Jan. 25th, at Guy's Hospital, from an accident, Arthur Nesham Weir, F.R.C.S., aged 32.

*N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

# Notes, Short Comments, and Answers to Correspondents.

## SCARLET FEVER AT A LAUNDRY.

Non compliance with isolation laws at any time, and more so just now when the greatest precautions are being taken to prevent the spread of small-pox and other diseases, is an infringement of the Public Health Act deserving severe punishment. A case in point came before the Hailsham Petty Sessions on Jan. 22nd, when a man was summoned at the instance of His Majesty's inspector of factories for "unlawfully causing or allowing wearing apparel *to be cleaned in a dwelling house occupied by him* while inmates of the said dwelling house were suffering from scarlet fever, contrary to the Public Health Act." The defendant lived at Willingdon, where he carried on an extensive laundry business. His clients were almost solely residents in the neighbouring town of Eastbourne On Nov. 23rd, 1901, Mr. A Wheeler Taylor was called in from Eastbourne to see the children of the defendant, and on the following day he diagnosed them to be suffering from scarlet fever. His advice to have the patients removed *to the sanatorium* was not complied with. *They were allowed* to remain on the premises, and it was only in the first week of this year that a certificate was given that the children were free from infection. From Nov. 23rd onwards the laundry business was carried on as usual in a room adjoining the dwelling-house, but connected with it. There was the daily arrival of soiled linen and the daily exit of clean clothes. On Dec. 5th the premises were visited by Mr. Hugh Stott in his capacity as medical officer of health of East Sussex and as the medical officer of the Eastbourne rural district. The process of washing was being continued, clothes were being brought in and being sent home, and at the same time he found the children on the premises suffering from scarlet fever. The defendant told Mr. Stott that he would rather have his work stopped than remove his children to the isolation hospital at Polegate. But neither course was taken. Six days later—on Dec. 11th—a sanitary inspector saw the defendant who was about to deliver laundry work in Eastbourne. The defendant was not allowed to accomplish his errand until the "washing" had been disinfected at Polegate. An epidemic of scarlet fever might easily have been conveyed to Eastbourne by the ignorance and stupidity of the laundry proprietor. In the case of scarlet fever, although only in a mild form, isolation is the most effectual means of arresting its spread, and the general community have a right to be protected from the acts of such a person as the defendant. The case was an aggravated one, and the defendant, who had rendered himself liable to a fine of £10, was mulcted in a penalty of £2 2*s*., inclusive of costs.

## PUBLIC VACCINATORS AND PRIVATE FEES.

*To the Editors of* THE LANCET.

Sirs,—I inclose a cutting from the *Nottingham Guardian* re-vaccination. You will see that Mr. J. Jeffares, who is public vaccinator for that district, has got a free advertisement at the hands of the Shardlow Guardians. It is stated that he vaccinates people privately for 2*s*. 6*d*., whereas his official pay is 6*s*. This appears to me to be touting for vaccination cases at 2*s*. 6*d*. Also what will the authorities say when they give him 6*s*. for a case done as a public vaccinator, and find that he announces that he can do private patients equally as well at 2*s*. 6*d* ?

Thinking this may be of interest to readers of THE LANCET who are public vaccinators.

I am, Sirs, yours truly,

Jan. 14th, 1902. 1902.

*** We do not read the paragraph in the *Nottingham Guardian* as our correspondent reads it, but we think it wrong for a public vaccinator to forego his lawful fees because his action may embarrass his brother officials.—Ed. L.

## CORONERS' INQUESTS.

A correspondent informs us that recently he received the following letter from the coroner for his district:—

> "Dear Dr. ——,—Will you kindly in future as soon as possible notify to me all sudden deaths similar to the Revd. ——, in order to save trouble to the relatives by so doing you oblige,
>
> "Faithfully yours,
>
> "—— ——."

Our correspondent adds "The case in point was that of an old gentleman, aged 74 years, who died in five hours from apoplexy. I was his regular attendant had been attending him up to his death, and was with him during his last illness. The coroner himself with a policeman marched up to the house and, naturally, disturbed the family. Is there any authority for this order? the coroner is a medical man in practice in the city." Presuming that our correspondent gave the usual medical certificate of the cause of death, as doubtless he did, we think it to have been unnecessary, to say the least, for the coroner and his attendant policeman to go to the residence of the deceased. As for the coroner's request that he years past, directed towards it. Of course, if those competent to speak for the medical profession take a different view--they are more qualified to judge than I am and if their views are brought before the Government they will receive full consideration.—Mr. LEE: Will the right hon. gentleman consider the advisability of recommending a substantial grant of money for this inquiry in view of the fact that there is no fund available for the purpose?—Mr. BALFOUR: The question which my hon. friend now asks raises a very large issue and I should not like to touch upon it at the present time. The amount of Government money given in this country for experiments is not very large, but whether it should be or should not be increased is a question which I cannot answer on the spur of the moment, it requires very careful consideration and consultation with my colleagues. I may add that there has been no application up to the present time for a grant in order to carry out this particular object.

## MONDAY, JAN. 27TH.

### *The Sources of Vaccine Lymph.*

Mr. CORRIE GRANT asked the President of the Local Government Board (1) whether he could state the original sources of the vaccine lymph supplied by the Government; (2) whether any was derived from the inoculation of small-pox on animals; (3) whether a pure culture of the organism of vaccinia could be supplied in place of lymph; (4) whether the strength of the virus could be standardised so as to measure the dose administered; (5) whether the Government guaranteed the purity and innocuity of the lymph they supplied; and (6) whether the Government would take steps to secure the control and supervision of all lymph used in this country.—Mr. LONG replied: The lymph supplied by the Government is derived from calves which have been vaccinated with lymph from other calves and is not obtained by inoculating animals with small-pox. The reply to the third and fourth questions is in the negative. The Government give no guarantee, but they use every effort to secure that their lymph shall be free from undesirable organisms. As at present advised I do not propose to ask for power to control the lymph supplied from other sources.

### *The Small-pox Epidemic*

Mr. JOSEPH A. PEASE asked the President of the Local Government Board whether he was aware that several cases of small-pox had been traced to an outbreak on the s.s. *Anglian* from Boston, docked in the Royal Albert Dock on Jan. 3rd last; whether the port sanitary authority thoroughly inspected the s.s. *Anglian*, and why the existence of small-pox on board was not discovered at once and notified, seeing that the dockers were engaged for two or three days dealing with the cargo before the disease was notified; and whether, with a view to prevent similar outbreaks, steps had been taken to insure that vessels arriving with disease on board should be placed in quarantine until a clean bill of health had been certified for by the port sanitary authority.—Mr. LONG replied: I am aware of the facts referred to the first paragraph of the question. I am informed that on the arrival of the vessel at Gravesend the captain reported "all well" and "no sickness during the voyage." As the ship did not come from an infected port the persons on board were not medically examined and the vessel proceeded to dock where the cattlemen, after the cattle had been discharged, cleared from the ship. On the following day one of the cattlemen, feeling ill, presented himself at the Branch Seamen's Hospital where he was seen to be suffering from small-pox and he was conveyed to hospital. The port medical officer traced nearly all the persons who had left the ship, and in all five cases of small-pox have been dealt with. Vaccination was performed in the case of all persons on board willing to be vaccinated. The vessel has been disinfected and the names and addresses of the persons on board have been notified to the medical officers of health of the districts concerned. The system of quarantine is not in force in this country. The method adopted consists of medical inspection of ships coming from infected places or having illness on board, isolation of infected persons, and keeping under observation those brought into contact with them. The medical officer of the Port of London has taken steps to have all vessels from Boston and New York, where it is stated that small-pox is prevalent, medically inspected on arrival at Gravesend.

## TUESDAY, JAN. 28TH.

### *The Royal Army Medical Corps.*

Dr. FARQUHARSON asked the Secretary of State for War whether he could inform the House when the last examination took place for commissions in the Royal Army Medical Corps, how many vacancies there were, and how many candidates competed for them; and whether, to encourage the flow of candidates from the medical schools, he would quickly produce the Royal Warrant founded on the recommendation of his committee?—Mr. BRODRICK replied: The last examination was in February, 1901, when 22 appointments were offered and 10 candidates competed. The Royal Warrant will shortly be published.

### *Sanitation in Glasgow.*

Mr. THOMAS BAYLEY asked the Lord Advocate, as representing the Secretary for Scotland, whether his attention had been called to the fact that the provisions of the Glasgow Building Regulation Act, 1890, whereby it was enacted that all houses must be supplied with proper water sanitary accommodation, had not been carried out; could he state what steps the Corporation of Glasgow were taking to carry out this Act; and if, in the event of the corporation failing to carry out their own building regulation act, would the Government take any proceedings to insist on their so doing.—The LORD ADVOCATE replied: The statute to which the hon. Member intends to refer is the Glasgow Police Amendment Act, 1890. Since it came into operation a great deal has been done at the instance of the Corporation of Glasgow to carry its provisions into effect. Further measures designed to secure so far as possible the desired result have been receiving the attention of the Local Government Board for Scotland and of the Glasgow corporation which has assured the Secretary for Scotland that the matter is receiving its earnest consideration. The last paragraph of the hon. member's question suggests an hypothesis and I am not prepared to pledge the Local Government Board in circumstances which have not yet arisen.

# Appointments.

*Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to* THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

ARMSTRONG, HUGH, F.R.C.S. Eng., has been appointed Medical Officer of the Friendly Societies' Medical Institute, Tamworth, New South Wales.

BELL, R. H., M.A., M.B., M.C. Cantab., has been appointed Obstetric Tutor and Registrar to St. Thomas's Hospital, vice Mr. Fairbairn.

BROWNE, T. W. S., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory Acts for the Chatham District.

CHOLMELEY, W. F., F.R.C.S., has been appointed Honorary Assistant Surgeon to the Wolverhampton General Hospital.

COLLINS, PATRICK JOHN, L.K.Q.C.P. Irel., L.R.C.S. Irel., of Woolabra, New South Wales, has been appointed a Justice of the Peace.

DICKMAN, H. G., M.B., M.S. Edin., has been appointed Medical Officer of Health for the Urban District of Diss, Norfolk.

EDWARDS, G. M., M.B., B.S. Cantab., has been appointed Certifying Surgeon under the Factory Acts for the Harrow District of Middlesex.

ELLIOT, S., M D. Edin., has been appointed Certifying Surgeon under the Factory Acts for the West District of Caithness.

FAIRBAIRN, J. S., M.B Oxon., F.R.C.S. Eng., M.R.C.P. Lond., has been appointed Assistant Obstetric Physician to St. Thomas's Hospital in the room of Dr. Walter Tate.

FISHER, CHARLES, M.B., B.S. Durh., M.R.C.S., L.R.C.P. Lond., has been appointed House Physician to the City of London Hospital for Diseases of the Chest, Victoria-park, London.

FLETCHER, J. H., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer to the Ince Urban District Council.

GRAHAM, A. W., M.R.C.S., L.S.A., has been appointed Medical Officer of Health for the District of Beaconsfield and Dalrymple, Tasmania.

HAMILTON, J. A. G., M.B., L.M. Dubl., has been appointed Gynæcologist at the Adelaide Hospital, South Australia.

HARRIS, A. B., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer of Health for the Loughton Urban District.

HEMSTED, R. H., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Factory Surgeon for the Rural Districts of Whitchurch and Kingsclere, Hants.

HOPE, J. W., F.R.C.P. Edin., has been appointed Honorary Consultant to the Fremantle Public Hospital, Western Australia.

HURST, J. D., M.M. Melb., has been appointed Public Vaccinator at Laverton, Western Australia.

MACLENNAN, ALEX., M.B. and C.M., has been appointed an Extra Honorary Surgeon to the Royal Hospital for Sick Children.

MOFFIT, J. E. J., L.K.Q.C.P., L.R.C.S. Irel., has been appointed Government Medical Officer and Vaccinator for Balranald.

PALMER, ARTHUR A., M.B., M.S. Edin., has been appointed a Member of the Administrative Board of the Civil Ambulance and Transport Brigade, New South Wales.

PENFOLD, THOMAS C., M.B., M.S. Edin., has been appointed Medical Officer of Health for the Hexham Rural District.

ROBB, W., M.B., M.S. Glasg., has been appointed Medical Officer of Health for the Irthlingborough Urban District.

SAYER, THOMAS, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Resident Medical Officer at the Leeds Sanatorium for Consumption at Gateforth.

SCOTT, F S., M.B., B.Ch., B.A.O. R.U.I., has been appointed Medical Officer to attend to the destitute poor and aborigines at Mitcham, South Australia.

SHAW, F. C. S., J.P., M.B. Syd., has been made an Appointed Member of the Licensing Court for the Licensing District of Emmaville, New South Wales.

SPROTT, GREGORY, M.B. Glasg., D.P.H., has been appointed an Honorary Medical Officer of the Hobart Hospital, Tasmania.

SPROULE, W., M.D. Edin., has been appointed Medical Officer at the Hospital, Wyalong, New South Wales.

STANLEY, G. P., M.B., Ch.M. Syd., has been appointed Medical Officer to the Friendly Societies' Medical Institute, Tamworth, New South Wales.

WOLFHAGEN, JOHN EDGAR, M.B., Ch.M. Edin., has been appointed a Member of the Court of Medical Examiners, Hobart, Tasmania.

# Vacancies.

*For further information regarding each vacancy reference should be made to the advertisement (see Index).*

ANCOATS HOSPITAL, Manchester.—Resident House Surgeon. Salary £100 per annum, with board, &c.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—Resident Surgical Officer. Salary £60 per annum, with board, washing, and attendance.

BOLTON INFIRMARY AND DISPENSARY.—Junior House Surgeon. Salary £80 per annum, with apartments, board, and attendance.

BRADFORD ROYAL INFIRMARY.—Dispensary Surgeon, single. Salary £100 per annum, with board and residence.

BRECON INFIRMARY.—Resident House Surgeon, unmarried. Salary £100 per annum, with apartments, board, attendance, fire, and gas.

BRISTOL EYE HOSPITAL.—House Surgeon. Salary £80, with residence and maintenance.

BRISTOL GENERAL HOSPITAL.—House Surgeon. Salary £120 per annum, with board, residence, &c.

CAITHNESS COUNTY COUNCIL.—Medical Officer of Health. Salary £250 and £50 for travelling and other expenses.

## LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

**MONDAY** (3rd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. J. F. Payne: Clinique. (Skin.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Baldwin: Surgical Emergencies.

ROYAL INSTITUTION OF GREAT BRITAIN.—5 P.M. General Monthly Meeting.

**TUESDAY** (4th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. W. Ewart: Clinique. (Medical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Robinson: Uterine Hæmorrhage.

ROYAL INSTITUTION OF GREAT BRITAIN.—3 P.M. Dr. A. Macfadyen: The Cell, its means of Offence and Defence. Immunity.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Dr. Ferrier: Varieties of Gait

**WEDNESDAY** (5th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. A. H. Tubby: Clinique. (Surgical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. McAdam Eccles: Lantern Demonstration on Hernia.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL (Gray's Inn-road, W.C.).—8 P.M. *Dr. D. Grant: The Examination and Diseases* of the Accessory Sinuses of the Nose.

**THURSDAY** (6th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W C.).—4 P M. Clinique. (Surgical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Davis: Medical Anatomy and Physical Diagnosis.

CHARING-CROSS HOSPITAL.—4 P M. Dr. Abercrombie: Demonstration of Medical Cases. (Post-Graduate Course.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Colman: Demonstration of Selected Cases.

MEDICAL OFFICERS OF SCHOOLS ASSOCIATION (11, Chandos-street, Cavendish-square, W.).—4 P.M. General Meeting. Discussion on the Ventilation of School Buildings, with special reference to its application to existing buildings, opened by Mr. W. N. Shaw. Special appliances connected with ventilation will be exhibited.

**FRIDAY** (7th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. E. Clarke: Clinique. (Eye.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Baldwin: Surgical Emergencies.

ROYAL INSTITUTION OF GREAT BRITAIN.—9 P.M. Prof. E. Ray Lankester: The New Mammal from Central Africa and other Giraffe-like Animals.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Dr. J. Taylor: Epilepsy.

## EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

*It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.*

*Lectures, original articles, and reports should be written on one side of the paper only,* AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

*Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.*

*We cannot prescribe or recommend practitioners.*

*Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."*

*Letters relating to the publication, sale, and advertising departments of* THE LANCET *should be addressed "To the Manager."*

*We cannot undertake to return MSS. not used.*

## MANAGER'S NOTICES.

### THE INDEX TO THE LANCET.

THE Index to Vol. II of 1901, which was completed with the issue of Dec. 28th and the Title-page to the Volume, were given in THE LANCET of Jan 4th.

### VOLUMES AND CASES.

VOLUMES for the second half of the year 1901 are now ready. Bound in cloth, gilt lettered, price 18*s*., carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s*., by post 2*s*. 3*d*.

To be obtained on application to the Manager, accompanied by remittance.

### TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with *none of whom have the Proprietors any connexion whatever*) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

The rates of subscriptions, post free, either from THE LANCET Offices or from Agents, are:—

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SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE. It has come to the knowledge of the Manager that in some cases higher rates are being charged, on the plea that the heavy weight of THE LANCET necessitates additional postage above the ordinary rate allowed for in the terms of subscriptions. Any demand for increased rates, on this or on any other ground, should be resisted. The Proprietors of THE LANCET have for many years paid, and continue to pay, the whole of the heavy cost of postage on overweight foreign issues; and Agents are authorised to collect, and do so collect, from the Proprietors the cost of such extra postage.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied. Address—THE MANAGER, THE LANCET OFFICES, 423, STRAND, LONDON, ENGLAND.

## METEOROLOGICAL READINGS.

*(Taken daily at 8.30 a.m. by Steward's Instruments.)*

*THE LANCET Office, Jan. 30th, 1902.*

| Date | Barometer reduced to Sea Level and 32° F | Direction of Wind | Rainfall. | Solar Radia in Vacuo | Maximum Temp. Shade. | Min Temp | Wet Bulb. | Dry Bulb | Remarks at 8.30 A.M. |
|---|---|---|---|---|---|---|---|---|---|
| Jan. 24 | 29·50 | S W | .. | 55 | 48 | 43 | 41 | 44 | Cloudy |
| " 25 | 29·15 | W.N.W | 0·12 | 63 | 40 | 33 | 33 | 34 | Cloudy |
| " 26 | 29·65 | W.N.W | . | 68 | 41 | 34 | 33 | 34 | Cloudy |
| " 27 | 29·45 | S. W. | 0·20 | 64 | 49 | 34 | 40 | 41 | Overcast |
| " 28 | 29·20 | S W | 0·04 | 63 | 47 | 40 | 40 | 41 | Cloudy |
| " 29 | 29·94 | N. | 0·01 | 62 | 40 | 31 | 31 | 32 | Fine |
| " 30 | 30·37 | N | ... | 49 | 38 | 30 | Fzn. | 31 | Cloudy |

During the week marked copies of the following newspapers have been received:—*Blackburn Gazette, Bournemouth Guardian, Dudley Herald, Northern Guardian, Lancashire Post, Bristol Times, Grantham Journal, Plymouth Morning News, Western Mercury, Yorkshire Post, Ipswich Times, Times of India, Pioneer Mail, Citizen, Architect, Builder, Blyth News, Devon and Exeter Express, Barnsley Express, Ulster Echo, Manchester Dispatch, Glasgow Citizen, Bradford Observer, Darlington Star, Sheffield Daily Telegraph, Municipal Reporter, Allgemeine Medicinische Central Zeitung, Revista Medica de San Paulo, Echo, Daily Mail, Daily Express, Yorkshire Post, Standard, Bristol Mercury, Windsor and Eton Express, Reading Mercury, La Caducée, Hong Kong Weekly Press, Herts Advertiser, Times of India, Pharmaceutical Journal, Aberdeen Free Press, Manchester Guardian, Dublin Evening Telegraph, Southampton Echo, Stafford Advertiser, Islington Gazette, Coventry Herald, Whitehall Review, Belfast News, Birmingham Daily Mail, Lancaster Guardian, &c.*

*future all such deaths should be notified to him*, he has a perfect right to ask that such procedure may be followed, but we do not think that he has any right to demand it in virtue of his office.

### MEDICAL PRACTITIONERS AND THE SALE OF POISONS.

*To the Editors of* THE LANCET.

SIRS,—In your annotation regarding Medical Practitioners and the Sale of Poisons in THE LANCET of Jan. 4th, p. 44, you fall into several errors. In the first place you say "the Act forbids a medical man or anyone else not registered under the Pharmacy Act to keep a shop or to supply scheduled poisons," &c. The Act of 1868 certainly did so; the first clause of the Act forbade anyone but a "pharmaceutical chemist or a chemist and druggist within the meaning of the Act" to do so. This, however, was repealed by the *Pharmacy Amendment Act* of 1869 which distinctly permitted medical practitioners to keep open shop and to sell scheduled poisons. The first clause of that Act reads:—

> "Nothing contained in the first 15 sections of the recited Act (1868) shall affect any person who has been registered as a legally qualified medical practitioner before the *passing of this Act*; and the said clauses shall *not* apply to any person who may hereafter be registered as a legally qualified practitioner, and who in order to obtain his diploma for such registration shall have passed an examination in pharmacy," &c.

Then it is not in virtue of Section 3 of the Amendment Act that a medical practitioner may sell or deliver medicines containing scheduled poisons to his patients: it is in virtue of Section 1, which I have just quoted. Section 17 of the Act of 1868 required all scheduled poisons to be labeled with the name of the poison, the word "poison," and the name and *address of* the seller, &c. The third section of the Amendment Act of 1869 which you quote is merely a regulation which makes it unnecessary to label a scheduled poison with the word "poison" when it is contained in a mixture dispensed to prescription. The Act of 1869 placed pharmaceutical chemists and registered medical practitioners on the same footing as regards keeping open shop and *the sale of scheduled poisons*, and they have *remained* so until the recent decision of the General Medical Council. Both have been in the habit of keeping unqualified assistants and apprentices. Should an unqualified assistant break the law by selling a scheduled poison he is fined, but in the case of a pharmaceutical chemist the punishment stops short with the assistant. But should the doctor's unqualified assistant break the law then the doctor must be also punished by worse than fine or imprisonment—he must have his means of livelihood taken from him. Surely a crime which merits so severe a punishment in the one case is deserving of some punishment in the other.

I am, Sirs, yours faithfully,

Jan. 11th, 1902. M.D.

*** We believe our view of the effect of the Pharmacy Acts to be correct, the matter being regulated by the sections upon which we laid stress as well as by that to which our correspondent refers. With regard to the question raised at the end of his letter, it was clearly the opinion of the General Medical Council that the medical practitioner should not employ others to break the law and then escape all responsibility in the event of their detection.—ED. L.

### TAP'S PATENT FUMIGATOR.

THE feature of this simple little apparatus is the way in which the supply of the disinfectant is regulated. The apparatus consists of a spirit lamp situated over which is a metal evaporator. Just above the evaporator is a cone-shaped container with its apex downwards. By means of a screw at the top of the container a metal rod moves up or down inside the apex of the hollow cone, so that the dropping of the disinfectant may be easily controlled. It is the same system as is employed in the stylographic pen, by which the flow of ink is regulated. Almost any kind of disinfectant fluid can be used in the apparatus, or anything in fact that is capable of being vapourised. The fumigator is supplied in a portable form by Messrs. S. Maw, Son, and Sons, 7 to 12, Aldersgate-street, London, E.C.

### IMMUNITY FROM SMALL-POX.

*To the Editors of* THE LANCET.

SIRS,—In reference to your annotation last week (p. 248), I had variola about 20 years since. I had been previously well vaccinated. I again unsuccessfully vaccinated myself on Jan. 13th.

I am, Sirs, yours faithfully,

Jan. 27th, 1902. SURGEON.

◆

*Campestres.*—A must make very sure of his ground before he does anything, for we suspect that he has been misinformed. But if he is certain, from trustworthy and undeniable evidence, that B has openly stated an intention of ousting him he is at liberty to cease to have professional or friendly relations with B. Medical men are constantly placed in positions of rivalry towards each other, but there is no reason why competition should not be conducted in an honourable manner.

*P.*—The eggs should be placed in the water glass on the day on which they are laid, and left there until they are required.

*M.A. Oxon.*—Many laboratory boys are asked to discharge more arduous and delicate scientific duties.

## Medical Diary for the ensuing Week.

### OPERATIONS.

#### METROPOLITAN HOSPITALS.

**MONDAY** (3rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.) St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.) West London (2.30 P.M.), London Throat (2 P.M.).

**TUESDAY** (4th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

**WEDNESDAY** (5th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.).

**THURSDAY** (6th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

**FRIDAY** (7th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.). West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square, (9.30 A.M.), City Orthopædic (2.30 P.M.).

**SATURDAY** (8th).—Royal Free (9 A.M. and 2 P.M.), London (2 P.M.) Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.), Throat, Golden-square (9.30 A.M.)

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

### SOCIETIES.

**MONDAY** (3rd).—SOCIETY OF ARTS.—8 P.M. Dr. S. Rideal: The Purification and Sterilisation of Water. (Cantor Lecture.)

OTOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-square, W.).—4.30 P.M. Cases and Specimens will be shown by Mr. A. Cheatle, Mr. Lake, Mr. Lawrence, Dr. Macnaughton-Jones, Dr. Pegler, Dr. Tilley, Mr. Whitehead, Mr. Yearsley, Dr. Milligan, and Dr. J. Horne. Presidential Address: Prof. U. Pritchard.

**TUESDAY** (4th).—PATHOLOGICAL SOCIETY OF LONDON (King's College).—8 P.M. Laboratory Meeting. Dr. N. Dalton: Hyaline Fragmental Bodies in a Syphilitic Patch.—Dr. Whitfield: On Pappendium's Staining Method.—Dr. Howlett: The Absorption of Antitoxin by the Stomach and Rectum.—Dr. Daniels: Avian Filariæ from Guiana.—Mr. Cheatle: Healing of Aseptic Fractures.—Dr. Howlett (for Prof. Simpson): Preparations of Plague Bacilli from Man and Animals.

**WEDNESDAY** (5th).—OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Annual Meeting. Specimens will be shown by Dr. A. Routh, Dr. W. Duncan, Mr. Bland-Sutton and others. The President (Dr. Horrocks) will deliver the Annual Address.

**THURSDAY** (6th).—HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Titchborne-street, Edgware-road, W.).—8.30 P.M. Dr. W. Ewart: Scleroderma with Raynaud's Disease.—Dr. S. P. Phillips: Epistaxis in Rheumatism.

RONTGEN SOCIETY (20, Hanover-square, W.).—8.30 P.M. Paper;—Mr. E. W. H. Shenton: A System of Radiography.

NEUROLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—8 30 P.M. Annual Meeting. Annual Address:—Mr. H. W. Page (President): Concussion of the Brain in some of its Surgical Aspects.

**FRIDAY** (7th).—WEST LONDON MEDICO-CHIRURGICAL SOCIETY (West London Hospital, Hammersmith-road, W.).—8.30 P.M. Discussion on the Treatment of Inoperable Cancer. Mr. A. Cooper, Mr. S. Boyd, Mr. Butlin, and Mr. H. Morris will speak.

WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary, Greenwich-road, S.E.).—8.45 P.M. Dr. R. E. Scholefield: Some Cases of Feigned or Functional Disease.

SOCIETY OF ANÆSTHETISTS (20, Hanover-square, W.).—8,30 P.M. Clinical Evening.

LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Cases and Specimens will be shown by Dr. L. Lack, Mr. R. Lake, Dr. F. W. Bennett, Mr. A. Thorne, Dr. L. H. Pegler, Mr. Waggett, Dr. H. J. Davis, and Dr. Donelan.

# A Clinical Lecture

ON

# TWO CASES OF SOLID ABDOMINAL TUMOUR WITH ASCITES.

*Delivered to the Post-Graduate Class at Charing Cross Hospital on Oct. 24th, 1901,*

BY THOMAS WATTS EDEN, M.D. EDIN., M.R.C.P. LOND.,
ASSISTANT OBSTETRIC PHYSICIAN TO THE HOSPITAL.

GENTLEMEN,—By the kindness of Dr. Mitchell Bruce and Dr. Amand Routh I show you two cases of abdominal tumour, calling attention to their points of similarity and contrast.

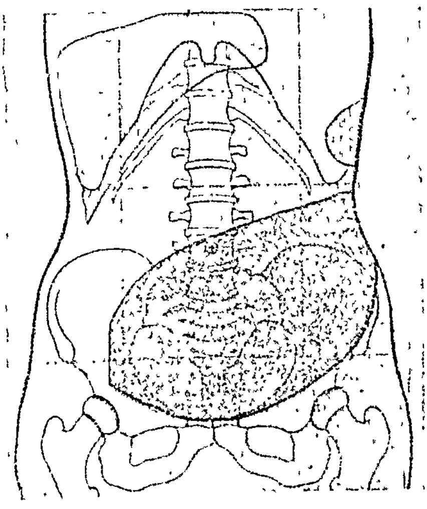
In the first case the patient, a married woman, aged 64 years, was admitted to Charing Cross Hospital under the care of Dr. J. Mitchell Bruce, on Oct. 15th, 1901, complaining of enlargement of the abdomen and of pain. Her past history presents few points of importance. She has had seven children, and menstruation ceased 15 years ago at the age of 49 years. For upwards of 10 years she lived in India, her husband being a soldier. Her family history reveals the presence of a marked tendency to tuberculosis, but she has herself been free from any trace of that disease. Indeed, she never remembers having been ill until Christmas, 1900, when she had an attack of rheumatism. After this she remained in good health until July, 1901, when she began to be troubled with pain in the abdomen which was felt at first below the left costal margin. She also had at this time some incontinence of urine and great frequency of micturition. Since that period her health has failed steadily; there has often been a little sickness in the morning, she has lost flesh, while the abdomen has increased in size, and her strength has also been failing. There has been no discharge, hæmorrhagic or other, from the vagina.

On admission it was noted that there was slight œdema of the legs and feet. The urine was found to be normal in all respects, and although repeatedly examined since her admission it has been always free from abnormal constituents. Both morning and evening temperatures are a little subnormal. The heart and lungs are sound. Inspection of the abdomen shows considerable distension of the lower abdomen which is slightly pendulous. The greatest girth is a little below the umbilicus and measures 45 inches. Above the umbilicus the abdomen is not appreciably distended. Percussion when the patient is in the dorsal position reveals an area of dulness the extent of which is indicated in the sketch. The whole of this area is not absolutely dull, the left lumbar region being sub-resonant. When the patient is turned upon her right side the right lumbar region remains resonant, while the percussion note in the left lumbar region becomes a little less impaired, but by no means clear. Palpation of the dull area shows that it contains a solid tumour freely moveable in a collection of fluid which surrounds it. A fluid thrill can be obtained from side to side passing in front of the tumour. "Dipping" is readily obtained over most of the dull area, while the solid tumour can be tossed from side to side or from below upwards like the fœtal head in a uterus over-distended with liquor amnii (external ballottement). The solid tumour is oval in shape with its long axis transverse to that of the body; its lower edge can be palpated just above the pubes, but the percussion dulness is continued to the pubes without a break. The surface of the tumour is nodular. There is very little abdominal tenderness. On vaginal examination some prolapse of the post-vaginal wall was found; the uterus was directed forwards and was very freely moveable in all directions; the sound passed for two and a half inches. The uterine appendages could not be felt nor could the lower surface of the abdominal tumour be reached either by vaginal or rectal palpation.

In Case 2 the patient, aged 47 years, was admitted to Charing Cross Hospital under the care of Dr. Amand Routh on Oct. 17th, 1901, complaining of enlargement of the abdomen. I had previously seen her in the out-patient department, where she attended by the advice of her medical attendant (Mr. L. Potts of Leatherhead). She has been married for seven years and has never been pregnant. Her menstrual periods have never given her any trouble until about two years ago when they became profuse, lasting 14 days with an interval of about the same period. For 12 months the periods continued to be profuse, but during the last 12 months the amount has gradually lessened until at the present time the duration has diminished to seven days with 21 days' interval. About 18 months ago she became conscious of the presence of a small lump in the lower part of the left side of the abdomen. Since then she has complained of increasing abdominal pain and discomfort both on walking and on lying down, and of steadily increasing abdominal enlargement. Her general health has been fairly good and she does not think that there has been any loss of flesh. There have been no urinary symptoms and no leucorrhœa. Her past personal history and her family history present nothing of interest. She has never been very robust, and she thinks that she was usually anæmic.

On admission it was noted that the patient was well nourished but anæmic; there was a good deal of œdema of the feet and legs, which had not entirely disappeared a week after her admission, although she had been kept in bed all the time. The temperature since her admission has been a little irregular, and on two evenings has reached 99·8°F. The urine contains nothing abnormal, and the heart and lungs are healthy. Inspection shows that the abdomen is uniformly distended to a moderate extent, the greatest girth immediately below the umbilicus measuring 37½ inches. Measurements from the umbilicus to the right and left anterior superior spines are about equal, and the umbilicus is about midway between the pubes and the xiphisternal articulation. There is no bulging of the flanks. Palpation reveals the presence of a large solid tumour lying beneath the thick abdominal parietes. The extent and outline of the tumour can best be defined by palpation and are represented in Fig. 1.

FIG. 1.



Areas of dulness in dorsal position.

On percussion a resonant note is obtained over the upper third of the tumour in the middle line, showing that in this part it is covered by coils of intestine. Its lower border can be palpated just above the pubes. Over a part of the anterior surface of the tumour represented in the sketch No. 2 there is evidence of the presence of a thin layer of fluid between the tumour and the abdominal wall.

## Communications, Letters, &c., have been received from—

**A.**—Monsieur J. Astier, Asnières; Ancoats Hospital, Manchester, Secretary of; Anti-Kamnia Chemical Co., St. Louis, U.S.A.; Acetylene Association, Lond.; Dr. F. R. B. Atkinson, Radcliffe; Messrs. S. Allsopp and Son, Burton-on-Trent; A. T.; Messrs. Allen and Hanburys, Lond.; Dr. F. J. Allen, Lond.

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large tumours causing great distension of the abdomen this is often impossible, and in the case under consideration we have failed to detect the presence of the ovaries in their normal position. In a woman who has ceased to menstruate for 15 years atrophy of the ovaries will have further increased the difficulty of recognising them. The only possible line of proof which remains is the recognition of the ovarian pedicle. In most cases of ovarian tumour, whether solid or malignant, the pedicle can be palpated by the following simple procedure. The cervix is drawn down with a volsellum so as to depress the uterus and to withdraw it from the abdominal tumour. An assistant then gently pushes the tumour upwards, and in this way the pedicle is stretched, and the finger passed into the rectum can recognise it or a bimanual examination may be made under favourable circumstances. In this way both the existence of a pedicle and the side to which it is attached may be recognised and the thin membranous ovarian pedicle can readily be distinguished from the thick pedicle of a pedunculated subserous fibroid.

In the case before us no pedicle can be palpated, but the distension of the abdomen is too great to permit of a satisfactory bimanual examination being made; the presence of the fluid greatly increases the difficulties of the procedure. The existence of a pelvic pedicle cannot, therefore, be excluded with certainty, so that we have carried the process of exclusion as far as we can go with certainty. A question of probability remains, however, which appears to me to determine the weight of evidence in favour of an omental and not an ovarian origin. If ovarian the pedicle must be a long one, for the growth lies above the pelvic brim and cannot be reached from below. The history of the patient's illness is short (about three months), and the growth of the tumour is therefore rapid, and its existence may be presumed to be of not more than six months' duration. Now an ovarian growth arising from 14 to 15 years after the menopause is extremely unlikely to develop a long pedicle, for the broad ligaments must have undergone considerable shrinkage from the normal atrophic processes which follow the menopause. The tumour is therefore more probably omental. (*Note.*—This patient left the hospital on Oct. 31st, having declined operative interference.)

Turning now to the second case, in which the age of the patient is 47 years, let us take up the differential diagnosis of growths of the omentum, the ovaries, the uterus, and the broad ligament. You remember that in this case a pelvic pedicle uniting the tumour to the uterus was felt distinctly; this fact almost serves to exclude growths of the omentum which, of course, have no pelvic pedicle. It must be remembered, however, that malignant abdominal tumours tend to invade neighbouring organs and in this way a tumour of abdominal origin may acquire a pelvic attachment. Such an attachment, however, would be unlikely to occur alone—i.e., without invasion of all surrounding organs, leading to fixation of the tumour. The mobility of the abdominal mass in this case renders invasion of surrounding parts extremely unlikely and the pelvic pedicle is therefore proof of a pelvic origin. Growths arising in the broad ligament may be excluded for the same reasons as those given in discussing the first case. The diagnosis therefore lies between growths of the uterus and growths of the ovary or ovaries.

It will be well first of all to indicate the general lines of proof available for the differential diagnosis of tumours of these two organs. Symptomatology in relation to abdominal and pelvic diseases practically never renders much assistance in differential diagnosis. Fibroid tumours of the uterus, although they usually cause menorrhagia, may be associated with scanty menstruation, and solid tumours of the ovary cause amenorrhœa nearly as often as menorrhagia, while frequently menstruation is unaffected by them. I profoundly distrust symptoms as an aid to diagnosis. Abdominal conditions must be recognised, and differentiated from one another by a careful study of their physical signs, without any mental bias such as a trust in symptoms often produces. The first point to which I would direct your attention is the length of the uterine cavity. Ovarian growths do not cause enlargement of the uterine cavity while fibroids usually do; therefore, if the sound passes definitely further than the normal length this point is strongly in favour of uterine tumour. The converse cannot unfortunately be maintained, for sub-peritoneal fibroids which cause no hæmorrhage usually also cause no enlargement of the uterine cavity. In the next place, if the ovaries can both be recognised in their normal position, an ovarian origin can be excluded. It must be remembered, however, that the ovaries are often much displaced by fibroid tumours, and nodules of new growth may be mistaken for them. Often palpation of the ovaries is impossible without an anæsthetic, and sometimes impossible then, but a positive result is of great value. Here, again, the converse cannot be maintained, for one frequently finds the ovaries lying behind a fibroid tumour where they would be quite inaccessible to clinical examination.

In the next place, palpation of the pedicle can be practised, and this offers the most reliable means of distinguishing uterine from ovarian tumours in the great majority of cases. The ovarian pedicle is a structure which can often readily be examined by a bimanual or rectal examination, and after a little practice can hardly be mistaken for anything else. The attachment of a subperitoneal fibroid is usually very much shorter and thicker, and feels solid rather than membranous. Occasionally such a tumour develops a membranous pedicle, but this occurrence is so rare that allowance need not usually be made for it. Recognition of the ovarian pedicle also tells the side from which the tumour springs. Interstitial fibroids can be absolutely distinguished by this method. Sometimes, however, ovarian tumours develop between the layers of the broad ligament and have no pedicle; sometimes in the case of malignant ovarian tumours secondary nodules develop in the pedicle causing it to assume the character of a fibroid pedicle. Errors arising from such occurrences as these cannot be avoided.

Lastly, ascites is the rule with solid tumours of the ovary, and with fibroids is so extremely rare that its presence almost serves to exclude them. An extended search in text-books and monographs and in the transactions of obstetrical societies has only revealed one such case, recorded by Thomas Keith, and then the ascites only developed after an injury to the tumour caused by a blow upon the abdomen.

In the case which we are now considering we have enlargement of the uterine cavity, a distinct but thick pedicle on the left, and ascites. The two latter points practically settle the question in my own mind that the principal tumour is a solid ovarian growth. But this will not explain the enlargement of the uterine cavity, which is strongly presumptive of fibroid tumour, as the patient is not, and never has been, pregnant. Further, the nodules felt in the pouch of Douglas feel very like subperitoneal fibroid growths from the posterior wall; their mobility practically excludes the possibility of their being secondary malignant deposits in the pelvic peritoneum. The conclusion seems inevitable that both conditions are present—that the main tumour is a solid growth of the left ovary, while the uterus is the seat of one or more small fibroid tumours. (*Note.*—The patient was operated upon on Oct. 30th by Mr. Stanley Boyd who removed a large solid ovarian tumour of the left side; there was also a large amount of free ascitic fluid and the uterus contained several small fibroids. The tumour was a fibroma with extensive cystic degeneration irregularly distributed through it.)

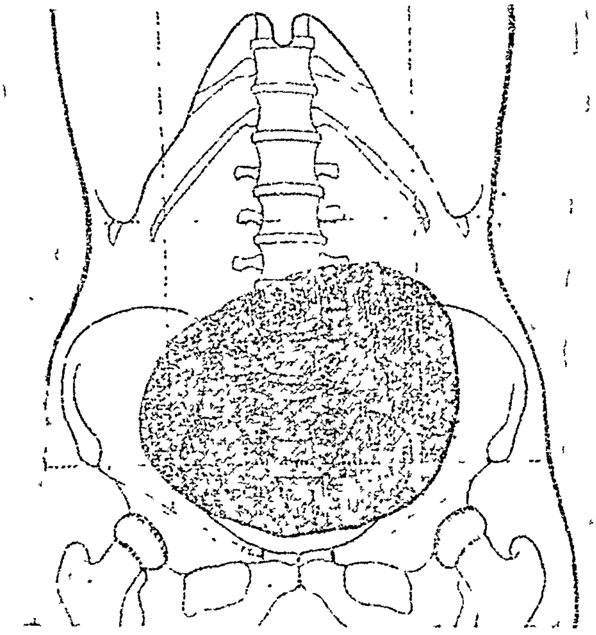
The only remaining point for diagnosis is the *nature* of the growth. In the case of an abdominal tumour it is seldom possible to say more than that it belongs either to the class of malignant growths or to that of innocent growths. Its actual structure can only be determined by the microscope.

With regard to the first case I believe that the growth is in all probability malignant. The history of the illness is very short, the patient having been in good health up to July, 1901. The tumour has, therefore, attained a considerable size in a short time, and its rate of growth must be rapid. Further, there has been considerable loss of flesh, although this does not amount to emaciation. Solid abdominal tumours, with the exception of those of the uterus and ovaries, are usually malignant, especially when accompanied by ascites. The age of the patient is not a point of much importance, but as a general rule old age is presumptive of malignancy. I do not think that much importance can be attached in this case to the presence of œdema of the lower extremities which is probably of mechanical origin, but when such œdema accompanies abdominal growths of small size it is strongly in favour of malignancy.

With regard to the second case the evidence is in favour of innocence. Although the history of the patient's illness is much longer than in the last case, amounting to about 18 months, there has been practically no loss of flesh, and with

"Dipping" can readily be obtained over this area, although the amount of fluid is not sufficient to yield a percussion thrill. Near the edge of the tumour a rounded nodule lies, just beneath the abdominal wall. A sharp push upon this nodule causes it to recede suddenly and return in a moment to the surface, giving a distinct example of "ballottement." The whole tumour is not nearly as moveable as was that in the last case where ballottement of the whole mass could be obtained. Its general outline is oval and its surface is irregular and nodular. There is very little abdominal tenderness. The total area of dulness (partial or complete) is represented in Figs. 1 and 2. The left lumbar region is, however, sub-resonant in the dorsal position and clears a good deal with the patient on the right side. With the patient on the left side the area of dulness increases considerably, as the tumour appears to fall forward against the anterior abdominal wall. The right lumbar and iliac regions are resonant in every position. From these relations it is obvious that we are dealing here, not with free ascites—i.e., with fluid free to move from one rt of the peritoneal cavity to another under the influence gravity—but with fluid limited to a great extent by adhe-, or in some other way. On vaginal examination we nd the cervix in its normal position; the uterus cannot be ed by bimanual palpation, but the sound passes and forwards for four inches. In the pouch of has a smooth solid lump of the size of a pigeon's egg felt and this can be readily displaced by a tap, giving ballottement. Fluctuation can also be felt in this fornix. As far as can be made out without anæsthetising the patient the solid abdominal tumour is continuous with the uterus. By pulling down the cervix with a volsellum and then practising rectal palpation a thick dense attachment of the tumour to the left side of the fundus can be made out.

FIG. 2.



Size and position of tumour as defined by palpation.

Let me now briefly recapitulate the results of the physical examination in the two cases. In the first case we have a solid abdominal tumour surrounded by a large amount of fluid in which it is very freely moveable. The fluid is not free but is limited by adhesions or otherwise. The uterus is small and freely moveable, and no connexion between the abdominal tumour and the pelvic organs can be made out. In the second case we have a solid abdominal tumour with a smaller amount of limited fluid, and much less moveable than the former. It is closely connected with an enlarged uterus, and there is a moveable solid nodule with fluid in the pouch of Douglas. Most of the fluid in this case appears to be in the pelvic cavity. Percussion of the liver and spleen in both cases shows that there is no enlargement of these organs.

We are now in a position to discuss the diagnosis, which I hope you will not consider a waste of time. Too often nowadays one hears the remark from an operator: "We shall know all about it when we open the abdomen." But to be unable to determine the nature of an internal tumour without first removing it is a state of affairs with which we ought not to be content. The frequency and facility with which laparotomy is now performed have led to great neglect of the art of abdominal diagnosis; and for this neglect there is no excuse, because increased experience of abdominal surgery ought to have laid the foundations for greater accuracy of diagnosis, and if the opportunities of operators had been turned to good account it would have already done so. But the slackness which is content with postponing diagnosis until after operation is as much to be deplored as is the timidity which declines the risk of being proved to have reached an erroneous diagnostic conclusion.

The number of conditions which give rise to the occurrence in the abdomen of a large solid tumour with ascites is considerable. These conditions may be enumerated thus: malignant disease of the liver, the spleen, the kidneys, the omentum, and the ovaries; innocent tumours of the ovary, the uterus, and the broad ligament (rarely); and tuberculous deposits. With regard to the two cases under consideration the list can be reduced considerably without much difficulty. Growths of the liver can be excluded by the facts (1) that there is no enlargement of that organ, and (2) that a distinct zone of resonance separates it from the tumour in both cases. Growths of the spleen can be excluded for the same reasons, with the reservation that growths arising in a displaced or wandering spleen give rise to extremely difficult diagnostic problems. Growths of the kidney can also be excluded (1) by the position of the tumour, and (2) by the healthy condition of the urine. Displaced kidneys may give rise to similar difficulties to those presenting in displaced spleen. Tuberculous deposits may in all probability be excluded (1) by the age of the patient (these deposits are rare after the fortieth year and extremely rare in old age); (2) by the size and mobility of the growth in each case (tuberculous deposits seldom form large masses and are usually more or less fixed by adhesive peritonitis); and (3) by the absence of signs of tuberculous disease in the lungs and pleura. Subnormal temperature often accompanies tuberculous disease of the peritoneum, so that the absence of pyrexia is not of diagnostic significance. These points reduce the possibility of tuberculous disease to very low limits. There remain for consideration growths of the omentum, the ovaries, the uterus, and the broad ligaments.

Let us consider first the case of the patient in Case 1, whose age was 64 years, and endeavour to decide which, if any, of these conditions can be excluded. Uterine tumours do not cause ascites, even when malignant, except in the rarest instances. Cases of degenerating fibroids with a little ascitic fluid are occasionally met with, but the amount of fluid is too small to admit of clinical recognition. Even uterine sarcomata do not cause ascites. The presence of a large amount of fluid in this case is therefore an important objection to the theory of uterine origin. Further, the absence of any discharge from the uterus, either hæmorrhagic or other discharge, is another important objection, for large uterine tumours, whether fibroid or malignant, are almost invariably the cause of discharge. Lastly, the size of the uterine cavity (2·5 inches) and the free mobility of the uterus independently of the tumour indicate that the organ is of normal size and not closely connected with it. This view is further confirmed by the fact that the tumour cannot be reached from the vagina or the rectum. The exclusion of growths from the uterus can therefore be satisfactorily accomplished.

Solid tumours of the broad ligament are either fibroid or malignant. In neither case is ascites found. The base of the tumour lies deep in the pelvic cavity and in close association with the uterine border from which it probably, in the majority of cases, arises. Cysts of the broad ligament may form a pedicle, but I have never met with a pediculated solid tumour of the broad ligament. Broad ligament growths may therefore be also excluded, leaving only two others for consideration, ovarian and omental tumours. Solid tumours of the ovary which have a long pedicle are not easily distinguished from solid omental tumours. They may occupy the same position in the abdomen, they are freely moveable, and they are associated with ascites. If the presence of both ovaries in the pelvis can be determined the exclusion of an ovarian origin is certain. But in the case of

7.50 A.M. and was completed at 12.30 P.M. Among the witnesses were the physicians who had been in attendance at the execution.

As the body lay upon the table in the dorsal position the right leg, to which the electrode had been attached, was slightly flexed and was a trifle abducted. This attitude of the body has been found to be uniform in the post-mortem examinations made on many other electrocuted criminals by Dr. Ira Van Gieson.[1] In all of these cases the electrode had been applied to the knee flexure. Corresponding to the attachment of the leg-electrode there was a superficial blistering, with some desquamation of the epidermis and some œdema. At the site of application of the head-electrode there were only a few signs of vesication, limited to the occiput. Post-mortem discolourations existed in all the extremities, but not in the trunk, head, or neck, where the skin was fairly white. There was post-mortem lividity of the toe- and finger-nails. The pressure of the straps had not produced any discolourations. There was a discharge of small amount from the urethra, probably of seminal fluid.

The assassin's physiognomy may be described as youthful and with rather a pleasant expression. The nose was pointed, slightly *retroussé*, and fairly straight, deviating a little at the point of the injury inflicted at the time of the assassination. The eyes were blue and the pupils were equal and moderately dilated. The hair was a light brown and was slightly curly. The face was oval and symmetrical. The ears were well formed and absolutely symmetrical. The mouth was well shaped and the lips were full; measuring the true orifice, the width was four centimetres, between the outer angles it was five centimetres. The teeth were of normal shape, but were in poor condition. The external genitals were normal and were unclean with accretions of smegma under the prepuce. There were two flat cicatrices, one four millimetres in diameter, the other half as much, on the mucous surface of the prepuce about five millimetres from the corona glandis. The tissues under and about these cicatrices were not indurated, and the scars were doubtlessly the remains of chancroids acquired at some time previously. As stated before, there had been a discharge of seminal fluid, some of which was still within the urethral passage. At 8 10 A.M. the surface temperature of the body, taken on the side of the chest with a "Seguin" surface-thermometer, was 97°F.; per os it was 97 4°. The body cooled very slowly throughout the examination and the greatest amount of heat appeared to be retained in the brain. Rigor mortis set in about three hours after death.

The following measurements of the head were recorded (the measurements are given in centimetres). Maximum circumference (21½ inches), 54 6; maximum antero-posterior diameter (from the glabella to the maximum posterior point), 18·7; maximum lateral diameter (cephalic index = 82·88), 15·5; bi-auricular diameter (between the roots of the zygomæ), 15·0; length of the face (from the inter-superciliary point to the superior alveolar point between the middle incisors), 9 2; bi zygomatic diameter, 14·5; minimum frontal diameter, 12 0; diameter from the glabella to the inion, 19·1; from the vertex to the hair-line, 12 0; from the hair-line to the root of the nose, 6 0; from the root of nose to its base, 5·3; from the base of the nose to the chin, 7·0; from the vertex to the chin (diameter), 25·4; breadth between the pupils of the eyes, 6·8; breadth of the nose at its base, 3·4; width of the mouth internally, 4·0; externally, 5·0; length of the ears (both sides equal), 6·1. After these measurements had been taken about 50 minutes were devoted to the making of plaster-moulds of the entire head. A cast has since been made from these moulds and two photographic views, in full face and in profile, were taken of it.[2] Unfortunately the left ear in the mould had been broken during transportation from Auburn and the fragments were pieced together with difficulty. The defects have been rectified in the photograph. On the subject the ears were perfectly symmetrical, both as to form and size. The moulds were made upon the head while the body lay prostrate upon the table. This attitude gave rise to the prominence of the "Adam's apple," and to the slight parting of the lips. The hair was rubbed well with vaseline and was flattened as much as possible to prevent the plaster from adhering. On the skull the following measurements were taken: maximum antero-posterior diameter, 18 0 centimetres; maximum lateral diameter, 14 7 centimetres; cranial index = 81 66.

The head of Czolgosz, as is typical of the Poles, falls in the sub-brachycephalic class; according to Weisbach, the cephalic index of 40 Poles was 82·9 (82 88 in Czolgosz).

At the time of Czolgosz's reception at the Auburn State Prison (Sept. 27th) the measurements of his body were taken according to the Bertillon system by J. N. Ross. I reproduce here the more important figures (the measurements are given in centimetres):—Stature (five feet seven and a half inches), 171 4; stretch, 181 0; trunk, 91·1; head—length 18 6, width 15 6; cheek, width, 14·5; right ear, length, 6·3; left foot, 26·0; left middle finger, 11·7; left little finger, 9·0; left cubit, 47·2. "These measurements are all medium and each is consistent with the others. The stretch and cubit measurements might be said to be slightly out of proportion, indicating that his forearms were slightly longer than those of a majority of men of his stature, but this excess of length is not sufficient to call for comment." His weight on that day was 141 pounds. The marks and scars are here reproduced in the order in which they appear on the identification card of the Prison Department. "I. Sev. sm. cics. post. first finger, left hand near 2nd joint. Cic. of 1 ob. ex. on 1st phal. 3rd finger left hand post. II. Cic. of 3 rec. ver. crossing 3rd joint, mid. fgr. right posterior. Cic. of 1 circ. at 5 over right wrist post. III. Mole at 5 under left cheek-bone and 9 to left med. line. IV. Sev. moles on front and back of neck."

Next the cranium was opened and the brain was removed. The scalp was divided by means of a median incision passing from the glabella to the inion. On incising the scalp a quantity of dark fluid blood escaped. The scalp was of moderate thickness, firm, and well adherent to the skull. The two flaps of the scalp were dissected from the skull and were drawn down on either side of the head. The sutures were well marked and no synostosis was observed. Supernumerary or abnormally developed bones were not discernible. The calva was removed by a saw-cut passing around the cranium about 1·5 centimetres above the glabella and about 2 5 centimetres above the inion. In the removal of the calva the saw was supplemented by the chisel and the hammer. The calva came off rapidly, the dura mater being non-adherent. There was no marked escape of cerebro-spinal fluid. Along the saw-cut the skull was slightly flatter in the fronto-parietal region on the right side, while it was more curved or rounded on the left. The right parieto-occipital region was a trifle fuller than on the left side. The markings on the internal surface of the calva, such as the groove for the superior longitudinal sinus and for the meningeal vessels, the digitations, and the impressions for the Pacchionian bodies, &c., were all distinctly marked. The dura mater was greyish-white, moderately translucent, and somewhat dry; there existed a marked engorgement of dark fluid blood. The dura mater was neither tense nor loosened. The Pacchionian bodies were of the usual number and distribution. The inner surface of the dura mater was fairly moist. There were no evidences of hæmorrhagic pigmentation or of pachymeningitis.

The brain, invested by the pia-arachnoid, was exposed by crucial incisions into the dura mater which was perfectly non-adherent to the membranes within. The brain was removed carefully and during most of the subsequent examination was kept in a salt solution (about one part in 20 parts of water). At the time of removal, still invested by the pia-arachnoid and with the ventricles unopened, the entire brain weighed 51½ ounces avoirdupois (1460 grammes). The base of the skull was normal in every respect. The pia-arachnoid was of normal thinness and devoid of opacities or other signs of disease, past or present. The only unusual appearance was an injection of bright red blood in the finer vessels of the pia, due, if we may judge from previous reports of necropsies on electrocuted criminals, to the high electromotive force exerted by the fatal current in this part of the body. The pia was stripped off with ease, being nowhere adherent to the cortex.

*Examination of the brain.*—In general the brain presented no marked peculiarities of shape or size. It was firm to the touch and no portion of it, despite most careful examination, felt softened or indurated. It was divided into its natural segments according to the following method. The ectal border of the optic tract and the tænia thalami ("ripa" of Wilder) were used as guides for a single simple incision; those of either side converge cephalad to meet in front of the chiasm; the usual cut through the callosum and the

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[1] Cited by Dr. Carlos F. MacDonald in "The Infliction of the Death Penalty by means of Electricity," 1893.

[2] THE LANCET, Feb. 1st, 1902, p. 281.

the exception of considerable but not profound anæmia her general condition is good. The presence of ascites with solid ovarian tumours is not in the least to be understood as evidence of malignancy, for the innocent growths are invariably accompanied by it. It is a curious phenomenon in intra-abdominal disease that a solid tumour—e.g., a fibroma of the ovary—should cause ascites, while a growth of precisely similar structure in the uterus should not. As in the last case, the œdema of the lower extremities is a mechanical effect of pressure. The solid nodules felt in the posterior fornix being well defined, freely moveable in the fluid, and accompanied by no peritoneal induration, are unlikely to be secondary malignant deposits. They are in all probability small subperitoneal fibroids. This case, therefore, admits of a favourable prognosis.

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# PRELIMINARY NOTE ON THE POSSIBILITY OF TREATING MITRAL STENOSIS BY SURGICAL METHODS.

BY SIR LAUDER BRUNTON, M.D. EDIN., F.R.S.,
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MITRAL stenosis is not only one of the most distressing forms of cardiac disease, but in its severe forms it resists all treatment by medicine. On looking at the contracted mitral orifice in a severe case of this disease one is impressed by the hopelessness of ever finding a remedy which will enable the auricle to drive the blood in a sufficient stream through the small mitral orifice, and the wish unconsciously arises that one could divide the constriction as easily during life as one can after death. The risk which such an operation would entail naturally makes one shrink from it, but in some cases it might be well worth while for the patients to balance the risk of a shortened life against the certainty of a prolonged period of existence which could hardly be called life, as the only conditions under which it could be continued might to them be worse than death. I was much impressed by the case of a man under middle age whom I had under my care at St. Bartholomew's Hospital. For no fault of his own, but simply because of his disease, this man was really exiled from his family and one might almost say imprisoned for life inasmuch as he could only live in a hospital ward or a workhouse infirmary. Whenever he left the hospital or infirmary with an amelioration of his distressing symptoms and returned home the exertion brought on an exacerbation and he had to leave home again in a few days to return to the hospital or infirmary. It occurred to me that it was worth while for such a patient to run a risk, and even a very grave risk, in order to obtain such improvement as might enable him at least to stay at home. But no one would be justified in attempting such a dangerous operation as dividing a mitral stenosis on a fellow-creature without having first tested its practicability and perfected its technique by previous trials on animals. Accordingly I obtained a licence and certificates a year ago in order to make the necessary experiments, but unfortunately other calls upon my time have not allowed me to do more than to make trial experiments of dividing stenosed valves in diseased hearts from the post-mortem theatre and on healthy valves in the hearts of cats, and also to try the proposed operation in the dead animal. It may be some months longer before I can get anything more done, and I therefore think that it may be worth while to write this preliminary note, especially as, after all, if the operation is to be done in man it will be surgeons who will do it, and they must, of course, make their own preliminary experiments, however fully the operation may be described by others, and each must find out for himself the method which he will employ in each particular case.

The first question that arises is whether the mitral orifice should be enlarged by elongating the natural opening or whether the valves should be cut through their middle at right angles to the normal opening. I think there can be little doubt that the former would be the better plan, but the latter is the more easily performed, and it might be sufficient to effect the desired purpose of facilitating the flow of blood from the auricle into the ventricle. The knives which I have used have been like tenotomy knives, but some which I have had made of ladies' bonnet pins were too thin and flexible for stenosed valves although they were sufficiently strong to divide the normal valves in the hearts of cats. The cutting edge of some of these was only a quarter of an inch, but this is too short and a cutting edge of from half an inch to an inch is really required. The main part of the valve can be divided with comparative ease, but the thickened edge is firm and it resists the knife. I have not yet decided on the best form of knife, and its form must depend to some extent upon whether the surgeon decides to operate from the auricle or from the ventricle. The latter is less likely to bleed as the knife need not be much thicker than a needle, and a needle wound of the ventricle rarely gives rise to any bleeding. I have often observed this in animals, especially during the experiments of the Hyderabad Chloroform Commission. The same is the case in man, whilst a needle puncture in the auricle may give rise to much bleeding.[1]

The plan which I have used (but only in the dead animal) for exposing the heart is that of Ninni of Naples, recommended by Rotter and described in the *Medical Review* for July, 1900, p. 400. In consists in making incisions from the left edge of the sternum outwards to the left along the lower edges of the third and fifth ribs, connecting their outer ends by a third incision, and dividing both the soft structures and the fourth and fifth ribs. The window thus made is forcibly turned back on the sternum, the sternal attachments of the ribs yielding to the pressure. In this way the heart is sufficiently exposed, and the lung being pushed back the pericardium can be divided and the knife can be introduced into the ventricle. I have only inserted the knife into the ventricle *in situ*, and if one wished to operate through the auricle the window would probably require to be made by an incision at the lower border of the second rib, although by pulling upon the heart it might be displaced sufficiently to allow a knife to be put into the auricle even when the incision is made at the lower border of the third rib.

In many experiments made for other purposes I have been astonished at the way in which the heart went on beating, apparently quite unaffected by pulling, compressing, or handling of any kind. In operating on the living heart the knife should be introduced during diastole, as one is less likely to wound the opposite wall of the ventricle. The pericardium should not only be opened for convenience of operation, but should, I think, be left open so as to allow any blood which might ooze out through the ventricular wound to flow away instead of remaining in the pericardial cavity, for the heart has very little power indeed to resist pressure from pericardial distension, especially if it comes on rapidly.

The good results that have been obtained by surgical treatment of wounds in the heart emboldens one to hope that before very long similar good results may be obtained in cases of mitral stenosis.

Stratford-place, W.

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# THE TRIAL, EXECUTION, NECROPSY, AND MENTAL STATUS OF LEON F. CZOLGOSZ,

ALIAS FRED NIEMAN, THE ASSASSIN OF PRESIDENT MCKINLEY.

BY CARLOS F. MACDONALD, A.M., M.D.,
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*With a Report of the Post-mortem Examination,*

BY E. A. SPITZKA,
OF THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

(*Concluded from p. 293.*)

## THE REPORT OF THE POST-MORTEM EXAMINATION BY MR. SPITZKA.

THE post-mortem examination was performed by me under the supervision of Dr. Carlos F. MacDonald of New York, who was requested by the State Superintendent of Prisons to take medical charge of the execution in conjunction with Dr. John Gerin, prison physician. The examination began at would be independent but for a superficial junction with the para-central. The occipital fissure was deeply confluent with the calcarine. The post-calcarine was tri-radiate and was separated from the calcarine by a posterior cuneo-lingual isthmus. The super-frontal gyrus was fairly well marked by many transverse fissures, and by two long and distinct rostral (rostral and sub-rostral) fissures. The pre-cuneus was large, a little larger than its fellow on the left side. The cuneus was as small as on the left half. The sub-calcarine gyrus was of considerable width in its caudal portion. The insula presented an ordinary degree of development and, as on the left side, it possessed six gyres, with seven peri-insular digitations.

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[1] Medical Record, Dec. 15th, 1900.

*Section of the brain.*—In cutting the brain, the resistance to the knife suggested neither increased nor diminished consistence. The cut surface was moderately moist, the grey as well as the white matter were of normal colour, the cortex was of the usual thickness, and there existed neither anæmia nor hyperæmia. No hæmorrhages, sclerotic patches, neoplasms, or other lesions were discoverable. The basal ganglia, crura, cerebellum, pons, and oblongata were all perfectly normal, there being even an absence—so far as naked-eye examination could determine—of the small hæmorrhages in the floor of the fourth ventricle which have been usually found in electrocuted criminals.[4] The spinal cord was not examined.

*Examination of the thorax and abdomen.*—An incision was made from the top of the sternum to the pubic symphysis, a quantity of dark fluid blood escaping. The diaphragm was found to be attached to the sixth rib on both sides of the sternum. About from three to four fluid-drachms of clear fluid were found in the pericardial sac. The heart was firm and appeared to be in a tetanised condition; it had ceased in systole. This contracted condition of the heart was doubtlessly due to the high electromotive force of the fatal current. The ventricles were empty; the heart-walls, endocardium, and valves were normal. The weight of the heart was 11 ounces. Both lungs were somewhat emphysematous, floating a trifle more than half out of water. They were moderately pigmented and of firm consistency. None of the bronchial lymph-nodes were enlarged. Except for a few bands of pleuritic adhesions of the right lower lobe, there were no lesions in either lung. The left lung weighed seven and three-quarter ounces, the right lung eight and a half ounces. The larynx, the aorta, and the venæ cavæ were normal. The stomach was in the normal position, well contracted, and well under the diaphragm, with only a small residue of food near the pyloric end—the prisoner having had nothing to eat since the evening before the execution.[5] The examination of the intestines was a brief one as nothing unusual was seen. The appendix was eight centimetres in length, free, and lay dorsad and mesad of the cæcum. The pancreas was normal. The liver was dark and hyperæmic but healthy; there were no patches, infarctions, or other lesions. The gall-bladder contained about one ounce of clear bile. The liver weighed 61 ounces. The spleen was also hyperæmic, mottled with light pink streaks, but of normal structure. Its weight was seven and three-eighths ounces. The kidneys were moderately supplied with fat, markedly hyperæmic, but all the structures could be made out clearly to be of normal condition. The left kidney was somewhat larger than usual. The capsule was non-adherent in both instances. The left kidney weighed seven and a quarter ounces; the right weighed five and a quarter ounces The bladder was somewhat contracted; it was firm and contained about three ounces of clear urine. The bladder-wall and mucous membrane were normal in all respects. The prostate was rather firm but not enlarged. The urethra, testes, &c., were normal.

It had been my purpose to make a fuller anatomical and anthropometrical investigation upon the assassin, but the peculiar circumstances which arose in the matter of the disposal of the body and the anxiety of the prison warden to put the body under earth forced me to conclude my researches after having obtained the most essential data for purposes of record and future study.

The results of the necropsy can be summed up by saying that Czolgosz was in excellent health at the time of his death. There was, of course, a marked condition of hyperæmia of all the viscera, and the blood was considerably altered in that it remained fluid, doubtlessly due to the destruction of the fibrin-ferment, or of the fibrinogen, or both. These phenomena, as also the seemingly tetanised condition of the heart, have been observed by E. C. Spitzka, Carlos F. Macdonald, Van Gieson, and E. W. Holmes[6] on criminals executed by lethal currents of electricity. The external appearances of the body of the assassin, especially the facial expression, have been admirably described by Murat Halstead, who happened to be present, in a short but vivid account of the necropsy entitled, "Czolgosz after Death."

> The spectacle was interesting. The assassin had been dead but a few minutes and was lying at full length on his back on the table provided for the surgeons, his body white as marble, his face not at all distorted. One might say he was as if sleeping, but that would not describe the expression of the features, though that was almost of perfect repose. The head rested on the back part of the table so as to elevate the chin and allow the forehead to slope downward. There was no sign of a great agony; the hair had not been removed for the electrode, but was full of water from the sponge, and in disorder. If there was any mark on the head made by the deadly shock it was not visible. There was a red blotch on the right leg below the knee. ...... The strong throat, with a distinct Adam's apple, was prominent. The lips were slightly parted with more than the curl they had in life. ...... There was nothing in the appearance of the body of the emaciation from imprisonment so often referred to. Any physician would say the corpse was that of a well nourished young man. The figure was of good proportions, his limbs especially so. The arms were not muscular. Evidently he was not a man who had cultivated his muscles by exercise or expanded them by labour. The arms were of a young man of leisure—smooth, round, and fair. His hands were not in any way notable. He had high insteps, neat ankles, and long toes. The muscles of the legs were better developed than those of his arms, indicating he was swift of foot. He was not noticeably spare in body; his chest was round and symmetrical—not lean—but the ribs quite distinct. With his head thrown back, it seemed to have been well poised in life, more so than is shown in his pictures—all of which that are familiar having been taken in prison. Nothing in his face or his person gave indication of heavy feeding or drinking, or of evil indulgence. There were none of the inevitable traces of confirmed dissipation.

The question as to whether the body of Czolgosz invested a healthy mind opens up a wide topic for discussion which it is not entirely in my province, to pursue. So far as our knowledge of the correlation of brain-structure and brain-function extends, nothing has been found in the brain of this assassin that would condone his crime for the reason of mental disease due to intrinsic cerebral defect or distortion. The weight of the brain, though by itself unimportant, when considered in its other relations points to a good condition of the organ. Divested of its membranes, dissected, drained, and after being immersed in a salt solution for several hours, its weight was 1415 grammes, a trifle less than 50 ounces. This weight is even a little over the average. Giltschenko[7] *records observations upon the* weight of 102 Polish brains, the average being for males 1397·8 grammes, with an average stature of 168·12 centimetres. The development of the fissures and gyres from a morphological point of view had taken place in the direction usual in ordinary average brains. There were no marked evidences of arrested development or of pithecoidal anomalies. Generally speaking, this brain did not exhibit that especial kind of asymmetry of gyral structure in the cerebral halves that is so characteristic of the brains of highly endowed individuals. *There were many features in* the one hemisphere that were reproduced almost exactly alike in the other. The few peculiarities encountered in the course of the fissures, such as the confluence of the left pre-central, by its anterior ramus, with the super-frontal, across the medi-frontal gyrus; or the separation of the right cephalic para-central limb from its stem, while at the same time the inflected joined the para central (a feature found by me in nine out of 160 hemi-cerebra in which the inflected was present),[8] and also the smallness of the cuneus, are insignificant *so far as individual brains are concerned.*

The skull was not symmetrical, but the asymmetry was

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[4] Dr. Carlos F. MacDonald The Infliction of the Death Penalty by *Means of Electricity*; being a Report of Seven Cases, with Remarks on the Methods of Application and the Gross and Microscopical Effects of Electrical Currents of Lethal Energy on the Human Subject, 1893.

[5] The "hearty breakfast" so graphically described in most newspapers was but a figment of the imagination.

[6] The Anatomy of Hanging, with a Report of the Electrocution of Fritz Meyer at Sing Sing (now Ossining).—Pennsylvania Medical Journal, July, 1901.

[7] Das Gewicht des Gehirns und einzelner Teile desselben bei verschiedenen Volksstämmen Russlands. Nachrichten der Königlichen Gesellschaft der Freunde der Naturkunde, Anthropologie, und Ethnologie an der Universitat Moskau, Band xcv. Arbeiten der Anthropologischen. Sektion B 19, Moskau, 1899, pp. 99-220. (Russian.) Ref. in Jahresbericht ueber Fortschritte der Anatomie und Physiologie, 1899, Band v., pp. 455-458.

[8] The Mesial Relations of the Inflected Fissure. Observations upon 100 Brains. Proceedings of the Association of American Anatomists, 1901, pp. 105-115, New York Medical Journal, Jan. 25, 1901, pp. 6-10.

terma (lamina terminalis) completed a tri-section which left the cerebrum (prosencephal) and brain-axis separated as nearly the ideal as could be. This mode of dissection is a modification of Meynert's plan and is a method by which each hemi-cerebrum, with the insula intact, is separated from the brain-stem; whereas Meynert by trenching round the circum-insular boundaries separates the convex cortical mass from the brain-stem plus the insula, leaving a cortical component attached to the axial structures. The Meynert method consequently does not give the weight of the cerebral hemispheres, strictly speaking. As far as the caudatum and lenticularis are concerned this would not be a serious objection; but as it also excludes the important cortical area of the insula—no inconsiderable portion of the cerebral projecting and associating tracts—it falls short of the method adopted here. After the brain had been thus dissected and drained and the pia-arachnoid stripped off the cerebrum, the segments were found to have the following weights:—Left hemi-cerebrum (without pia), 585 grammes; right hemi-cerebrum (without pia), 600 grammes; cerebellum (with pia-arachnoid), 166 grammes; and the isthmus (with pia-arachnoid), 64 grammes. A total weight of 1415 grammes, or a trifle less than 50 ounces, was thus given.

Examination of the paracocles (lateral ventricles) in both hemi-cerebra revealed the veins of the striatum (the striatal veins) injected with deep violet-coloured blood. The cornua were of normal extent and conformation throughout. The endyma was smooth, the choroid plexus was normal and contained little blood; the velum interpositum ("velum" of Wilder) was normal.

The following is a description of the fissures and gyres:—

*Left hemi-cerebrum.*—The Sylvian fissure was six and a half centimetres in length, the epi-Sylvian two and a quarter centimetres; the hypo-Sylvian was absent. The pre-Sylvian ramus was two centimetres in length and the sub-Sylvian one centimetre in length. The central fissure was fairly flexuous and ramified; it was uninterrupted throughout its length and was separated from the Sylvian by a narrow isthmus. At its ventral end the fissure terminated in a hook-like manner. The dorsal end appeared on the mesial surface. The super-central fissure was confluent with the super-frontal but was separated from the pre-central fissure The super-frontal fissure was distinct in the mid- and post-frental regions but was absent in the pre-frontal region. The three-tier type was preserved in the pre-frontal region by the existence of a medi-frontal fissural segment about four centimetres in length and which was confluent with the orbito-frontal. The pre central fissure was confluent with a small diagonal fissure and this in turn with the pre-Sylvian. It sent an "anterior pre-central ramus" across the medi-frontal gyrus to anastomose with the super-frontal fissure. The sub-frontal fissure was independent and sent off several rami into the neighbouring gyres. There was a very long radiate fissure. The pre-central gyrus was not very broad as compared with the post-central. The three frontal gyres were fairly massive and were marked by fissures which ran generally transverse. The post-central fissural complex consisted of three segments. The dorsal one was very flexuous and ramified, but independent. The middle segment was confluent with the parietal, and was only superficially joined to the third segment, the sub-central. The trans-post-central was hardly visible on the external surface, but on examination it was found to communicate with the circum-insular fissure. The parietal fissure was notable for the angle which it made with the inter-cerebral cleft, converging rapidly towards it as it passed the cauda. It communicated with the paroccipital fissure over a vadum about six millimetres in depth. Otherwise the paroccipital did not communicate with any other fissure. There were two trans-parietal fissures—the cephalic one communicating with the pre-cuneal fissure on the mesial surface. The temporal lobe was of good size and shape. The super-temporal fissure was uninterrupted throughout its length and communicated with the inter-medial over a slight vadum. The medi-temporal fissure was represented by four segments. Numerous fissures, the lateral occipital among them, marked the region of the occipito-temporal transition. The post-calcarine fissure appeared on the lateral surface for about two centimetres. The post-central gyrus was of good development and was fairly wide. The marginal, angular, and post-parietal gyral portions of the sub-parietal lobule exhibited a moderate development. The parietal gyrus was of cuneiform shape, with broad cephalad and narrow caudad. The super-temporal gyrus was very sinuous. The remaining temporal gyres were fairly wide and well-developed. The sub-calcarine gyrus was wide in its caudal portion. The cuneus was small, rather unusually so. The pre-cuneus was of good size and conformation. The para-central gyrus was of typical appearance and of the usual size. It was traversed by a well-marked inflected fissure and by a tri-radiate intra-para-central fissure. The mesial surface of the super-frontal gyrus was of moderate size and was marked by five or six transverse fissures, three of which were rami of the super-callosal. The callosal gyrus in its cephalic half was doubled by a long fissure running parallel with the super-callosal; in its caudal part it was traversed by several transverse fissures. There were two well-marked rostral fissures (rostral and sub-rostral) and a short trans-rostral. The super-callosal fissure was long and anastomosed with the para-central over a vadum of five millimetres. The para-central fissure in turn anastomosed with the pre-cuneal over a vadum of three millimetres. The occipital and calcarine fissures anastomosed freely. A "posterior cuneo-lingual" sub-gyrus tended partially to separate the calcarine from the post-calcarine. The collateral fissure was fairly well ramified. The insula exhibited a good development. There were six gyres proper with seven peri-insular digitations. The insula was completely covered by the opercula.

*Right hemi-cerebrum.*—The Sylvian fissure was five and a half centimetres in length; the epi-Sylvian, three centimetres; the hypo-Sylvian, one and a half centimetres; and the pre-Sylvian, two and a half centimetres. The sub-Sylvian was very short. The epi-Sylvian was three centimetres long and the hypo-Sylvian one and a half centimetres. The central fissure was uninterrupted throughout its length and was separated from the Sylvian by a very narrow isthmus. Its dorsal end crossed the dorsi-mesal margin. The super-central fissure anastomosed with a long super-frontal fissure but not with the pre-central fissure. The pre-central fissure joined both the trans-pre-central and the diagonal and by means of these the Sylvian cleft.[3] This fissure gave off an "anterior pre-central ramus" from which sprang the caudal segment of the sub-frontal fissure. The super-frontal fissure was long and uninterrupted, extending nearly to the frontal pole. There was no true medi-frontal fissure present. The sub-frontal fissure was in two segments, the caudal segment being confluent with the pre-central by means of its "anterior ramus"; the cephalic segment anastomosed with the orbito-frontal. Besides an independent radiate fissure there were other unnamed fissures in the sub-frontal region. There were two long sagittally directed orbital fissures; the lateral one of these communicated with the orbito-frontal. As in the left half the pre-central gyrus was rather narrow as compared with the broader post-central gyrus. The three frontal gyres were all of good width and were chiefly marked by transverse fissures. The post-central fissural complex was made up of two segments superficially confluent with each other. The dorsal segment was short. The ventral segment was longer and was confluent with the parietal fissure. The parietal fissure was uninterrupted, deep, and separated from the paroccipital fissure by an isthmus. There were a well-marked post-paroccipital fissure and one distinct trans-parietal. The super-temporal fissure was long, uninterrupted, and not deeply confluent with any other fissure. There were four medi-temporal fissural segments. The inter-medial joined the parietal. There was a fairly well-marked "lateral occipital" fissure. The post-central gyrus was fairly wide and flexuous. The parietal gyrus was wide and exhibited the same cuneiform shape as described for the left side. Of the sub-parietal gyres the angular gyrus was of fair size, while the remainder of this territory showed only a moderate development. The paroccipital gyrus was very small, but was quite flush with the general surface of the brain. The gyres of the temporal lobe showed very good development, and in the occipito-temporal transition the markings were quite complex. On the mesial surface the super-callosal fissure consisted of two segments, and there was a similar duplication of the callosal gyrus (in its cephalic portion) as has been described in the left half. A notable peculiarity consisted in the confluence of the inflected fissure with the para-central stem, while the cephalic para-central limb was separated from its stem but was joined to the caudal end of the super-callosal. There was a tri-radiate intra-para-central. The pre-cuneal fissure mass had been felt bulging through the posterior vaginal wall an attempt at delivery by means of forceps had been made, with the result that the mass protruded through the vulva. The mass, which proved to be an ovarian dermoid cyst, became detached as Dr. Haultain explored it. After delivery was effected by the forceps the rent in the vagina was packed with gauze; the patient recovered.

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[3] Found by Sernoff in 44 per cent. of Polish brains.

Thus the most recent records only confirm the prevalent teaching that an ovarian tumour detected during pregnancy should be removed, that its removal may be the best course during labour, and that a tumour of this kind is liable to undergo in the puerperium prejudicial changes which indefinitely increase the dangers of operation. This latter teaching is strongly supported by my own operative experience which I will now relate.

### OVARIOTOMY IN PREGNANCY.

I will begin with two cases of *ovariotomy during pregnancy* in my own practice. In the first all complications and dangers were anticipated, none existing at the date of the operation. In the second torsion of the pedicle occurred and the tumour lay in a position prejudicial to labour. *In each case the complication had been diagnosed* by the patient's private medical adviser who foresaw danger.

CASE 1.—A patient, aged 29 years, who was under the care of Dr. S. T. Plumbe of Maidenhead was sent to me in June, 1897, *on account of the discovery of a tumour*, pregnancy being evident. She had been married for eight years and had borne three children—the youngest was two and a half years old—and there had been no abortions. The catamenia had been absent for 15 weeks. In November, 1896, the patient *first noticed an abdominal swelling, with much dull pain*. Dr. Plumbe had recently examined her and had detected a tumour and a pregnant uterus distinct from each other; the former had grown larger since the cessation of the catamenia. I found a freely moveable spherical cyst, as large as a big orange, *rising above the right groin*. *On its* inner side was the gravid uterus, the fundus rising three inches above the pubes. The cyst could be perfectly separated from the uterus and pushed to the right or upwards. No part of the tumour came down into the pelvis. There could be no *doubt about the diagnosis*. I had seen some bad cases where pregnancy had recently occurred, cases which will presently be referred to. It was clear that an ovariotomy would be simple if performed at once; if delayed, on the other hand, several painful or *dangerous complications* were *highly probable*. The cyst, for example, might easily have fallen behind the uterus, as happened early in the history of the next case. Then there would have been a dermoid cyst obstructing labour, a complication entailing several obvious dangers. The patient was *very strong and healthy*. The pulse was 84 and the temperature was 98° F. I therefore operated on June 17th, 1897. I exposed a dermoid cyst. On account of the nature of the tumour I enlarged the incision and extracted it entire. It is very inadvisable to sponge, mop, or *flush the peritoneum in a pregnant subject*, yet such procedures are absolutely necessary if dermoid matter fouls that serous cavity, and such an accident is always possible however carefully the trocar is manipulated. The pedicle was three inches long, anatomically it was normal and untwisted. *I ligatured the ovarian vessels and then* transfixed and tied the entire pedicle which was not broad, and I took care not to tie the ligature close to the uterine cornu. The left ovary and tube were healthy. The lower border of the great omentum had been pushed up by the tumour and was adherent to the parietes; I removed it in part after careful ligature. I closed the parietes with interrupted silkworm-gut sutures, after bringing the recti and their sheaths together with continuous catgut. The tumour contained dark-brown hair, grease, and a flat piece of bone.

The after-history of the case was that the patient made a good recovery and was delivered spontaneously on Dec. 11th, 1897, of a female child. She has borne one more since that date. I will presently speak of a remarkably similar case where I had not the opportunity of operating till after the puerperium.

CASE 2.—The patient, a married woman, aged 25 years, was sent to me by Dr. R. Purdie of Haverstock Hill on Oct. 1st, 1901, he having diagnosed pregnancy complicated by a tumour. The patient, who was married in December, 1899, was delivered of a child at term in November, 1900. Dr. Purdie used the forceps, not on account of any obstruction, but because he found the patient somewhat exhausted, whilst the pains were ineffectual and the head was arrested in the perineum. There was no difficulty in delivering the child. Recovery was rapid; the child was suckled for seven months, and the patient menstruated twice (in February and in April, 1901) during lactation. The periods did not re-appear after the first week in April, 1901. Early in August the patient had a sharp attack of abdominal pain which laid her up for two or three days. About a week later she had another attack which laid her up for a week. Since then she had no more pain, permanent or temporary. Dr. Purdie had already discovered a pelvic tumour by accident when examining her at the beginning of this pregnancy. I examined her on Oct. 1st when she was admitted into the Samaritan Free Hospital. Of the pregnancy there could be no doubt. The soft gravid uterus rose to above the umbilicus. The cervix was soft and lay high in the pelvis. In Douglas's pouch and the left fornix lay a firm mass quite immoveable. On bimanual palpation its upper limits could be indistinctly defined behind the left border of the uterus in the left iliac fossa. The patient was put under an anæsthetic, and then the presence of some kind of tumour could be more clearly defined. It was separate from the uterus and it pushed the cervix upwards and forwards—in other words, it obstructed the inlet. The tumour seemed to be absolutely fixed and was very firm. Owing to its position palpation from above and below simultaneously was not easy, so that it remained uncertain whether it was solid or cystic. Attempts were made to push up the tumour gently; it was fortunate that not much force was used. Dr. C. Hubert Roberts, Dr. F. J. McCann, Dr. C. H. J. Lockyer, and Dr. R. H. Bell examined her at a consultation. An exploratory operation was considered preferable to expectant treatment.

I operated on Oct. 15th, Mr. A. C. Butler-Smythe assisting. I exposed the pregnant uterus, passing my hand into the left iliac fossa. I detected a tumour which I partly set free from soft vascular adhesions. I object to working too much in the dark in any case, and in this instance I wished to avoid bursting the cyst (it felt clearly cystic), as wiping up fluids and flushing the peritoneum greatly add to the chances of premature labour. I therefore enlarged the incision and drew the gravid uterus forwards out of the abdominal cavity. Then I saw that the left appendages were perfectly normal. The tumour was the right ovary dilated into a small pyriform cyst and displaced to the left. Its pedicle, twisted two turns, was stretched tightly across the back of the uterus. At the twisted part the pedicle was no thicker than a No. 3 catheter and on the distal side it was full of organised clot. I transfixed, tied, and divided it. The adhesions in Douglas's pouch and at the back of the uterus bled a little. The bleeding was checked by pressing sponges down into the pelvis from which a few clots were removed. Then the uterus was reduced and the abdominal wound was closed.

The after-history of the case is as follows. The patient, a healthy young woman free from neuroses, showed no sign of shock, and flatus passed within 24 hours. On the fourth day the bowels were moved freely by a dose (one drachm) of sulphate of magnesia followed by an enema. As is usual when the pedicle has been already twisted, there was no local pain, since the tension following the ligature of a broad normal pedicle did not exist. Not the least sign of uterine contraction or of bloody or any other discharge was observed. The patient left the hospital quite strong on Nov. 6th. Until her confinement she enjoyed good health and could attend to her ordinary housework without inconvenience. On Jan. 8th, 1902, she was delivered spontaneously of a living and well-developed female child. *Thus the operation did not hasten labour* which, calculating from the first week in April, took place precisely at term. Dr. Purdie informed me that the head was on the perineum when he arrived, so that he had no opportunity for an examination. Labour was easy and the *abdominal wound looked perfectly well and* showed no sign of stretching.

This case offers two special points for comment. In the first place, attempts to push up an ovarian tumour are objectionable, and I was not in favour of such a practice even in this instance; tapping is equally inadvisable. Semon of Dantzig[11] detected a tumour in the pelvis in the third month of pregnancy, and in the sixth month he operated. The tumour was a prolapsed kidney, which it was slight and fully within the normal range of variation. An absolutely symmetrical skull probably does not exist.

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[11] Monatsschrift für Geburtshülfe und Gynäkologie, October, 1901, p. [illegible].

It is a probable fact that certain oft-mentioned aberrations from the normal standard of brain-structure are commonly encountered in some criminal or degraded classes of society, and those who have attempted to found a school of degeneracy have endeavoured to explain crime and social wickedness as due to the "accidental persistence of lower types of human organisation." But these structural anomalies, so far as they have been described in the brains of criminals, are too few and too insufficiently corroborated to warrant us in drawing conclusions from them. Various perversions or anomalies of mind may exist in this class without presenting a uniform criminal type, either from the sociological or the anatomical aspect. Of course, it is far more difficult—and it is impossible in some cases—to establish sanity upon the results of an examination of the brain, than it is to prove insanity. It is well known that some forms of psychosis have absolutely no ascertainable anatomical basis; and the assumption has been made that these psychoses depend rather upon circulatory and chemical disturbances. So far as this question touches upon the brain and body of Czolgosz, there have been found absolutely none of those conditions of any of the viscera that could have been at the bottom of any mental derangement. Taking all in all, the verdict must be: "Socially diseased and perverted, but not mentally diseased." The most horrible violations of human law cannot always be condoned by the plea of insanity. "The wild beast slumbers in us all. It is not always necessary to invoke insanity to explain its awakening."

In conclusion, I wish to express to Dr. Carlos F. MacDonald my appreciation of, and thanks for, the exceptional opportunity afforded in the performance of this necropsy.

# OVARIAN TUMOURS AND OVARIOTOMY DURING AND AFTER PREGNANCY.

BY ALBAN H. G. DORAN, F.R.C.S. ENG.,

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IN the Cavendish Lecture for 1897[1] Sir John Williams showed that ovariotomy had proved as successful during pregnancy as apart from pregnancy, whilst the mortality associated with obstetric operations undertaken in cases of labour complicated by ovarian tumour was appalling. Mr. J. Bland-Sutton[2] gives in the first of his three lectures delivered before the Medical Graduates' College and Polyclinic a graphic description of two cases of labour. In the first the fœtus was extracted through an incision in the uterus and was saved; then the tumour, which lay in the pelvis, was removed and the mother recovered. In the second the tumour was pushed up, the child was delivered with forceps and was lost, whilst on the third day ovariotomy was performed after septic peritonitis had set in and the patient died. Since those authorities wrote the above observations Dr. Orgler of Breslau has prepared a most exhaustive treatise on ovarian disease and ovariotomy in pregnancy.[3] After an abstract of previous clinical and statistical records he places before us a valuable table of 148 cases of ovariotomy during pregnancy reported between 1889 and the beginning of 1901, excluding all reports which are valueless or even likely to mislead on account of important omissions. The conclusions deserve brief notice. Only six mothers were lost (a mortality of 4 per cent.), but in only four was the fatal result clearly caused by the operation, as in one case death was due to criminal abortion during convalescence from the ovariotomy and in one the patient survived the operation three months and the cause of death was not reported. The four remaining deaths make the mortality only 2·7 per cent. Subtracting the two mothers lost not directly through the operation pregnancy was interrupted in 36 out of 146 cases (24·7 per cent.), "interruption" including not only abortion and premature labours but also the four maternal deaths from operation. Thus in 110 cases pregnancy was uninterrupted. 49 were specified as having been delivered at term and some of the remaining cases were lost sight of before delivery. Amongst the 36 interrupted pregnancies, besides the four deaths, was one case of criminal abortion not fatal to the mother, two of the induction of premature labour by obstetricians, and one of vesicular mole pregnancy. Thus, 32 cases remain where untimely conclusion of the pregnancy was due purely to the operation (22·5 per cent.). In 30 cases the ovariotomy was double; in 24 of this group pregnancy was not interrupted and the remaining six included one case where the mother died. In all the 148 cases, excepting seven, the ovariotomy was abdominal. The minority was made up of vaginal operations; in two of them the pregnancy was interrupted, in two it was specified as proceeding to term, and in the remaining three it was simply recorded as continuing after convalescence. Dr. Orgler shows that when ovariotomy is postponed till after labour abortion occurs in 17 per cent. of well-observed cases. Since the appearance of this valuable monograph Dr. J. B. Hellier of Leeds[4] has published three cases, in none of which was the pregnancy interrupted by the operation, but in one done at the sixth month a stillborn child was born at the eighth month. In October, 1901, Dr. Herbert R. Spencer[5] read before the Obstetrical Society of London notes of a fatal case of rupture of a large ovarian cyst in the first week of the puerperium. The patient had refused operation and she died just after arriving at the hospital.[6] Lowenberg[7] reports a case of acute torsion of the pedicle in the third month; double ovariotomy was performed. On the thirty-fourth day, the date at which the report ends, there was no sign of abortion. M. Puech[8] reports a case which shows, what we must always bear in mind, the perils of labour when ovarian tumour is present. The patient, a primipara, aged 26 years, was confined at term. The labour was lingering and a soft, non-fluctuating tumour filled the greater part of the pelvis. The cervix lay high up against the pubes, and a foot presented and was drawn down. At the end of two hours labour had made no progress. The tumour was tapped for diagnosis, Cæsarean section being proposed. Over 600 grammes of a puriform fluid came away. Then delivery was effected, but the child, a very big male, died during extraction. Three months later Puech successfully operated, removing a large dermoid of the right ovary full of hair and grease. Dr. J. M. Munro Kerr[9] reduced a dermoid cyst obstructing labour by pushing it out of the pelvis, the patient being under chloroform. The attempt did not succeed until the head was disengaged; then the forceps was applied and the child was extracted. Five weeks later the tumour was successfully removed.

M. Puech and Dr. Munro Kerr can justify their procedures by the results which followed. None the less do both cases teach that it is always best if possible to remove a dermoid cyst during pregnancy and many experienced operators question if it be not best to operate during labour when any kind of ovarian tumour causes obstruction. Otherwise it may be damaged by pushing and handling and may become infected in the puerperium, an accident not rare even when the tumour has not caused obstruction. Thus whilst Mr. Bland-Sutton was forced to operate, in his second case related above, on the third day of the puerperium when infection had set in, and lost the case, I likewise had to operate in a case which will presently be related two months after delivery and puerperal infection of the cyst, which had not obstructed labour. This case, too, did not end in recovery.

The most recently published instance of ovarian tumour associated with gestation is among the most remarkable within the whole literature of the subject. Dr. F. W. N. Haultain[10] attended a woman in her third labour which, when he first saw her, had lasted for 24 hours. As a soft facts of clinical experience and they afford, in my opinion, the most reasonable explanation yet offered of the strange varieties of clinical phenomena met with in these conditions. The four cases which form the subject of the present paper have been seen by me in consultation during the last year and illustrate in a very graphic manner many interesting points in connexion with word- and letter-blindness. No attempt, however, will be made to discuss each case in detail, as this would lead to a repetition of what has been done already in previous papers. I will, in the first place, simply narrate the cases without comment and afterwards will discuss only those special features of each which hitherto I have been unable to illustrate by such excellent clinical examples as these cases afford. It will be seen that many important facts observed in these cases strongly confirm the views developed in detail in previous papers on this subject.

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[1] THE LANCET, July 17th, 1897, p. 129.

[2] The Surgery of Pregnancy and Labour complicated with Tumours, Lecture I., THE LANCET, Feb. 9th, 1901, p. 382.

[3] Zur Prognose und Indication der Ovariotomie wahrend der Schwangerschaft, Archiv fur Gynakologie, vol. lxv., 1901, p. 126.

[4] THE LANCET, Dec. 21st, 1901, p. 1727.

[5] Transactions of the Obstetrical Society of London, vol. xliii., p. 224.

[6] An instance of rupture during pregnancy is reported by Fothergill in the Transactions of the Edinburgh Obstetrical Society, vol. xxvi., 1901, p. 114—"A Case of Pregnancy with Ovarian Cyst." Collapse and abortion followed the rupture, then septic infection and removal of placental tissue. A month later an operation was proceeded with during a sharp attack of peritonitis. Recovery ensued.

[7] Centralblatt fur Gynakologie, No. 51, 1901, p. 1389.

[8] Kysto Dermoide de l'Ovaire compliquant l'Accouchement, Gazette des Hôpitaux, Dec. 17th, 1901.

[9] Dermoid Cyst of Ovary obstructing Labour, Transactions of the Obstetrical Society of London, vol. xliii., 1901, p. 145.

[10] Expulsion of a Dermoid Ovarian Cyst during Labour, Journal of Obstetrics and Gynæcology of the British Empire, February, 1902, p. 243.

CASE 1.—Three years ago a man, aged 34 years, had an attack of left hemiplegia with paralysis of the left side of the face, from which he had been gradually recovering and now scarcely any trace of this remained. Ever since the hemiplegic attack he had suffered from severe pain above the right eye, which disappeared about a week before his aphasic attack came on. On July 5th, 1901, about mid-day, whilst at his work, he became completely aphasic. There had been very little warning before the attack, although in the morning he had said to his brother that he did not feel quite well. There was no unconsciousness or motor paralysis. His aphasia was at first complete, both motor and sensory. He could not speak and was completely word-blind and word-deaf, so that he was entirely cut off from communication with others. He could not express the simplest idea or simplest want, nor could he interpret any communication made to him by others either in writing or by speech. There had been a gradual improvement in every respect as to the motor, visual, and auditory aphasia, and when I first saw him (on the 12th) all these defects were only partial and a considerable improvement had taken place. With regard to his speech he had still some aphasic defect, but he could express all his wants and ideas, although imperfectly. He was very frequently at a loss for the proper word, only getting it after considerable pauses and hesitation, and he often used a wrong word. With regard to the auditory aphasia there were still traces of it present. He understood on the whole what was said to him, but it seemed to require considerable effort and mental concentration on his part to grasp the meaning of what was said to him. He often asked one to repeat a sentence and sometimes did not seem to grasp clearly the exact significance of a question or statement. The word-blindness was the symptom which had persisted in the most marked degree and regarding which he had been sent specially to consult me.

On examination I found that there was no letter-blindness. He read all the printed and written letters very fluently with an occasional mistake which, however, he could always correct himself. With regard to printed words there was considerable word-blindness, but not complete. He could not read any continuous sentence, but he could pick out here and there words by sight, especially the smaller and more familiar words, but the longer words always puzzled him and he was unable to read them by sight. If one allowed him to spell them out letter by letter he could, as a rule, name the word, but was unable to do so when restricted to the use of sight alone. With written words the word-blindness was still more marked. He could only pick out very few of the written words by sight and he himself was aware that he had greater difficulties with written than with printed words. The patient being a highly educated man and knowing Greek, Latin, and French, I tested him as to his power of reading each of these languages. Greatly to his own surprise I found that he read Greek correctly and with very little difficulty. I tested him with passages from Thucydides, Homer, and Xenophon and he read them all correctly. He read somewhat slowly, making very few blunders, which he always corrected at once himself. On testing him with Latin I found that though he did not read this so correctly as the Greek, he read it much more fluently and correctly than the English and that he was able to recognise by sight a much larger number of words. Many long Latin sentences he read without a pause, only now and again he failed to recognise a word by sight and had to spell it out letter by letter. French he did not read so well as Latin, but he read it better than English, being able to pick out by sight alone a much larger number of words. Thus of the four languages which he knew his word-blindness extended only to three of these, his power of reading Greek remaining intact. Of the three languages affected—viz., Latin, French, and English—the degree of word-blindness was not the same in each, being greatest with English, less with French, and least of all with Latin. In the last tongue the word-blindness was only very partial and he was often able to read whole sentences without a mistake. He read numbers with perfect fluency and correctness, both individually and in the most complex combinations. He performed sums in addition and subtraction correctly, but failed with multiplication and division, seeming to have great difficulty in remembering the multiplication table. He read musical notes as fluently and correctly as ever he did, without manifesting the slightest hesitation. He wrote to dictation, but not with perfect fluency and correctness. He evidently did so with considerable difficulty and made a good many mistakes. There was no ocular symptom or defect. There was no change in the visual fields and no abnormality in the fundus of the eye. The pupils were equal and the pupillary reactions were normal. The knee-jerks were active and there was no paralysis or paresis. The occurrence of these cerebral symptoms in a young man, 34 years of age, with healthy heart and kidneys, and the history of the antecedent attack of hemiplegia three years before, made me strongly suspect syphilitic disease of the cerebral blood-vessels and he was put upon an energetic course of specific treatment, both mercury and iodide of potassium. He was strongly urged to take complete cerebral rest. I saw this patient again on August 27th after an interval of about six weeks and found that there had been a continuous improvement as regards his word-blindness. Printed and written English words were now read with perfect correctness, though somewhat slowly and with evident effort. If he made an occasional mistake he always corrected himself when his attention was called to it. A similar improvement was found in his other languages. He read French, Latin, and Greek more rapidly and fluently than before. The patient informed me that the reading of Greek and Latin did not require such a great mental effort as the reading of English and did not take nearly so much out of him, as he expressed it. When I saw him finally (on Sept. 28th) all trace of word-blindness had disappeared and he now read English as rapidly and fluently as the other languages, but he still maintained that it required a greater mental effort and greater mental concentration to read English than to read Greek and Latin, both of which he read with a greater sense of confidence and ease. There had been a continuous improvement in his condition in other respects also. He was now much better at arithmetic and performed sums in multiplication and division fairly well, although somewhat slowly. He wrote to dictation more rapidly and with fewer mistakes, but still not with perfect correctness. There was also marked improvement with regard to speech, but traces of his aphasia still occasionally manifested themselves. Sometimes he spoke very fluently, but now and again he was at a loss for the proper word. Traces of his word-deafness were also manifest in his occasional difficulty in clearly apprehending what was said to him, necessitating the repetition of a statement. He had continued his specific treatment steadily during all this period.

CASE 2.—On the evening of July 10th, 1901, a man, aged 57 years, came home from business, had tea, looked over the newspapers according to his usual custom, and then went to the bowling green. Whilst engaged at the game he felt something wrong with his vision, had some difficulty in seeing the mark, and suffered from a slight frontal headache and some mental confusion. He managed, however, to finish his game without interruption. When he got home he took up the newspaper before going to bed, but found that he could not read it. He got up on the following morning feeling all right and took a good breakfast. After breakfast he took up the newspaper again, but found that he could not read a word, and so at his daughter's request his medical attendant, Dr. David Watson, was sent for, who took me along to see his patient two days after the onset of his trouble.

On examining the patient with the test types on July 12th I observed that he always carried the test card well to the left of the middle line before he attempted to read it. I therefore at once examined his visual field and found that the right half of each visual field was absent—i.e., he, thought advisable to remove. Pushing or tapping might have caused grave results. Mr. Bland-Sutton[12] insists in his lectures already alluded to that pushing an ovarian tumour out of the pelvis during labour is "decidedly in opposition to all the canons of surgery." In the second place, I wish to insist on the necessity of drawing the uterus well out of the abdominal incision when there is the least doubt of what is behind it. There is little chance of causing abortion if the uterus be well protected with pads anteriorly; but if the uterus be not drawn out the operator will be forced to keep moving his fingers behind it for some time and to drag unnecessarily on the appendages—manœuvres well calculated to set up uterine contraction.

### OVARIOTOMY AFTER PREGNANCY.

The result of operating in these cases was quite satisfactory. I find 15 cases of ovariotomy performed by myself where pregnancy had existed recently and the tumour was known to be present before labour. I exclude about three times as many cases where pregnancy had occurred within three years of the operation but where, when no complications were present, it was probable that the ovarian tumour had developed after the last labour and where when complications were present they might have developed later than the last puerperium even if the tumour had actually existed during the last pregnancy. Out of the 15 no complications (twisted pedicle, adhesions, &c.) were found at the operation in three. But in one of these abortion at the third month had occurred six months before I operated, and the cyst was then very large. Another case aborted in the middle of the fourth month from twisted pedicle. Thus there were two abortions in 15 cases. In two cases the patients had been twice pregnant since the diagnosis of the tumour. In eight cases, including the patients who had been pregnant twice, delivery was normal and at term, in one lingering at term, and in two instrumental at term. In two cases delivery was premature; in one of these labour, which took place at the seventh month, was very lingering, and severe peritonitis followed. I operated within three months and found the pedicle twisted and strong visceral and parietal adhesions. In one of the two cases in which the patients were known to have been pregnant twice the pedicle seems to have twisted slowly during the second puerperium with little or no pain. There were strong adhesions. The second case looked worse in this respect than it proved to be when I operated six months after the last confinement. The patient in this case was 25 years old and had long refused operation. The tumour was detected on the left of the uterus by Dr. W. I. Watson of Wellingborough during the first pregnancy, which ended normally, two years and one month before I removed it. Strange to say, though the tumour retained its position on the left side of the abdomen through both pregnancies and could not be pushed to the opposite side, I found that it was perfectly free from adhesions and bore a moderately long pedicle. It contained four pints of clear ovarian fluid and only weighed six and a half ounces. The history led one to suspect that it must be held to the left by adhesions. In no less than 11 out of the 15 cases I found the pedicle distinctly twisted and in six of the 11 the tumour was a dermoid. In one the pedicle had yielded and the tumour was nourished by omentum. The tumour had been diagnosed one month before her last delivery which occurred at term 11 months before I operated. The patient, who was 29 years of age and had borne seven children, suffered little from her tumour which held 14 pints of dark-brown ovarian fluid. In five of these 11 cases there was no further complication besides the twisting of the pedicle; the case of yielding of the pedicle is included in the five, and in the other six cases the patients suffered the usual painful symptoms of axial rotation. In seven out of the 15 cases I found strong adhesions; in six of the seven the pedicle was twisted, so these six also come under the last heading. In one of the seven cases the pedicle was not twisted; the operation was performed three months after delivery at term. There was a strong parietal adhesion, hard to reach and to separate close to the liver, and the cyst wall was dull through plugging of its vessels, but the contents were clear and sweet. In six cases the separation of adhesions gave great trouble, especially in the case of one patient who had been pregnant twice during the existence of the tumour, mentioned above as an example of painless twisting of the pedicle, yet the adhesions showed that extensive peritonitis had occurred. In one of the six cases the operation was followed by fatal results, making one death in 15 cases. A live child had been delivered at term with the forceps; the tumour was not apparently impacted in the pelvis, but it seems to have been roughly handled. As in Mr. Bland-Sutton's case, related above, it became infected during the puerperium two months before operation. Under the care of Dr. H. J. Ilott of Bromley the patient improved a little, but the temperature remained high and she was very sickly when I operated. I found universal adhesions, involving the parietes, the omentum, the ascending colon, the cæcum, the vermiform appendix, the bladder, the opposite tube and ovary, and especially several coils of small intestine, which were deeply injected. The pedicle was strongly twisted and the cystic fluid was very fœtid. The peritoneal cavity was flushed with saline fluid after careful repair of the damaged serous coat of one of the separated coils of small intestine. The patient died on the sixth day after the onset of symptoms from bacillus-coli infection—sickness, free passage of fœtid flatus, diarrhœa,[13] and tympanites, a complication frequent after separation of intestinal adhesions in ovariotomy where malignant or strongly adherent dermoid tumours are removed. This case was an eminently instructive example of puerperal infection of an ovarian cyst. Any pregnant woman with a cyst has this danger in prospect—a fact never to be overlooked in dealing with a pregnancy thus complicated. Another of the six cases where adhesions were dense is instructive on account of its strong resemblance to Case 1, where I operated during pregnancy. The patient was 30 years of age and had borne two children, and she was very strong and healthy. When I operated she had been delivered at term six months previously, and Mr. Chune Fletcher informed me that she had suffered from retroversion of the gravid uterus during the last pregnancy. Acute abdominal pain set in shortly after convalescence from the puerperium. The tumour was a dermoid closely packed with greasy hair and dull red fluid mixed with half liquid fat came away on tapping one loculus. There were very intimate adhesions to the parietal peritoneum over the bladder and to the peritoneum of the right iliac fossa. The pedicle was tightly twisted for two turns, and therefore it was easily secured and divided; then I found that the lowest part of the tumour was adherent to the front of the uterus and to some small intestine. This adhesion had to be transfixed and tied as though it were a pedicle. The peritoneum was thoroughly flushed with saline solution, some of which was left in when the abdominal wound was closed. The patient made a good recovery. Had I waited to operate on Case 1 till after labour similar complications might have been very probably encountered. Let it be noted that in both the tumour was a dermoid, full of grease; that twisting of the pedicle is exceedingly frequent in the puerperium, as the above records show; that dermoids are specially liable to this accident; that bad adhesions often follow torsion; and that separation of the wall of an adherent dermoid always involves distinct risk. Thus in 15 cases with a very clear history of recent pregnancy the proportion of complications, obstetrical and operative, was very high. This experience supports Dr. Orgler's conclusion that postponing the operation till after delivery exposes the mother to considerable danger during pregnancy, labour, and, above all, the puerperium.

Granville-place, W.

# FOUR CASES OF WORD-BLINDNESS.

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I HAVE already published in the columns of THE LANCET[1] five different papers dealing with varieties of word- and letter-blindness, in which certain views have been expounded in explanation of the highly interesting but often complex phenomena which are met with in these cases. These views, though speculative in character, are based entirely upon the numbers fluently, her power of interpreting them was a marked contrast to her complete word- and letter-blindness. She had great difficulty in naming objects shown to her—i.e., she had visual aphasia. For example, when a spoon was shown to her she could not name it, but said, "Of course, I know what it is, but cannot name it," and the same with my watch and various objects which were shown to her. I showed her also pictures of a sheep, a horse, and a dog, but she could not name any of them. There was no object-blindness, however—i.e., when she saw an object, although she could not name it, she recognised its true character and appropriate uses. She recognised her acquaintances as well as ever but could not name them. There was no loss of memory for places and she could find her way about as well as she ever could. As 14 months had elapsed since the cerebral attack, and as there now seemed to be no active disease in the brain, I strongly recommended her medical adviser to begin a course of re-education. I recommended that she should begin to learn the alphabet and to read small words just as you would teach a child to read. In fact, I have found that it is best for the patient to make use of the graduated primers which children use at school. In learning the letters I have found letter-blind patients much helped by making use of block letters, so that the sense of touch in handling the letters helps to strengthen the visual impressions and thus enables them to be acquired more rapidly. This course has been adopted, and I am informed by Dr. Semple that after two months' practice the results have been very satisfactory and encouraging, the patient being now able to recognise all the letters of the alphabet and also most of the small words in the child's first reading-book.

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[12] THE LANCET, Feb. 9th, 1901, p. 382.

[13] See Vautrin. L'Infection Colibacillaire en Chirurgie Abdominale, Revue de Gynécologie et de Chirurgie Abdominale, November–December, 1901, vol. v., p. 935.

[1] THE LANCET, Dec. 21st, 1895, p. 1564; Nov. 21st, 1896, p. 1451; Feb. 12th, 1898, p. 422; Jan. 14th, 1899, p. 83; and May 26th, 1900, p. 1506.

Of these four cases, Case 1 presents the most novel and interesting features in the partial character of the word-blindness. In the case of an individual knowing more than one language, can he become word-blind to one language alone, leaving the others intact? Or if the word-blindness extends to all the languages with which he is familiar, may it vary in degree in the case of the different languages? Case 1 is, I think, a very important one in giving a definite and affirmative answer to these questions. The facts were observed with great care and the patient, a highly intelligent and educated man, was therefore able to render every assistance in making our examinations accurate and reliable. The patient, who was familiar with four languages, English, French, Latin, and Greek, had soon discovered for himself the painful fact that he could no longer read English; but neither he nor his medical attendants had ever thought of testing his power of reading the other languages with which he was familiar. When I put a Greek book into his hand he was both surprised and delighted to find that he could read it correctly. I made him read passages from Homer, Xenophon, and the New Testament, all of which he did correctly. It was evident, then, that so far as Greek was concerned there was no evidence of word-blindness. I then tested him with Latin and found that here there were evidences of partial word-blindness, although the great majority of words he read correctly by sight. Now and again he came to a word which he did not recognise by sight and which he had to spell out letter by letter before he could interpret it. Although he did not read Latin with the absolute correctness and fluency with which he read Greek, his reading was a very marked contrast to his almost complete word-blindness for English. On testing him with French a greater degree of word-blindness was manifested than in the reading of Latin, but still it was not nearly so pronounced as that manifested in the reading of English. He recognised by sight a large number of French words, although he made many mistakes, and many of them he could not recognise at all without spelling them out letter by letter. It will be observed, however, that even with English the word-blindness was not absolutely complete and there was no letter-blindness, thus showing that the interference with the functional activity of the centre was only of a very partial character. He knew all the letters of the alphabet and could pick out by sight a word here and there, especially the shorter and more familiar words, such as *the*, *to*, *of*, &c., but he could not read a single sentence by sight. He could only read if you allowed him slowly and laboriously to spell out each word letter by letter and thus interpret the words by appealing to his auditory memory. Thus of the four languages which he could read the word-blindness extended only to three, and the degree of word-blindness was very different in each of the three languages affected, being greatest in English, less in French, and least in Latin. The Greek language had entirely escaped, and no trace of word-blindness was manifest so far as it was concerned.

These phenomena, which at first sight may seem strange and inexplicable, are in perfect harmony with our knowledge of the brain and afford yet another clinical proof of the correctness of the views expounded and developed in my book on "Letter-, Word-, and Mind-Blindness,"[2] that "all the varieties of word-blindness met with in clinical experience can be intelligibly explained by regarding them as disorders of the visual memory produced by lesions affecting more or less completely a definite area of the cerebral cortex in which are preserved these past visual impressions arranged in definite and ordered groups."

In the case of a person who is able to read several languages the letter- and word-visual images of each language will be grouped together, forming thus a series of separate groups within the centre. If the whole centre is destroyed or its functional activity abolished the individual will be word-blind to all languages, but if there is only a very partial interference with the centre then the word-blindness also may only be very partial and may be limited to a single group of these visual images—i.e., to a single language. Hence this, at first sight, singular phenomenon of an individual being word-blind to one language and not to another is just what we would expect from the views already enunciated as to the separate grouping of the visual images within the visual-memory centre.

Although this is the first case in which I have met with different degrees of word-blindness in different languages I had already met with a case in which a patient knowing two languages was word-deaf to one but not to the other. This condition, of course, is easily explained in the same way as the partial word-blindness—viz., that in the auditory memory we have the different languages arranged in separate groups, and hence in a partial lesion one group may be interfered with or destroyed whilst the others are preserved. The patient referred to was a teacher of French in Glasgow. Manifesting certain cerebral symptoms he resigned his position in Glasgow on my advice and returned to France, where he died about a year later, right-sided hemiplegia and some degree of aphasia having manifested themselves before his death. His wife wrote to me after the event and mentioned as a very curious fact that for some time before his death he could not understand French, his native tongue, but could only understand what was said to him in English; or, in other words, he was word-deaf to French but not to English. This partial word-deafness is an exact analogy to the partial word-blindness manifested in the present cases and can be explained in precisely the same way.

The records of such cases of partial word-blindness are, however, exceedingly rare. In my book on Word-Blindness[3] it is stated "that there are partial cases of word-blindness, when the patients are able to read only some words and some letters. The inability to read may embrace all the different words and letters known to the patient, but this is not always so. Michel[4] quotes a case where the patient could read the Gothic but not the Latin characters. Charcot[5] records a case where the patient, knowing French, German, Spanish, Latin, and Greek, lost the memory of a few of the Greek and German characters only." The present case affords an excellent clinical example of the possibility of the visual word-memories of one language being preserved whilst those of the other languages known to the individual may be materially interfered with or even completely lost. Case 2 affords a further example of the peculiar varieties of partial letter-blindness. On my first examination there was a very marked difference between his power of reading printed and written letters. He read all the printed letters fairly well with an occasional mistake, but with the written letters his failure to read them was very striking. He read correctly a few of the written letters, but he made numerous mistakes and was quite unable to read a great number of them. In short, he could read the printed letters, but had a considerable degree of letter-blindness with respect to the written letters. As the patient's condition improved this letter-blindness to written characters rapidly passed off. I had right lateral homonymous hemianopsia. It was found on further examination that the patient was word-blind but not letter-blind so far as printing was concerned. He read printed letters fairly well with an occasional mistake, which he always corrected himself after a little hesitation. He could not read words, however, unless he was allowed to spell them out aloud letter by letter. He could then name the word by appealing to his auditory memory. He could not read words by sight unless in the case of a few short familiar words which he was able to pick out without spelling, such as his own name, *the, to, on, in,* &c. His word- and letter-blindness was much more complete to written than to printed characters. He did not read the individual written letters with anything like the same fluency or correctness with which he read the printed ones. He made numerous mistakes and often found it impossible to name an individual written letter. He was absolutely word-blind to written words, not being able to read by sight even the smallest and most familiar words. He could read numbers fairly well with an occasional mistake, which he was able to correct himself if he got time; the more complex the number the greater the difficulty he experienced. Groups of numbers up to tens of thousands he read fairly correctly, but in dealing with hundreds of thousands and millions he become somewhat confused. He performed simple sums mentally fairly well. He wrote correctly to dictation, but could not read what he had written. His wife informed me that the day after the occurrence of the word-blindness he wrote a letter to her at the coast, written and spelt quite correctly, as if there had been nothing wrong with him. There were no speech difficulties whatever to be made out on the most careful examination. The patient's general health had been good. In the course of his business he consumed a fair amount of alcohol each day, but without becoming intoxicated He had occasional epileptic fits for three years after his marriage, but none since. His vessels were atheromatous. His knee-jerks were exaggerated, but no other nervous symptom was discoverable. I re-examined the patient two days later. On taking the visual field I found that the hemianopsia had largely disappeared, although the right half of each field was still considerably constricted. The patient showed decided improvement in reading printed letters and words. He read the letters more rapidly, with less hesitation and with fewer mistakes. With regard to printed words he also showed improvement. Although unable to read a sentence by sight alone he was now able to read by sight a greater number of words than formerly. He had made marked progress in the reading of written letters since his last examination. Two days before he could recognise correctly by sight only very few written letters, being almost completely letter-blind for writing, but on this occasion he read all the written letters quite as readily and as fluently as the printed ones. He had made scarcely any progress with regard to written words and was practically completely word-blind in this respect. He read numbers even more fluently and correctly than on the last occasion. The last time he read fairly up to tens of thousands, but he could now read quite fluently up to millions. He felt quite well, slept well, and had no headache. His wife informed me that his memory showed no signs of impairment in other respects. He had given them many minute instructions about his business, which showed that the acuteness of his memory for facts was unimpaired. Ever since that date I have examined the patient at frequent intervals. The constriction of the visual fields gradually became less, and on August 21st both visual fields were found to be normal. There was a gradual improvement in his powers of reading This improvement was most rapid in the case of printed words and much slower in the case of written words. The number of printed words which he could read by sight steadily increased until on the 21st, about six weeks after the onset of his trouble, he was able to read sentences from the newspaper, but very slowly and with mistakes, which he was always able to correct when his attention was called to them. A month after this (Sept. 17th) he was reading even more fluently than before and with fewer mistakes. Still his reading was not normal. It was only accomplished very slowly and deliberately and evidently with great mental effort. He made steady improvement also in his power of reading written words, but his progress here was much slower. On the 17th I found that he had much greater difficulty with written words and made more numerous mistakes. He himself was well aware of this. He read all combinations of numbers fluently. He performed arithmetical problems with increasing rapidity and correctness, but still he made mistakes, especially in multiplication and division, and his results, though often correct, could not be relied upon. I was informed by Dr. Watson that on Oct. 31st he was back at his business and that all symptoms of his word-blindness had passed away.

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[2] Letter-, Word-, and Mind-Blindness, London, 1900.

[3] Ibid.

[4] Berger: Les Maladies des Yeux dans leur Rapports avec la Pathologie Générale, Paris, 1892.

[5] Clinical Lectures on Diseases of the Nervous System, vol. iii., New Sydenham Society's Series.

CASE 3.—On Sept. 2nd, 1900, while holiday-making in the country, a man, aged 60 years, was seized, when out walking in the garden, with a "giddy attack," but he was able to get into the house without falling. Thereafter there gradually developed some mental obtuseness and some inability to see and to speak properly. There was no motor paralysis. After a week or ten days' rest in bed his recovery seemed fairly complete with the exception of a complaint that he could not see well. His medical attendant, Dr. William MacLennan, at first thought that it was his eyes which were at fault, but at the end of September, on his return to Glasgow, Dr. MacLennan found that he was suffering from letter- and word-blindness, and accordingly brought his patient to visit me on Oct. 7th. He informed me that the patient was recovering from his word-blindness and that the condition was not now so complete as when he first saw him.

On testing the patient with letters I found that he could recognise most of them. He recognised them, as a rule, only after considerable hesitancy and difficulty, but in the long run, if he got sufficient time, he named them correctly. There were curious variations in his power of naming the letters, as at one time he was not able to name a letter and then a short time afterwards he was able to do it. On testing him with words his power of reading at sight was found to be very defective. In fact, he could not read by sight a single sentence. He could pick out by sight only an occasional word here and there. Other words he could read if one allowed him slowly and laboriously to spell them out aloud letter by letter, but if one confined him to visual recognition of the words he was unable to interpret them. He read figures more fluently than words and letters, but made mistakes with them also. There was no aphasia and no general loss of memory or defect of intelligence. I saw him again 12 days later and found an improvement. He recognised the letters much more rapidly and with fewer mistakes than before, so that his letter blindness had almost passed away, but his word-blindness remained much the same. He was put upon biniodide of mercury, and Dr. MacLennan reported that his recovery was steady, and that by the end of January, 1901, he was able to read with comparative fluency, and, in fact, that his word-blindness was practically gone. About the middle of March his medical attendant was suddenly summoned and found that the patient had had a fit. He had thereafter several severe epileptiform convulsions, not distinguishable in any way from ordinary epileptic seizures. There was no knowledge of these occurrences on the part of the patient. Recovery took place without any motor paralysis, but all the other symptoms were greatly aggravated and much worse than after the primary attack. There were now complete word- and letter-blindness and inability to read figures and to write. There were considerable mental obtuseness and general failure of memory and loss of flesh. The patient, I am informed, has remained in this condition ever since.

CASE 4.—In July, 1900, a lady, aged 34 years, became suddenly unconscious and remained so for several days. On regaining consciousness she was found to be paralysed in the right arm and the right leg and to be completely aphasic. She could neither speak nor understand what was said to her. She has gradually recovered the use of her arm and leg and of her power of speech. When I saw the patient on Sept. 11th, along with her medical attendant, Dr. Miller Semple, there was no paralysis although both knee-jerks were considerably exaggerated. There were no traces either of motor or of auditory aphasia. She expressed herself fluently and correctly and seemed to have no difficulty in understanding what was said to her. On taking her field of vision the right half of each field was found to be wanting—i.e., she had right lateral homonymous hemianopsia. She was completely word- and letter-blind both to printing and writing. The most familiar words, *the, of, to, in,* &c., she could not recognise, nor could she recognise a single letter of the alphabet. She could recognise very simple combinations of figures, but with occasional mistakes and often only after pausing for a time and evidently with considerable effort. Some numbers, on the other hand, she recognised in a moment. Although, therefore, she was far from reading been trifling the tertiary symptoms may be peculiarly severe. Nor is this to be wondered at when we consider that these patients have received little or no treatment whatever until the serious later manifestations of the disease show themselves. Hence I think it is a pretty safe rule even in the complete absence of positive evidence, to put the patient on specific treatment if there is the slightest possibility of the taint having been contracted. In Case 1 the age of the patient still a young man and the fact that he had had cerebral symptoms three years before, made it exceedingly probable that his symptoms were due to syphilitic disease of the blood vessels. The very rapid improvement under specific treatment strongly confirmed this opinion. By specific treatment I mean that the remedies should be pushed boldly, and I hold that the patient should get the benefit of the mixed treatment both by mercury and iodide of potassium. I give the mercury either by the mouth or by inunction in sufficient doses to touch the gums gently and iodide of potassium in large doses from 20 to 30 grains, thrice daily. I find that these large doses are better tolerated than the smaller ones and experience has convinced me of their superior efficacy. The treatment is to be stopped if there are no signs of improvement within a reasonable time.

Can anything be done in that other class of cases where the cerebral tissue has been destroyed and where, therefore there is permanent loss of the visual memories of words and letters? The only course to be employed in such cases is re-education. This however should not be begun too early after the onset of the cerebral lesion or so long as there are any traces of active cerebral disease present. When we are persuaded that all active cerebral disease has disappeared then we may begin to attempt the re-education of the patient. The patient must be taught to read, first learning the letters of the alphabet and then learning to read by means of the graduated primers in the same way as children are taught. That a fresh area of the brain may be educated to perform the function previously discharged by another area is, I think conclusively proved by Barlow's case[11] which I quoted in the second chapter of my book. The patient, a boy suffering from heart disease had an attack of aphasia from which he gradually recovered. He had later a second attack of aphasia which remained permanent. An opportunity occurred later of examining the patient's brain when it was found that there had been embolism of the artery supplying the left third frontal convolution and later an embolism of the vessel supplying the right third frontal convolution. The recovery from the first attack of aphasia must have been due to re-education of the corresponding brain area on the right side, but when this centre had been destroyed the loss became permanent.

So with word blindness the visual memories of the signs of language as has been stated in previous papers in THE LANCET are deposited in the angular and supra-marginal gyri of the left hemisphere but when this is destroyed there is a possibility of re-acquiring them and storing them in the corresponding area on the right side of the brain. The chances of success will be greater with young patients, as the younger the individual the greater are the capacities of development of nerve cells and nerve fibres.

In the first case which I reported seven years ago,[12] and in which the patient was a man 58 years of age completely word and letter blind re-education met with partial success. After six months daily practice he learned again to recognise the letters of the alphabet but he never learned to read by sight. He was never able to re-acquire the visual memories of words or at the most only of a very few of the short familiar ones. He could only read by spelling out each word letter by letter and thus appealing to his auditory memory. He thus made little progress beyond acquiring the visual memory of letters. After labouring at this for a year he came to me one day and said that he had given the task up. It took so much out of him as he expressed it and required such intense mental effort and he was making so little progress that he felt constrained to abandon any further efforts towards learning to read. I had recently an opportunity of examining him and found that he had again lost the visual memory of letters which he had acquired with so much effort. He was now completely letter blind as well as word blind. The visual memory of letters which he had acquired with so much difficulty had been lost completely in a few years from want of practice. This was in striking contrast to the visual memory of figures which had never been affected and which remained quite intact although never exercised during the last seven years. He read figures up to millions with correctness and fluency. This shows that the visual memory is less receptive late in life and that the impressions made are not so permanent. Five years' interval had completely effaced the visual memory of letters which had been re-acquired with great labour, but after seven years interval the visual memory of numbers remained intact because the latter was acquired at an early period of life when the cerebral cells have great powers of receptivity. His case however was so far encouraging, as it showed the possibility of re-acquiring by practice the visual memory of symbols which had been obliterated by disease. In the case of a younger patient the prognosis is decidedly more hopeful. An opportunity of putting this to the test was recently afforded me by Case 4 which I saw in consultation with Dr Semple on Sept 11th 1901. This woman, aged 34 years had been completely word and letter blind for a period of 14 months. So complete was the letter blindness that she could not recognise a single letter of the alphabet. I recommended that she should attempt to read again, practising regularly every day. This has been done and as I have just heard from her medical attendant with the most promising results. She has not been able to practise long at a time because it seems to exhaust her mentally—just the same complaint as in my other patient. She has, however, in two months made considerable progress, being now able to read all the letters of the alphabet and to recognise by sight also small words of two and three letters. She is able to read the simple sentences in a child's primer. This result is most encouraging and there is every reason to hope that she will yet regain the power of reading which had been lost by the destruction of the visual memory centre on the left side of her brain.

In another class of cases to which I have recently directed attention[13] under the term "congenital word blindness" where children born with a defective visual memory centre experience the greatest difficulty in learning to read, I have shown what can be done by determined and persevering effort steadily directed to their education and Mr E Nettleship[14] in a recent paper has confirmed my views on this subject. These patients have no doubt the great advantage of youthful brains, when the power of receptivity is greatest. Still the success achieved in these cases should further encourage us, even in the case of adults to persevering effort in the attempt to re-educate the patient and to re-imprint in the brain the visual memories of words and letters which have been blotted out by disease.

Glasgow

# A CASE OF TUMOUR OF THE LEFT PRE-FRONTAL LOBE REMOVED BY OPERATION.[1]

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AND

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THE following case presents features which appear to us worthy of being recorded. In spite of the advances made in cerebral surgery in recent years a very small number of the successful operations have been performed for tumours. This is due chiefly to the fact that very few cerebral tumours even if they can be accurately diagnosed and located are removeable. Starr has published a table of 1100 cases of cerebral tumour reported by several well known observers which shows that only 7 per cent. were "probably removeable." The difficulty in localising cerebral tumours is still very great in spite of recent advances in our knowledge of cerebral anatomy and physiology. If situated in the Rolandic area in any of the speech centres or in the occipital lobe symptoms are produced which afford great had already called attention to the possibility of this condition in Chapter IV. of my book, where I mention a case of Bruns and Stoelting,[6] in which the patient's inability to read printed letters and words was complete, but only incomplete for written characters. This case forms the antithesis of my own. In Case 3, also, it was observed that the word-blindness was more complete with regard to written words than it was with regard to printed words.

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[11] Brit Med Jour 1877 vol i

[12] THE LANCET Dec 21st 1895 p. [illegible]

[13] THE LANCET May 26th 1900 p 1506

[14] Ophthalmic Review March 1901

[1] A paper read before the Edinburgh Medico-Chirurgical Society on Jan 1 th 1902.

Of these four cases of word-blindness, in one only (Case 4) did it extend to the reading of figures. In Case 1 the patient read figures with perfect fluency and correctness. In Case 2 the patient read figures with an occasional mistake and with some effort, but in a manner which formed a marked contrast to his complete word-blindness. In Case 3, although the power of reading figures was impaired, the patient read them much more correctly than words. I have elsewhere[7] discussed at length the frequency with which the power of reading figures is retained when the power of reading letters and words is lost more or less completely. These cases confirm the view of the complete functional independence of the visual memories of letters and figures and the inference which logically follows—viz., that these groups are deposited in distinct but probably adjacent areas of the cerebral cortex.

I would also call special attention to the fact that in Case 1, although the patient was word-blind, he could read musical notes as well as ever. This is the converse of the condition in which there is loss of visual memory for musical notes, whilst the patient may be able to read words and letters. Professor Edgren of Stockholm has given numerous examples of such cases and I have referred to this in some detail in a previous paper in THE LANCET.[8] This functional independence of the visual memories of musical notes and words is well illustrated by Case 1.

How is it that there are so few recorded cases of these partial forms of word-blindness? I think the reason simply is that the patient is not thoroughly examined by testing his power of reading all the characters and all the languages with which he is familiar. In Case 1, had I contented myself with observing the patient's inability to read English without testing his power to read the other languages with which he was acquainted, I should never have observed the fact that he was able to read Greek. It has been taken for granted that if a patient was unable to read one language he would, therefore, be unable to read any language, and that there was no necessity for applying further tests. In Case 2, had I examined the patient simply with printed characters, I should not have discovered his greater blindness to written characters. These cases conclusively demonstrate the fallacy of such assumptions, and the facts observed are in perfect accord with the view that our past visual impressions are arranged in the visual-memory centre in definite and ordered groups. They also teach that to examine a patient properly for word-blindness it is essential that the patient should be examined as to all the various characters, printed and written, with which he is familiar, and also as to his power of reading all the different languages which he knows.

Another interesting fact is that two of these four cases of word-blindness were associated with right lateral homonymous hemianopsia. In the one case it was temporary but in the other it was permanent.[9] I had already met with a case in which right hemianopsia was present, and in my report of it[10] I have quoted numerous cases where hemianopsia was associated with word-blindness. This frequent association, as I then pointed out, proves that the centres for the visual memory and for the right halves of both visual fields or the paths to them must lie close together, and pathological evidence confirms the inference thus drawn from clinical experience. The association of these two symptoms has a distinct localising significance. It points to a subcortical lesion in the white matter of the left occipital lobe so situated as to cut across the fibres passing from both occipital lobes to the left angular gyrus, and also the optic radiations passing to the left occipital cortex. The four cases are very instructive as bearing upon the prognosis and treatment of cases of word-blindness.

Cases of word-blindness may be divided into two great classes—first, those which recover more or less completely; and, secondly, those in which the loss remains permanent. Of these four cases, in three there was recovery and in one the word-blindness persisted. The course will depend upon whether the centres or the fibres leading to it have been destroyed, in which case the loss will be permanent, or whether its function has only been suspended by its blood-supply being interfered with, either by pressure of a growth or a hæmorrhage, or by occlusion of the cerebral vessel by a thrombus or embolism. In the latter case, where there is no actual destruction of cerebral tissue, a restoration of function is possible if the blood-supply is gradually restored to the centre either by a gradual diminution of pressure—e.g., by the absorption of a hæmorrhage—or by the re-establishment of the blood-supply temporarily checked by the blockage of a blood-vessel.

Cases 1, 2, and 3 afford excellent examples of recovery by gradual restoration of the blood-supply to the visual-memory centre, which had been cut off either by the pressure of a hæmorrhage or blockage of the branch of the middle cerebral which supplies the centre, either by embolism or thrombosis. Case 3 affords an example, also, of permanent loss of function from destruction of tissue. After recovering the power of reading temporarily lost after the first attack the patient had a second cerebral attack which left behind permanent word-blindness. Both attacks were probably cerebral hæmorrhages, the first attack only temporarily compressing the cortical centre, but the second destroying the cortical tissue, and hence the permanent word-blindness after the second attack. In Case 4, also, the permanence of the word-blindness and of the homonymous hemianopsia points to destruction of tissue, probably by a subcortical hæmorrhage in the region previously indicated.

At the outset of an attack, however, of word-blindness one cannot say with any degree of certainty whether a particular case will recover or whether the loss will be permanent, and hence our prognosis as to the patient recovering the power of reading must be very uncertain. Time alone will show whether there has been actual destruction of cerebral tissue or only temporary suppression of function. If the function is going to be restored, however, signs of improvement will speedily be manifested. The improvement is, as a rule, only very slow and gradual, and in the three cases reported it was three or four months before these patients were able to read with any degree of fluency. The signs of returning function, however, are usually seen within two or three weeks of the original loss. If the patient, as in Case 4, shows no improvement after a lapse of 14 months we may be quite certain that the cerebral tissue has been destroyed and that the loss is permanent. What course should be followed in dealing with these cases?

If you find that the function is gradually returning and the patient is gradually regaining the power of reading then do not try to force it or to accelerate it by asking the patient to practise for so long every day. On the contrary, I always give instructions that such patients are not to be allowed to try to read unless on the occasions that they are tested by the physician. Complete cerebral rest gives the best chance of recovery to the damaged brain tissue. Besides, the possibility of relapse is always to be borne in mind. One of my cases (Case 3) exemplifies this in a very marked degree. This patient had completely recovered the power of reading, which he again completely lost in about seven months after his first attack, no doubt due to a recurrence of cerebral hæmorrhage. Many of these cases which recover are due to cerebral hæmorrhage, and we must ever bear in mind the danger of recurrence. Hence the importance of urging complete cerebral rest in such cases and above all of preventing the patient from practising reading for at least a considerable time after the attack.

Of course, all medicinal measures will be employed with a view to helping the restoration of the cerebral function. If there has been any taint of syphilis, anti-syphilitic treatment must be energetically pushed. Syphilitic disease of the cerebral vessels is the primary cause of the lesion in a considerable number of these cases. In some cases you may get a distinct history of syphilis or manifest traces of past syphilitic lesion may still be present on the body and thus lead to the positive diagnosis of specific taint. But syphilis is such a protean disease that its primary and secondary manifestations are often so slight and insignificant as not to have been observed by the patient, so that even with perfect candour and good faith on the part of the patient no specific history can be obtained. Yet we know from clinical experience that in such cases, where the early symptoms have previous 24 hours. The blood examined showed about 8000 leucocytes—about the same number as two days before. There was no anæsthesia anywhere. The projection over the left frontal eminence was still present and was distinctly painful and pitted on pressure. Percussing over the region with the finger caused wincing, but there was no other painful part of the skull. Ophthalmoscopic examination showed no neuritis, the right disc showed some blurring of the edges, and there was some dilatation of the veins in the fundus.

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[6] Neurologisches Centralblatt, Leipsic, 1888, Nos. 17 and 18.

[7] THE LANCET, Dec. 21st, 1895, p. 1564.

[8] THE LANCET, Dec. 21st, 1895, p. 1564.

[9] THE LANCET, Dec. 21st, 1895, p. 1564.

[10] THE LANCET, Dec. 21st, 1895, p. 1564.

Operation was performed on Oct. 15th at 10 P.M.; chloroform was administered and Mr. Miles operated. A horse-shoe shaped incision was made with its base over the left eyebrow. On reflecting the scalp—which was slightly œdematous—a small area of caries was exposed on the surface of the frontal eminence. It was not larger than a threepenny-piece and only affected the most superficial layer of the outer table. A small quantity of cheesy débris lay between the carious bone and the scalp. A circle of bone which included the carious area was removed with a one-inch trephine. The inner aspect of the bone was normal. The dura mater was *not adherent*, but was slightly thickened. It bulged into the trephine opening and gave evidence of considerable intracranial tension. On incising the dura mater the brain substance appeared to be normal, but it did not pulsate. On introducing the finger a firm nodular mass could be detected occupying the tip of the frontal lobe. The trephine opening was enlarged by rongeur forceps. The tumour was then recognised to be definitely circumscribed and to have a thin covering of cortex over it. To the finger it had the consistence of a normal prostate as felt per rectum. It was easily shelled out without causing any hæmorrhage. The brain pulsated freely as soon as the tumour was removed, and the cavity in the frontal lobe was immediately filled by the brain matter bulging into it. The wound was closed, a small strand of iodoform gauze being left in as a drain at one corner. After removal the tumour was found to be evenly lobulated, having a shape which suggested a comparison to a tomato. It was uniformly firm, of a dull grey colour, and apparently not very vascular. It measured two inches long, by one and a half inches broad and one and a quarter inches in thickness. The microscopic examination, made by Dr. T. Shennan, showed it to be composed *externally of young connective tissue, which towards* the centre gradually passed into caseous material like that found in syphilitic conditions. It was therefore a syphiloma. Next day (the 16th), although somewhat dull, he was able to answer questions. He knew that he was in hospital and he recognised his wife. The following day on the house surgeon going into the ward the patient said, "Good morning, doctor," before the house surgeon reached his bedside. He spoke voluntarily and answered questions in a bright and lively manner—in fact, it was thought that he did so a little too promptly. His condition suggested that of a man who had had a little too much alcohol. He did not wait to be spoken to or asked a question, he started the conversation on his own account. The slight paresis of his *face* was gradually passing off. On the second day he voluntarily controlled his bladder and bowels and asked for the bed-pan when he required it. He had no discomfort in the head. On the 18th he resembled still more a man slightly intoxicated, began to use bad language, and became emotional. On the 21st the patient was still emotional. He remembered events that happened some time before his admission to hospital, but not those immediately preceding. *He did not remember coming* to hospital. *He asked about* the yacht-race—an event in which he had been pecuniarily interested and which had been attracting much attention for a few weeks previously. On the 28th and 29th he complained of pain in his head. The pain was over the seat of the wound, but there was nothing made out to cause it. Iodide of potassium was prescribed. He was able to be up on Nov. 12th and has continued well ever since; he was shown at the meeting of the Edinburgh Medico Chirurgical Society on Dec. 4th, 1901.

The chief points that enabled us to arrive at a diagnosis as to the localisation of the lesion that produced the symptoms in the patient may be summarised as follows. The symptoms undoubtedly pointed to the cerebrum rather than to any other part of the nervous system. The only symptom which might have caused confusion was the apparent want of control over his bladder and rectum. Careful inquiry, however, showed that the loss of control had a higher origin than the spinal cord—that, in fact, we had to do with a case in which as far as these functions were concerned the man had been reduced to the animal condition as in advanced dementia. Associated with this symptom was that of loss of modesty and shame, just as one finds in cases of dementia, where there is a gradual involution of the nervous system beginning in the higher levels. The general condition of the patient and the short duration of the illness enabled us, however, to *exclude dementia. It was not quite so easy to exclude* cerebral softening due to embolism or thrombosis, but the history of the case—viz., the gradual onset of the symptoms (there being no history of a sudden attack and especially no history of distinct paralysis of motion or sensation either general or of the special senses)—pointed to the softening, if present, being in the frontal region and not in any area further back. Cerebral thrombosis or embolism, however, is very rarely limited to the frontal region and is very much more common in the central regions of the brain—i.e., in the areas supplied by the middle cerebral and its terminal branches in the Sylvian fissure. Hæmorrhage was excluded for almost the same reasons as were embolism and thrombosis, *but especially from the history of the gradual onset, although* it was necessary to bear in mind that the rapid increase in the severity of the symptoms the day before the operation might have been due to hæmorrhage from a previously existing tumour. This rapid progress, however, was thought to be more probably due to congestion and œdema—a condition which frequently comes on where there is a tumour and often leads to a suddenly fatal issue. Abscess was excluded from the history and from the absence of fever and of leucocytosis.

The symptoms which pointed to tumour were—the gradual onset and the apparent steady increase and progress of the symptoms from the time that the patient gave up work about a month before admission. These symptoms indicated a gradual increase of intracranial tension. The slow and dull cerebration with depression of spirits, together with the slowness of the pulse and the attacks of vomiting without apparent cause, were very suggestive of increased intracranial tension. The usual eye symptoms were absent, but unfortunately only one eye could be examined, and that the one on the opposite side from the lesion. His good eye, although it had no optic neuritis, showed blurring of the *edges of the disc with some dilatation of the veins.* A tumour being indicated, was there anything pointing to its seat? In the first place, we had a symptom which pointed to a lesion of the left side of the brain—viz., the very slight paresis of the right arm, the more distinct paresis of the right side of the lower part of the face, with dysarthria in speaking, but no aphasia. The symptom pointed to an implication of the fibres passing from the lower part of the Rolandic areas to the internal capsule. The fact that there was no aphasia showed *that Broca's convolution was not affected*, and as there was much less affection of the arm than of the face the lesion producing this symptom was almost certainly in the centrum ovale subcortical to the lower part of the Rolandic areas. One other symptom pointed to the left side of the cerebrum. There was a slight but distinct swelling over the left frontal eminence which was painful to pressure and was slightly soft in the centre. This was felt to be distinctly external to the bone, but as he had a cicatrix over the other side of his forehead where he had had a previous swelling three years before which had been incised, the present one was looked on as specific in character and therefore might be associated with a gumma on the internal *surface of the skull.* These two *symptoms, therefore*—viz., the presence of the paresis of the right side of the face and the presence of a swelling over the left frontal region—apart altogether from his mental symptoms, pointed to the tumour being on the left side. His mental or psychical symptoms were, however, not only confirmatory, but if they had been taken alone would have been sufficient to have justified an operation over the left frontal region. These symptoms may all be considered as a loss or depression of the *inhibitory* power of the individual. Such *symptoms* are exceedingly difficult to analyse and are even more difficult to describe. The absence of such symptoms renders a man what he is, gives a man his distinctive character in relation both to the lower creation and to his fellow-men—the presence of such symptoms alters the *ego* of a man, takes away his special mental characteristics, and reduces him to a lower level. The loss of inhibition of his organic centres, such as those of the bladder and rectum, we help in locating the tumour, but there are still many "latent" or "silent" regions of the brain, lesions in which give rise to no symptoms or to symptoms which are as yet not understood.

Our patient suffered from a tumour of one of those so-called "silent" regions—viz., the left prefrontal lobe—and his case illustrates the fact, which has been pointed out by *several* observers, that a tumour or other lesion in this region gives rise to a fairly definite group of symptoms. The prefrontal lobe was looked upon as a silent region from the fact that experiments—such as those of Ferrier, Horsley, and others—failed to elicit any definite motor reaction when this part of the brain was electrically stimulated. Extirpation of the prefrontal lobes in monkeys, however, gave rise to a train of symptoms which, as far as they can be compared, closely resemble those exhibited by our patient as well as by the patients in other reported cases. As these symptoms are produced by an interference with inhibition, with attention, and with judgment, which are probably the highest functions of the brain, rendering man pre-eminent amongst living creatures, it is very difficult to compare such symptoms with those exhibited by the lower animals.

Our patient, a man, aged 47 years, was admitted into Leith Hospital on Oct. 12th, 1901. The history we obtained was that he had enjoyed good health till the May before his admission when he began to suffer from pain in the back of his head and in the small of the back and shooting pains in the legs. Soon afterwards the pain was referred to the left frontal region and it subsequently remained localised to that part of the head. Early in his illness the left side of his forehead and face became swollen to such an extent that his left eye was closed, and while this swelling lasted the pain in the head was relieved. After about four weeks the swelling began to disappear gradually. During this time the patient was taking some medicine—probably potassium iodide—which had been prescribed for him previously at the Royal Infirmary, Edinburgh. He had occasional attacks of vomiting of the cerebral type, without relation to food or other apparent cause. He continued at his work till Sept. 12th, on which date the term of his employment expired. For about a fortnight he was no worse, but then he became depressed, refused to leave his bed, and would not speak to his wife. He sometimes refused to take his food, although his appetite appeared to be normal. His memory became affected also, so that he would forget in a few minutes what he had been saying. He became very emotional and would begin to weep at the sight of his friends—as his wife expressed it, "he became kind o' soft." It was also a source of annoyance to his friends that he seemed to lose all sense of decency and shame and exposed his person unduly and needlessly. He suffered from incon- ce of urine but had full control over his rectum. At he appeared not to be aware where he was, and when own house he would say to his wife, "Let us get away ere." During the night especially he seemed to lose arings and did not know where he was. At this time plained greatly of the pain in the left frontal region a swelling appeared over the frontal eminence. All symptoms gradually got worse and he was sent to Leith ospital on Oct. 12th, 1901.

On admission the patient lay on his back in apparent comfort. He was sleepy, dull, and apathetic, and could only be roused with difficulty by pinching or shaking him or by a sharp question. When awakened he yawned frequently. His hearing seemed to be normal. His responses to questions were correctly expressed, but were made more slowly than was normal. He could not sustain his attention for any length of time; any subject which was brought before him, although it might attract his attention for a moment, seemed to pass from his mind very soon. As regards the affection of his memory, it appeared to be not so much a blotting-out of his past impressions as a want of power of associating memories, of comparing and contrasting them. Lack of judgment, therefore, was a marked feature of his mental condition. There was no aphasia, but there was some degree of dysarthria which was well marked on his attempting to pronounce test words and sentences, such as "British Constitution," "truly rural," and "artillery." His reading and writing could not be tested as he had never learned to read and to write. There was paresis, especially in the lower part of the right side of his face, and the power in the right arm, as evidenced by the grasp of the hand, was not as great as in the left side. He complained of occasional pains, which were not very severe, shooting down the front of both legs. The plantar and patellar reflexes were present but not exaggerated. There was ankle clonus. He seemed to walk easily and, as far as could be tested, his coördination was not impaired. His wife stated that he had staggered on suddenly getting up out of bed, but he did not complain of giddiness. There was no pain in the left frontal region unless when the skull was percussed. An examination of the blood showed hæmoglobin 90 per cent., red blood corpuscles 4,800,000 and white corpuscles 8000. On microscopic examination of films nothing abnormal was detected. The sight of the left eye was completely lost, the eye having been disorganised by small-pox 25 years ago. The sight of the right eye was still good. The right pupil was slightly contracted but responded to light. Although the patient saw quite well he was not accurate in counting the number of finger held up before him. He could name objects at sight quite well. He could not tell the time on a watch correctly although he recognised that it was a watch and said so whe asked to name it. He had no difficulty in recalling words or names. He answered questions slowly and apathetically and in such a way as to indicate that he took no interest in what he was saying. His gestures also suggested this. For example, if he was shown a watch and asked what it was he looked at it and said "A watch." Then he half closed his eyes, assumed a disinterested expression, and turned his head away as if he had completed some piece of work and was now done with it. When asked his name he gave it all right, but when asked his age he said, "Sixteen." On being asked the same question repeatedly he always answered "Sixteen." He was then asked if he was a hundred and he answered, "Yes, more than a hundred." When asked where he lived he gave the name of a street he lived in a few years previously. On being asked if he lived in S—— street (where he really did live) he said, "Yes." When asked, "Where are you living now?" he said, "Here." Over the left frontal eminence was a small round swelling evidently arising from the bone, in the centre of which was a soft area. It was tender on pressure. Over the right frontal region was a small depressed cicatrix the result of an abscess which had been opened three years previously in the Royal Infirmary. The tongue was slightly tremulous and flabby, moist, and very slightly coated posteriorly. It was protruded in a straight line. The teeth were bad, the breath was foul, and the bowels were regular. The abdomen was slightly tympanitic. There was no splenic or hepatic enlargement. He passed his urine and fæces in bed, but this apparently was not from want of control of his sphincters but from want of appreciation of the impropriety of doing so.

As regards the history of the patient previously to the onset of his present illness it was stated that he had always enjoyed good health. Syphilis was denied. He had been married 17 years and his wife had had three miscarriages—at six, seven, and eight months respectively—and four living children. Three years before he had had "an abscess" opened over the right frontal region. Four years before this abscess formed he had received a blow on that region. There was no history of injury to the left side of the head. He had never been a heavy drinker or smoker.

With regard to the treatment and progress, on admission on Oct. 12th the patient was put on light diet and given iodide of potassium and mercury. On the 14th he was very drowsy and was much more stupid. He would not speak and there was great difficulty in making him take food. He evidently did not realise where he was. He vomited once after dinner. There were aimless movements of his hands. At 7.30 P.M. the patient exhibited a constant up-and-down movement of the left arm which was not purposive. There was no twitching of the muscles. He could move his legs freely and equally well, but kept his right arm still unless a stimulus sufficiently strong to be painful was applied. On the morning of the 15th he was much more stupid—could hardly be roused and could not be made to answer except by a grunt or monosyllabic sound. His breathing was sometimes almost stertorous and had a tendency towards the Cheyne-Stokes type. There was slight rigidity of the right arm. On pinching his face he carried both hands up to the painful part. He was in much the same condition up to 8.30 P.M., when it was noticed that he had slight difficulty in swallowing and that his breathing had become more Cheyne-Stokes-like. His pulse since admission had been slow, ranging between 60 and 68. The temperature was normal but had shown a tendency to rise to about 99 during the

I found the patient sitting up in bed, leaning forward with her head almost touching her knees, which were raised up, suffering from most terrible dyspnœa. Her face was livid; she was bathed in cold sweat; her breathing came in short, sharp gasps; and with each expiration she ejected, without any apparent effort, a thin pinkish fluid. She was apparently dying. The remedies which I then applied were an injection of one ounce of brandy with gruel into the rectum—she was far too distressed to swallow anything—the application of hot-water bottles to her feet, and the free application of very hot fomentations to the præcordium. The pulse was small and very rapid, the respirations were from 30 to 40 per minute, and the temperature was normal. Loud moist sounds were heard all over the chest. The amount of expectoration was very great. After four or five hours there was some improvement in her condition and she was able to swallow. I administered at intervals of 15 minutes two drachms of sweet nitre diluted with water. She was apparently very much relieved after three doses of this remedy. On the following day she seemed to be little the worse for the attack with the exception of being languid and tired and disinclined for exertion. I prescribed rest in bed for a day or two and gave her a mixture containing bromide of potassium and camphor. I ceased attendance on the third day as she seemed to be all right. The urine was not examined. Four days afterwards, on July 3rd, I was hurriedly sent for about the same time in the evening, and there was a repetition of the above-described condition, with the same result. After this second attack I made a very thorough examination of the patient, but could find no organic trouble of any kind. The urine on this occasion was not examined, but I gave directions that a sample should be retained every day, and that if the attack recurred the sample of urine passed immediately before the attack should be sent to me. On July 30th the patient had a third attack, and the urine was examined, but nothing abnormal was detected in it. She had 20 attacks in the next 12 months. In the meantime I looked up the subject in the literature at my disposal, but could find no description of any case exactly like that of my patient. I discussed it with various medical friends who could throw no light on the subject. I looked upon the case as one of asthma in a wide sense of the term, but such remedies as stramonium in its various forms, arsenic, belladonna, digitalis, and stimulants appeared to me to do harm rather than good. The attacks became so frequent—they seemed to have become a habit—and they were so terrible to witness that I was in despair over the case, for by now my patient was a confirmed invalid, unable to do any household work, and was completely broken down by the frequent attacks, and possibly in some degree by the drugging which I had subjected her to, in the vain hope of finding a remedy.

In March last I made up my mind that I would treat the next attack with chloroform, having already tried nitrite of amyl with unsatisfactory results.

I commenced the administration of chloroform in fear and trembling as to the result. I administered it in the ordinary way on a handkerchief, giving the patient a whiff of chloroform and a breath of air in alternate inspirations. The gasping, short nature of the breathing, and the obvious obstruction due to the frothy material in the air-passages prevented any great amount of chloroform vapour being introduced into the lungs. However, after from 10 to 30 minutes of administration in this way a marvellous change came over the patient. The lividity disappeared, the breathing became easier, the action of the heart became far less laboured, and the respirations slowed down, the patient lying back on the pillows apparently asleep. This condition lasted perhaps for an hour, when I roused her, and she expressed herself as feeling all right. So striking was the relief afforded that my patient begged me to leave the remedy with her in future, so that she could administer it to herself in case of need. I would not consent to this at that time, as I feared that carelessness in giving the vapour in too concentrated a form might end in disaster. During the next three months she had 23 attacks, at each of which I administered chloroform, with the invariable result that the attack was stopped in from 20 to 30 minutes. I was away from home last June for three weeks. My locum-tenent was called to the case, but he declined to take the responsibility of giving chloroform without a consultation. A consultation was held and the husband was informed that his wife was dying and that the administration of chloroform was out of the question, so my patient endured six or eight hours of her previous agony. Fortunately I was at home when the next attack occurred, and I was able to convince my colleagues of the value of the remedy. So terrified was my patient at the idea that I might not be available at any future attack that she begged me to teach her husband how to administer the remedy, and I, having lost all fear of any ill-effect from the judicious administration of chloroform in her case, devised the following method for her husband to carry out. I gave him two drachms of chloroform with instructions to put in an ordinary tumbler a few square inches of clean blotting-paper, to pour the chloroform on the blotting-paper, and to hold the tumbler upright under the patient's mouth and nose, but to be very careful that she did not take more than three inspirations from the tumbler without one intervening inspiration with it away. I witnessed the management of the chloroform on several occasions, and now he habitually gives the remedy, but I never allow him to have more than two drachms of chloroform in his possession at any one time. The attacks now, from beginning to end, with the administration of chloroform at the earliest possible moment, rarely last half an hour, and my patient appears none the worse the day following them. She has had no medicine for many months. I have notes of 72 attacks in the two and a half years during which she has been under my care and they were all as instantaneous in their onset as an epileptic fit. They varied somewhat in intensity and duration from time to time, but they were all characterised by these constant phenomena: suddenness of onset, intense agonising pain in the chest, frightful dyspnœa, lividity of the face, profuse cold sweat all over the body, laboured action of the heart, with a small rapid pulse, and, lastly, but most important, the ejection (one can hardly call it expectoration, for that implies coughing, which is almost absent) of enormous quantities of thin pink, sero-mucous fluid. I have measured as much as 42 ounces of this fluid in an attack lasting eight hours. I have never detected rise of temperature in the rectum or vagina during an attack. The attacks always occur at night. They are almost invariably preceded by a desire to go to stool and the dyspnœa always comes on then during the act of defecation. They very often occur about the period of menstruation, especially if that is delayed a few days, as it often is, though it is normal in other respects. I saw my patient to-day (Jan. 12th, 1902). She says she is better in every way than she has been for years. She is no longer an invalid, she is cheerful and confident, and can do her work as well as ever she did. I could find no organic disease of any kind. The urine is not albuminous. She has lost all fear of the attacks provided she has the chloroform at hand and she tells me that five minutes is now about the time the distress lasts, and then "everything eases off." She often does not go to sleep from the effects of the chloroform, but the attack never returns that night. There has been no pinkish sputum for some months. She is getting rid of the habit. I can add nothing further to the admirable description of these attacks given by Dr. Steven, but I have a word to say in regard to the pathology. The symptoms appear to me to indicate clearly obstruction in some part of the pulmonary circulation. The hypothesis which I have formed is this. Owing to some cause—at the nature of which I do not even guess—it seems to me that there is a spasm of the pulmonary venous (or efferent) system. This will account for the rapid engorgement of the lung and the consequent extravasation of serous exudation in the alveoli, just as engorgement occurs in a limb in venous obstruction. Spasm of the efferent vessels *alone* would allow rapid accumulation of blood in the (afferent) pulmonary artery and its branches, and the terrific labour of the heart which is present appears to be an effort to overcome this obstruction. The continued obstruction would eventually lead to general systemic venous engorgement, hence the lividity of the face, &c. The action of chloroform in my case seems to bear out my hypothesis, for as soon as the centres which preside over this spasm are affected by the chloroform the whole train of phenomena subsides. On the contrary, if the attack is allowed to run its course, it seems to me that the centres eventually become so paralysed by the effect of the carbonised blood that the same result happens. The spasm is relaxed eventually and the symptoms disappear but in hours instead of minutes, as they do under the action of chloroform.

Acute spasmodic asthma, which resembles this condition in many respects, differs, as Dr. Steven points have already referred to. His emotional condition was a prominent symptom in his case. The loss of his sense of modesty and shame we have also alluded to. These quite evidently point to loss of inhibition and are important symptoms in pre-frontal lesions. But to many the loss or diminution of the faculty of attention—the most prominent symptom in his case—will not so evidently appear as a loss of inhibition. Yet so it is; there can be little doubt that attention is largely an inhibitory process—in fact, some psychologists consider it entirely so. Be that as it may, a want of the power of attention was a marked feature in this case. His attention could be directed for a second to any object or statement, but only for a second. The next second he was apathetic and listless and required to be again roused. Closely allied to this loss of attention was his loss of power of forming a judgment about anything. He could not compare or contrast two things or ideas. This again may have been due to his want of power of sustained attention, his not being able to have two ideas in his mind at one time. His individual memories seemed all right. He saw objects, knew what they were for, and could name them all right. Whilst his memory for objects and things that he had seen before his illness was unimpaired, his memory for things that were shown him and events that happened since the onset of his most marked symptoms was very imperfect. He forgot what happened almost immediately. This probably in part resulted from the diminution in his power of sustained attention and in part from the general depression of the cerebrum due to the intracranial pressure, so that recent memories did not become fixed, because fixation in memory requires health and nutrition. This is proved by the fact that even now when he has recovered he has not regained the memory of events that happened for some time before his admission to hospital. It is questionable whether the prefrontal lobe has anything specially to do with the fixation in the memory apart from the faculty of attention—although the process of voluntary recollection is probably initiated in the prefrontal lobe. The symptoms exhibited by this patient have been pointed out as occurring in prefrontal lesions and there are now a good many such cases in medical literature. The time has come when we should discard the idea that the prefrontal lobes are "silent regions." Far from being silent regions, the left prefrontal at least speaks in decided if little understood language as being the seat of faculties the loss or deterioration of which completely changes the character of a man. There is much evidence to show that the left prefrontal, just as the left Broca's convolution, takes a more prominent part in higher cerebration than the right prefrontal, but into this question we have no intention of entering at present. The best summary of the symptoms of pre-frontal tumours which we can find in medical literature is that of Allen Starr of New York who along with McBurney[2] in 1893 described a case very similar to ours in which a sarcoma was removed from the frontal lobe. The position of the tumour was, however, somewhat further back than in our case, and therefore produced more symptoms pointing to the motor areas. Starr[3] had in 1884 made an inquiry into the symptoms of 23 cases of disease of the frontal lobes and found that decided mental disturbances occurred in half of them. The following were his conclusions: "The form of mental disturbance in lesions of the frontal region does not conform to any type of insanity. It is rather to be described as a loss of self-control and a subsequent change of character. The mind exercises a constant inhibitory influence upon all action, physical and mental, from the simple restraint on the lower reflexes, such as the action of the sphincters, to the higher control over the complex reflexes such as emotional impulses and their manifestation in speech and expression. This action of control implies a recognition of the import of an act in connexion with other acts—in a word, it involves judgment and reason, the highest mental qualities. By inhibiting all but one set of impulses it enables one to fix the attention upon a subject and to hold it there. It seems probable that the processes involved in judgment and reason have for their physical basis the frontal lobes, if so, the total destruction of these lobes would reduce man to the state of an idiot, while their partial destruction would be manifested by errors of judgment and reason of a striking character. One of the first manifestations would be a lack of that self-control which is the constant accompaniment of mental action and which would be shown by an inability to fix the attention, to follow a continuous train of thought, or to conduct intellectual processes. It is this very symptom that was present in one half of the cases collected. It occurred in all forms of lesions—from injury by foreign bodies, from destruction by abscess, from compression and softening due to the pressure of tumours—and therefore cannot be ascribed to any one form of disease. It did not occur in lesions of other parts of the brain here cited. But its presence in such a large number of these cases warrants the suggestion that in cases of suspected lesion of the frontal lobe the mental condition of the patient as shown by his acts of judgment and reason should be carefully examined and a change of character or behaviour carefully noted." It would be impossible for us to wish to have a better description of the symptoms of our case than this of Starr, the result of an investigation into the symptoms of frontal lesions. Ferrier,[4] Welt,[5] Gilman Thompson,[6] Griffith and Sheldon[7] as well as other neurologists and psychologists have produced evidence more or less in favour of these conclusions. We would point out one other symptom in this case which has also been pointed out by Bruns[8] as occurring in cases of frontal tumour—viz., staggering on walking or attempting to walk. Our patient had this symptom and Bruns points out that it may suggest cerebellar disease. He says that the symptom is usually absent in tumours of the Rolandic areas. It has been suggested that the symptom may arise from involvement of the bundle of fibres which are known to pass from the frontal lobe to the cerebellum. The same bundle may explain the fact that our patient at the beginning of his illness had an intense pain in the back of the head which, however, gradually passed round to the frontal region. It is interesting to note the symptom in connexion with the opposite condition which has been pointed out by Dr. Purves Stewart, that cerebellar lesions may be accompanied by frontal pain.

The removal of the tumour was followed by a rapid disappearance of the dull and depressed symptoms in this case, and the only mental symptom that has been noticed since is what one would describe as good cerebration evidenced by slight "forwardness" and sometimes "witticism." Oppenheim and Jastrowitz have pointed out that "hilarity" and "witticism" are accompaniments of frontal tumour, but we would suggest probably only before intracranial pressure gets too great. These symptoms are probably explained by slight injury to some of the structures concerned in voluntary inhibition. The condition is allied to that seen after administration of a moderate amount of alcohol, the result of the alcohol being, according to some authorities, the reduction of inhibitory control. It is a curious fact that the affection which produced the swelling over the frontal bone was not structurally connected with the tumour in the frontal lobe. That tumour had begun at the anterior part of the lobe and had extended backwards and downwards, pushing the structures before it, until latterly it had implicated the fibres passing from the lower Rolandic areas to the internal capsule, so producing the paresis of the right side of the face and of the arm.

# ACUTE SUFFOCATIVE PULMONARY ŒDEMA.

BY THOMAS LISSAMAN, M.R.C.S. ENG., L.R.C.P. LOND.

I HAVE read with the greatest possible interest the very full and graphic description of this condition by Dr. J. L. Steven in THE LANCET of Jan. 11th, p. 73.

I am fortunate, or unfortunate, as the case may be, to have under my care a patient who has suffered from this affection for two and a half years. She is a married woman, aged 45 years, with five children. She is stout and well nourished, with no traces, as far as I have observed, of any organic lesion of the heart, kidneys, or lungs, or, indeed, of any organ. She first came under my notice in June, 1899.

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[2] A Contribution to Cerebral Surgery, the American Journal of the Medical Sciences, April, 1893.

[3] Cortical Lesions of the Brain, ibid., April, 1894.

[4] Functions of the Brain, and Croonian Lectures, 1890.

[5] Alienist and Neurologist, April, 1890.

[6] Medical News, 1891.

[7] Journal of the Medical Sciences, 1890, p. 223.

[8] Deutsche Medicinische Wochenschrift, February, 1892.

an hour after returning to bed he complained of feeling very ill and faint. Subcutaneous injections were again administered in order to restore the failing heart, but this time the patient died. A necropsy could not be obtained until 36 hours after death, when the brain presented a congested appearance and there was evidence of minute subpial hæmorrhages. The meninges showed no signs of inflammation. Some of the cerebro-spinal fluid was collected in a sterilised bottle, from which cultures of the diplococcus lanceolatus were obtained. Nissl sections of the brain were made later under the direction of Dr. F. W. Mott, but no pathological changes in the cortical cells could be discovered. The other organs were normal.

Acute delirium is generally regarded as the most convenient term to apply to a somewhat rare but fatal group of clinical cases of which the two narrated above are types and which seem to be worthy of record. In all, practically, there is a predisposition to mental instability, hereditary or acquired. Some observers, especially in Italy, have described a bacillus associated with this condition, and others have found various kinds of cocci, whilst in many cases no organisms can be found at all. It seems probable that the toxins arise autogenetically.

Upper Berkeley-street, W.

# THE DECAY OF AUSCULTATION AND THE USE OF THE BINAURAL STETHOSCOPE.

By H. W. SYERS, M.A., M.D. CANTAB.,

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THE student of the present time is in danger of being overwhelmed by the multiplicity of the methods of diagnosing and treating disease. The continual outpouring of new remedies, most of which soon pass into merited oblivion, and the incessant recommendation of new (very often ancient) modes of treatment, chiefly distinguished by their grotesqueness, with all of which he is credited with possessing some sort of knowledge, render his career in the domain of therapeutics a chequered one. But with this side of the question I have now no concern, intending, as I do, to deal only with the method of diagnosis.

Twenty years ago the student was taught to rely almost entirely on the results obtained from the employment of his unaided senses, from the aspect of the patient, his attitude, and his mode of answering questions; in all these ways it was necessary for the learner to draw his own inferences, the use of special instruments being confined to that of the microscope, stethoscope, laryngoscope, and ophthalmoscope. Now, owing to the introduction of complicated blood examinations, of bacteriological methods of diagnosis, of colour reactions with the urine, and of many other proceedings of kindred nature, so much time has to be devoted to special modes of research that there is real danger of the old-fashioned but well-tried methods being relegated to the background in the student's scheme of practical work. To this craze for the employment of laboratory tests and for short cuts to diagnosis I attribute much of the present-day weakness in bedside examination which is, I regret to say, so often in evidence in union with the possession of the highest medical qualifications. These remarks are quite general and apply to no mode of examination in particular.

But, to pass from the abstract to the concrete, I would draw attention to a most urgently required reformation in a very important method of examination, an examination which is undertaken daily and hourly and which lies at the very foundation of clinical work. I refer to the examination of the chest and to the manner in which it is carried out. Until about 20 years ago the condition of the thoracic organs was always investigated by means of the wooden stethoscope, an instrument now almost banished and rarely seen either in hospitals or consulting-rooms. At the time referred to it became the fashion to employ the binaural instrument, at first in quite a tentative manner, then in combination with the use of the wooden instrument, and finally boldly and openly as the only stethoscope worthy the name. Now, were it the fact that the binaural instrument possessed advantages rendering it greatly superior to the wooden one this supersession of the latter would be merely an ordinary instance of the survival of the fittest, and nothing would remain to be said on the use of stethoscopes. But the facts are altogether opposed to this view of the case, and I am convinced that much of the faulty diagnosis of chest disease which is so frequently seen at the present day is the result of the habitual use of the binaural stethoscope. And the reason why this important matter has not attracted attention hitherto is, I have no doubt, the undue weight which is attached to those laboratory methods of diagnosis to which I have already alluded, and which can only result in the production of an unsound, unpractical, theoretical (in the worst sense of the term) type of clinician. The errors which are the direct and immediate result of the constant use of the double stethoscope are of course most obvious in the case of those whose experience of the physical evidence of disease is limited, and is less apparent when the examiner by long practice has become familiar with the physiognomy of disease, so that he is to a great extent free from the necessity of employing an instrument in order to draw his conclusions as to the nature of the illness. But even in this case errors of omission, though not perhaps of commission, are not seldom made through the employment of the binaural stethoscope, while in the hands of the younger brethren faults of both kinds are, to my certain knowledge, only too frequently committed, due entirely to the obstinate use of this most pernicious instrument.

I will now in a few words give my personal experiences in this important matter of diagnosis by means of the ever-popular binaural stethoscope. I have convinced myself that as regards the investigation of the sounds of the heart this instrument is most unreliable, and increasing experience, not only of students' work, but of that of qualified practitioners who are in the habit of employing the double stethoscope, confirms me in the opinion that unless the use of this instrument be discontinued in no long time aortic regurgitation at all events will be a disease which cannot be certainly diagnosed. I do not, of course, refer to those cases in which the diastolic aortic murmur is so obvious that it cannot possibly be mistaken, but to that very large class of murmurs due to incompetent aortic valves in which the bruit is soft, low-pitched, and not by any means easy to hear. It is these murmurs which are constantly passed over, the second sound being described as "clear." The least reflection will convince anyone of the great danger attending the failure to discover such a murmur. In the case of a candidate for insurance much injury may be done to the office and one of which the directors would have every right to complain. It is well known that the soft, low-toned regurgitant murmurs are just those which are found in cases subsequently dying suddenly, the very softness of the murmur being a most unfavourable indication as depending upon a feeble ventricular systole. But it may be urged that in aortic disease the physical signs, apart altogether from the murmur, are so characteristic that it would be impossible for the lesion to be overlooked. I would reply to this objection that in the case of the murmur in question the left ventricle is often scarcely at all hypertrophied, there is no throbbing of the carotids, and the radial pulse may not possess the characters associated with the presence of aortic reflux. As regards the latter, indeed, the qualities of the pulse found in aortic regurgitation are by no means seldom met with in people whose aortic valves are perfectly healthy. It may also be mentioned that even if hypertrophy is present it is often masked by emphysema.

Thus, then, we are reduced to the evidence furnished by the murmur and this alone, in forming the diagnosis of a most serious and fatal form of cardiac valve lesion, and it is neither more nor less than a calamity for such a murmur to be overlooked. Yet to my certain knowledge this happens every day. Now, a murmur may be passed over from the incompetence of the examiner as well as from the unsuitableness of his instrument. In other words, it may be in some cases that a bad workman unfairly complains of his tools. But this argument, in my experience, does not apply to the question now under consideration. Most efficient and even brilliant auscultators I have found to overlook constantly this variety of murmur simply and solely because the binaural stethoscope which they to their subsequent sorrow, had been in the habit of using had misled them. The same observers when immediately afterwards employing a wooden stethoscope have invariably detected the murmur at once and have acknowledged their error, attributing it to its rightful cause—the use of an untrustworthy instrument. This is a certain proof that the slip was the out, in the absence of the peculiar whitish-pink, abundant expectoration. It seems to me that the difference in the two conditions may lie in this—that in acute spasmodic asthma it is the pulmonary artery, or afferent system, that suffers from spasm, and in acute suffocative pulmonary œdema, it is the pulmonary vein, or efferent system, which is affected; for in the former case there is anæmia of the lungs with no expectoration during the attack, and in the latter there is engorgement, with pints of it. In other words, in acute spasmodic asthma ("dry asthma") the lungs are in much the same condition as the fingers are when they are cold, white, and "asleep," or as in Raynaud's disease. In acute suffocative pulmonary œdema ("wet asthma") they are, perhaps, in a similar condition to the extremities in certain forms of erythromelalgia. I think, therefore, one may reasonably argue that the two diseases are similar, but that they differ in the site affected by the provocative agent, whatever it may be. Both clinical pictures may be ascribed respectively to vaso-motor spasm of the different pulmonary vascular systems.

I shall certainly rely with confidence upon chloroform as a remedy for both conditions in future, for it seems to me from the observation of my case that great damage was done by sedative drugs and also by stimulation by alcohol, and none of the vaunted remedies for asthma did my patient any good. She seemed to be drifting into a condition of imbecility, like an epileptic does, until the systematic administration of chloroform stopped the violence of the attacks. She still has attacks—about two a month (instead of three or four a week as in March last)—it is true, but as the duration of them is so short and the remedy inspires such confidence she feels sure eventually she will completely recover.

Bolton-le-Moors.

# TWO CASES OF ACUTE DELIRIUM.[1]

BY R. H. COLE, M.D., M.R.C.P. LOND.

CASE 1.—The patient was a single woman, aged 40 years, living with her widowed mother. For the sake of employment and to supplement her income she had lately taken some work. There was no family history of insanity, but both the patient and her mother were decidedly nervous, and a brother had died from hip disease. Until nine months before she came under my observation she had enjoyed fairly good health. She then developed a bad attack of pernicious anæmia, from which, however, she recovered at the end of three months and returned to her work. On Feb. 21st, 1900, she again began to feel ill and prostrate, and she feared a relapse of her former illness. This time, however, she was more nervous and apprehensive, complaining of vague cranial uneasiness, and she said that she felt that she was "going off her head." The blood was examined again; it was found to present signs of pernicious anæmia and she was admitted for treatment into a nursing home. The nervousness and restlessness increased and in a week's time, after a few hours' warning, she became completely delirious which, on March 4th, necessitated her removal to an asylum where she was under the care of Mr. G. E. Mould. Before the delirium developed she had three sleepless nights. The patient now presented a wild appearance; she had no powers of recognition whatever and chattered incessantly, her speech being incoherent and the same phrases being repeated over and over again and she asked questions which she proceeded to answer herself. She gesticulated and was under the influence of visual and aural hallucinations. At times she had an ecstatic expression, apparently believing herself in heaven with angels flitting about. She had to be fed artificially and her bladder and rectum required constant attention. In spite of sedatives it was difficult to procure any sleep. The pulse was weak, varying between 120 and 140, the temperature being 99° F. There were a dry cracked tongue and sordes on the lips. The patient was given abundant nutriment and stimulants but she was evidently becoming exhausted. On the 9th her temperature rose to 105° and she seemed to be in a moribund condition. She was ice-packed, a hypodermic injection of strychnine was administered, and the stimulant (brandy) was increased. She rallied somewhat and the temperature was reduced, only to rise again on the following day to 107°. The patient was then placed in an ice-cold bath for half an hour which reduced the temperature to normal for a few hours. On the temperature rising once more she was placed on an iced water-bed and was given quinine and strychnine by the mouth and meat extracts and stimulants. She responded but feebly to these agents; the delirium had now become of a low muttering form and she picked at the bed-clothes. She died on the 11th in a state of collapse. Unfortunately no post-mortem examination was obtained.

CASE 2.—The patient was a young professional man, aged 27 years and single. An aunt had suffered from chronic insanity. With the exception of an attack of influenza a few years previously the patient had always enjoyed excellent health. He was by nature sociable, athletic, and clever, and had led a regular and temperate life. He was about to begin his life's work, having just finished his final examinations. He seemed unduly to feel the responsibility of his office, and some irritability and change of disposition were observed by his friends for a fortnight or more. On April 3rd, 1901, he first complained of not feeling well, being depressed and unable to collect his thoughts; however, he continued at his work until the 6th, with sleepless nights, when one of his friends gave him a Dover's powder and sent him to bed. On the 7th his manner was so strange that an attendant was engaged. He looked very dejected and would hardly speak; he gave expression, however, to delusions that he had neglected his work and ruined his family and he was somewhat suspicious about his diet. He could obtain no sleep without hypnotics and five days later (on the 12th) he was transferred to an asylum for special treatment. He would not eat an ordinary meal, but after persuasion drank milk on the first two days after his admission. From the 14th to the 21st he had to be fed with a tube (nasal). He was now in an exceedingly resistive mood, champing his teeth, refusing all food, and struggling during the dressing and when undressing or when going out for exercise and returning to his room; he now, however, slept well and without any hypnotics. On the 22nd he took his meals voluntarily, and on the next day he had a lucid interval which commenced suddenly and lasted three hours; during this interval he stated that he had a vague recollection of being moved to the asylum, but could scarcely remember anything more. He gradually became more restless and inattentive, and in the course of an hour he had drifted into a semi-stuporous condition, but he was quite tractable and took his food well. He would not speak except to utter emotional phrases, and any reference to his friends or relatives increased his agitation. In this state he remained for five weeks. On the night of May 28th he was sleepless and he looked ill on the next morning, his temperature being 100° F. and his pulse 120. He became very excited, struggled with his attendants, and took his food only by compulsion. During the next three days the patient was in a condition of acute delirium and evidently under the influence of terrifying hallucinations, chiefly of a visual nature. He occasionally talked, but his speech was incoherent and almost unintelligible. The pyrexia increased to 102°, and his pulse varied from 120 to 150. Sedatives were administered but he obtained very little sleep. From June 2nd to the 8th he lay on a water-bed in a very prostrate condition, with a dry tongue and sordes on his lips, and in order to ensure sufficient nourishment he was again fed by a nasal tube. Six ounces of brandy and four ounces of port wine were now given per diem and sleep was obtained by means of two drachms of paraldehyde every night. His pulse, which had always been rapid, was now intermittent and gave cause for anxiety. On the 5th he had a syncopal attack, but recovered with the assistance of a hypodermic injection of strychnine. The muscular system was in a state of hypertonicity and change of position was accompanied by pain. On the 9th the patient again began to take food voluntarily and seemed to be a little stronger. His temperature on this day was 100° and his pulse was 130. On the 12th the temperature returned to normal although the pulse continued to be rapid. In order to ease his back he was now allowed to sit up for an hour occasionally. Mentally he was still in a state of confusion, but he would answer simple questions and appeared to be slowly recovering. On the 15th he woke up in the middle of the night to use his night-stool, and a quarter of no fever is met with in this disease. Possibly the previous history of slow continued and remittent fever may have had some influence on the temperature.

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[1] Abstract of a paper read before the St. Mary's Hospital Medical Society on Dec. 11th, 1901.

The patient, an adult male, was admitted to hospital on Nov. 18th, 1901, and came under my care on Dec. 6th. With the exception of his temperature chart there was no record of his symptoms during that time. The temperatures recorded on the first three days in hospital were as follows:—Nov. 18th: evening, 104·6° F. Nov. 19th: morning, 104·6°; evening, 104·8°. Nov. 20th: morning, 103·8°; evening, 104·4°. From this date there was a steady decline till Dec. 5th when the temperature in the morning was 100·8° and in the evening it was 98°. In May, 1899, he had contracted primary syphilis at Aldershot, and during April, 1900, was under treatment for secondary syphilis at Malta. During his service in Malta he was subsequently treated for remittent fever and slow continued fever. When he came under my care he presented the following appearance. The face was thin, pale, and slightly cyanosed; there was constant cough with very little expectoration, the sputum in 24 hours only amounting to about one ounce, chiefly mucus, and on a few occasions a slight reddish tinge was noticed. Both lungs were dull on percussion, particularly at the bases, with great resistance to the finger; vocal resonance was increased; tubular breathing was heard over the bases and there were a few râles and a large number of rhonchi. Over the apices and front of the chest the breath sounds were more bronchial and the rhonchi were less. The respirations ranged between 20 and 26 per minute. The pulse-rate was 100. The heart sounds were regular but weak. The bowels were moved regularly twice a day. There was delirium at times. The temperature in the morning was 99·4° and in the evening it was 97·8°. On Dec. 7th it was 101·2° in the morning and 101·0° in the evening. From Dec. 10th to the 28th inclusive the temperature did not rise above 98·8°, except on the evenings of the 11th, 13th, 16th, and 17th.

On Dec. 13th the patient was put on 15-grain doses of potassium iodide three times a day and daily inunctions of mercury. On the 24th the temperature had practically been at normal for some days; the cough was almost gone; percussion over both lungs was normal and there were no rhonchi or râles. The man was quite sensible; he slept well and was able to sit up. On the 27th the cough had become more troublesome again, and I at the time attributed this to his bed being rather near a draughty window. He still seemed to be in good spirits and was quite sensible. On the 29th the temperature rose to 103·2°. The face became somewhat cyanosed and the old symptoms in the lungs returned. In spite of the dose of potassium iodide being increased to 30 grains he gradually passed into a typhoid state and died on Jan. 7th, 1902. The respirations reached 55 per minute three days before death, but they dropped on the 6th to 22.

It is a matter of great regret that no post-mortem examination was allowed. The diagnosis was founded on the distinct history of syphilis and the remarkable clearing up of all symptoms under anti-syphilitic treatment. The secondary and fatal attack showed the only temporary subsidence of the disease under treatment.

Mullingar.

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# A NOTE ON A FAMILY EPIDEMIC OF IMPETIGO CONTAGIOSA BULLOSA ORIGINATED BY PEDICULI CAPITIS.[1]

BY GEORGE PERNET, M.R.C.S. ENG., L.R.C.P. LOND.,
LATE PATHOLOGIST, BLACKFRIARS HOSPITAL FOR DISEASES OF THE SKIN.

WHILST in charge of the Skin Department of University College Hospital last September four children of the same family were brought to the out-patient room. I will shortly describe the cases in the order in which they were observed.

CASE 1.—The patient was a boy, aged two years and 10 months, with an eruption of two days' duration. It had commenced as a water-blister on the left forearm and had then spread to other parts of the body, trunk, &c. The mother, an intelligent woman, stated that the lesions commenced as vesicles of the size of hemp seeds which rapidly enlarged, attaining the diameter of a pea and later of a halfpenny, when they burst. As a result of this there were found on examination about a dozen recent superficially excoriated areas, about one inch in diameter, and looking very like what is observed in involuting pemphigus neonatorum. On the outer side of the left leg there was a vesicle of the size of a lentil, with clear contents and an erythematous areola. The mother said that the child had been feverish; on taking the temperature, however, it was found to be only 99·6° F.

CASE 2.—The patient was a boy, aged eight years. He had only been affected since the previous night, when a water-blister of the size of a pea was noticed on the back of the head. It was stated to have burst and the lesion to have since extended. When I saw him there was a crusted, superficially excoriated area a quarter of an inch in diameter, with surrounding redness.

CASE 3.—The patient was a girl, aged 13 years. In her case the eruption had been present for 10 days. It began on the right thumb as a scratch, came up as a blister, and burst. Three days later the face became involved. I found a reddened circular area of the size of a sixpenny-piece over the metacarpo-phalangeal joint of the right thumb. On the face there were several slightly crusted, reddened areas of the size of hemp seeds, some of which had coalesced, forming little patches each of the size of a finger-nail. These, the mother stated, had been originally vesicular. The child had been away in the country for a holiday with the patient in the following case.

CASE 4.—The patient was a girl, aged 10 years. Her eruption had been present for 10 days. It began as a white blister containing water on the lobe of the right ear. There were a reddened circular dry area one inch in diameter on the dorsum of the left hand, a similar one about a quarter of an inch in diameter on the right wrist, and a few drying-up pustules about the occiput and the right ear. The pustular lesions of the occiput led me to examine for pediculi. I found numerous nits. This gave the key to the whole thing. There were no pediculi in the other children.

In connexion with the above I may mention that I have seen pemphigus neonatorum occur where the three other children of the family all had marked impetigo contagiosa of the ordinary type. I had no doubt in that case that the infant had contracted the bullous eruption from the other children.[2] I was asked to see the child because it was thought to be a case of congenital syphilis. I found that the family lived in one upstairs room and the mother assured me that the house was quite healthy. I have also seen pemphigus neonatorum in sucklings whose mothers were suffering from abscess of the breast.

In the cases of bullous impetigo contagiosa which I have described above the youngest child had best presented the bullous type, no doubt on account of the greater delicacy of the skin. In him the lesions looked like what is seen in subsiding pemphigus neonatorum and the lesions had not the crusted appearances usually associated with ordinary impetigo contagiosa, whereas some of those in the older children had.

I am indebted to Dr. H. Radcliffe Crocker for kindly allowing me to make use of the cases.

Upper Gloucester-place, N.W.

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[1] A paper read before the Society for the Study of Disease in Children on Nov. 15th, 1901.

[2] See also Matzenauer on the "Identity of Impetigo Contagiosa and Pemphigus Neonatorum" in the Wiener Klinische Wochenschrift, No. 47, 1900.

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SMALL-POX AND ISOLATION HOSPITALS.—The following municipal authorities are either discussing sites or have decided to erect small hospitals:—Pinner Parish Council (small-pox), Staines Rural District Council (temporary small-pox), Warmley (isolation), Tredegar (cottage), Easingwold (isolation), Launceston Town Council (isolation), Haywards Heath (small-pox), Canterbury (extension of nurses' quarters at the sanatorium), Oswestry District Council and Town Council (joint isolation), Barrow County Council (small-pox), Kingswood Rural District Council (isolation), Beaconsfield Urban District Council (isolation), Bideford (new infirmary at workhouse, £4000), Berwick Sanitary Authority (infectious diseases hospital), Lutterworth (isolation), Dunstable Town Council (isolation), Wellingborough (temporary small-pox), Luton Rural District Council, and Eaton Bray District Council (isolation), Slough Guardians (isolation), Towcester (small-pox), Thetford (isolation, borough proposed joint scheme abandoned), and Chard Rural District Council and Town Council, Crewkerne Urban District Council, and Ilminster Urban District Council (joint isolation).

fault of the latter, not of the auscultator. Again, in the differentiation of mitral murmurs the double stethoscope leaves much to be desired. I have constantly found that systolic murmurs have been described as presystolic when this instrument has been employed, though the converse mistake has not occurred. And in the study of the normal heart sounds I have found the diagnosis of "over accentuation" or "obscurity," neither of which really existed, to be constantly made. As regards the heart, therefore, I look upon the use of the binaural stethoscope as being in every way most objectionable. As regards the diagnosis of heart disease there is no middle course. The double stethoscope should be altogether done away with and abolished off the face of the earth—*Delenda est Carthago.*

Next as concerns the examination of the lungs. Here, again, there is nothing good to be said as regards the use of the binaural instrument in its strictly auscultatory aspect. On the contrary, it is easy to point out numerous and grievous faults. I have noticed that beginners who are learning the elements of diagnosis of chest disease, and who, alas, are freely allowed to choose their instrument, never really appreciate the difference between bronchial, tubular, and cavernous breathing. I do not for a moment deny that this inability may to a certain extent depend upon the want of a keen and correct hearing sense; probably this is so to some extent. But making every allowance on this account, I maintain that this great fault is due chiefly to the most foolish and injudicious laxity which permits to a young and inexperienced student the use of an untrustworthy and deceitful instrument. This failure to recognise fine shades and distinctions of sound is practically always attributed to the defective "ear" of the observer. In nine cases out of ten it is nothing of the kind; on the contrary, it is the result of a defective system of education. the differentiation of friction sounds and of crepitation is by no means easy at any time; when the binaural stethoscope is made use of such discrimination is absolutely impossible. And the tendency of the instrument is invariably to exaggerate the pulmonary sounds, whether healthy or morbid, to a degree which is embarrassing and likely to tend to serious error in diagnosis. Further, the fact of both ears being occupied with the examination renders it impossible to appreciate the significance of what is heard by comparison with the unoccupied ear; this is a very important point and one not adequately recognised.

So much, then, for the disadvantages of the double stethoscope from the point of view of diagnosis. But there is another side to the question. Common sense tells us that it cannot be good for the delicate organ of hearing to be more or less constantly compressed by the ivory heads and the unyielding spring of the binaural stethoscope. For it must not be forgotten that when the instrument is made use of the pressure of the necessary spring is by no means a negligible quantity. Without a certain, indeed, a considerable, tension nothing can be made of the sounds heard within the chest, and I am strongly of opinion that the minimum pressure required for this purpose does not remain confined to the parts on which the ivory heads immediately impinge—i e., to the outer portion of the external meatus—but that it is transmitted to the rest of the canal and to the membrana tympani. It cannot be denied, therefore, that this pressure kept up intermittently for hours, as is the case with house physicians and others, may be most injurious to the hearing of the observer. I have known of extreme tenderness being the result of the use of the instrument; so marked, indeed, was this symptom that in more than one case experience has taught the sufferer at once to discontinue the use of the instrument, in order that worse evil might be avoided. The delicate organ of hearing is not intended to be abused in this manner, and pain and discomfort in the ear are the first warnings that nature is being trifled with; such warnings are not to be neglected with impunity.

Are there, then, no uses for the binaural stethoscope, or is the instrument to be altogether condemned? It may be said at once that the use of the double stethoscope should be altogether discarded were it not for the fact that it is convenient in illnesses which render it difficult to move the patient in a manner suitable for examination by the wooden stethoscope. In many cases of enteric and other fevers, in pneumonia, and other conditions in which it is undesirable on account of the feebleness of the patient to move him more than is absolutely necessary the binaural stethoscope is often of use in enabling the breath sounds to be heard, when this would be possible only with the greatest difficulty were the wooden instrument made use of. In babies, again, and in young children, the double instrument may be advantageously employed. But used in this way the stethoscope in question is merely an accessory, one to be employed for particular occasions and for special needs. What I protest against, and in the strongest possible manner, is the predilection shown for the binaural stethoscope by the young student who is allowed to make use of it from the very commencement of his clinical work, so that he is totally unable to appreciate the advantages which appertain to the employment of the old-fashioned instrument. No words can condemn too strongly this adoption of the binaural instrument which is, I am convinced, the cause of much of the indifferent diagnosis of chest disease so often observed at the present time.

Wimpole-street, W.

# Clinical Notes:

## MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

### FOREIGN BODY A LONG TIME EMBEDDED IN THE HAND.

By L. K. Herschel, M.D. Vienna.

The following short account of a case in which a fragment of glass remained embedded in the muscles of the hand for nearly three years may be of interest as showing the usefulness of non-interference when no danger can arise from waiting.

In March, 1899, the patient, who was engaged in the analysis of fats in the chemical laboratory of the University of Jena, unfortunately broke a glass jar while forcing a stopper into it. The palm of one of his hands was wounded in a line with the middle finger at a point nearly opposite to the middle of the metacarpal bone of the thumb. A jet of blood immediately spurted out as high as the ceiling and an artery was ligatured by a surgeon. A branch of the radial nerve was also severed, for numbness at once appeared on the inside of the thumb and on the outside of the forefinger. (This still continues to a slight extent.) At the time of the accident the surgeon who tied the artery discovered no foreign body, but an x-ray photograph taken five days afterwards showed a shadow of an abnormal character. There were, however, no urgent symptoms; the wound healed without suppuration, and in order that the ends of the artery might have time to consolidate the surgeon advised non-interference. After three weeks, the appearance of the hand being quite normal, the surgeon endeavoured to remove the foreign body which from the x-ray photograph was supposed to be just under the surface, but the attempt was unsuccessful. All remained quiet until a few months ago. The patient, who was a violinist, had given over playing on account of the injury, but on resuming it he occasionally had painful sensations in the back of his hand in the triangle between the metacarpal bones of the thumb and forefinger. In the first week of January, 1902, he felt considerable pain in this triangle when washing and drying his hand, and a red spot formed on the back of the hand almost on a level with the carpo-metacarpal articulation. On Jan. 10th the skin gave way at this spot and a sharp point protruded; two days afterwards, as it was coming more and more to the surface, the patient seized it with a pair of forceps and drew out a fragment of glass five-eighths of an inch long. No pain or difficulty was experienced in doing this and the wound closed without suppuration.

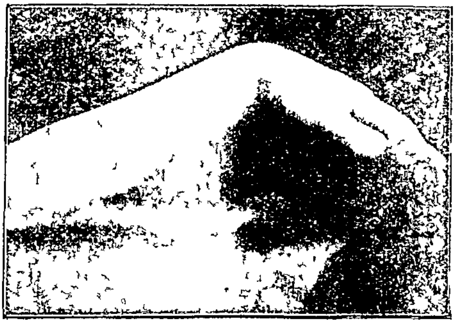
Bordighera.

### A CASE OF SYPHILITIC PNEUMONIA.

By John George Gibbon, M.D. Dub.

That the following case was one of syphilitic pneumonia there can, I think, be little doubt. The course of the temperature was interesting as most of the few authorities to whose works I have been able to refer mention that little or be called normal shortening which occurs when the tendons of healthy muscles are divided The remaining tendons were then divided similarly, their corresponding ends being loosely tied together for identification until their suture was completed, fine silk being used for this purpose The wound was closed without drainage and the fingers were put up in slight flexion For some weeks after movement was commenced, and even after it became free and unrestricted in range, the muscular power remained very feeble but eventually it began steadily to improve and when the patient was last heard of she had resumed work with perfect movement of the fingers and a fair grip

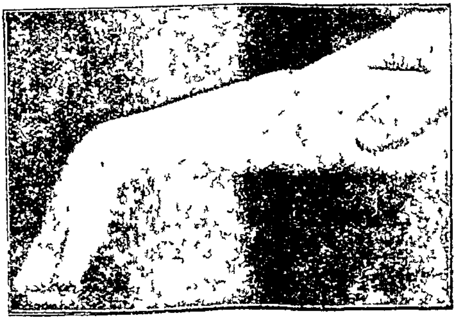
FIG 1



Showing flexion of wrist on extension of fingers

CASE 2.—A boy, aged 12 years, was admitted into the Leeds General Infirmary on Jan 30th 1901, with a crippled and useless hand the result of an injury received three years before He fell off a ladder and "broke the right arm between the wrist and the elbow" Splints were applied in front and behind and were kept on for about *10 weeks* (?) At the end of that time when the splints were removed on account of offensive discharge from beneath them, there was a large deep sore in front of the elbow and the fingers were bent and stiff and useless The wrist and elbow joints were also bent and stiff The boy stated also that "the skin came off the back of the fingers and the nails came away and there was very little feeling in the fingers—none at all in the forefinger", but he was not very clear about dates and sequences The fingers slowly healed and became less numb and by degrees he could move the elbow again but the stiffness of the wrist and fingers got no better—perhaps it grew a little worse—and for the last two years the hand had not altered except that from time to time the backs of the fingers became sore On admission neither the wrist nor the fingers could be straightened to any appreciable extent, but the metacarpo phalangeal joints were distinctly hyper extended (The attitude is well shown in Fig 2.) The thumb was stiff and contracted at the inter phalangeal joint. The fingers were smooth, shiny, and livid, and on the dorsum of the second phalanx the index third and fourth showed irritable looking tight scars of former ulceration Sensation was much impaired over the median nerve distribution in the fingers and to a less extent in the ulnar The radial nerve was unaffected. There was a large and somewhat contracted scar in the middle of the forearm just below the bend of the elbow It was about one and a half inches wide by two inches long (Unfortunately, the electrician's reports in the two cases are not forthcoming Being written on much smaller paper they have been lost )

FIG 2



Showing hyper-extension of metacarpo-phalangeal joints

A similar operation to that in Case 1 was performed on Feb 8th, except that the tendons were exposed by a longitudinal incision extending five inches upward from the annular ligament, on the radial side of the palmaris longus tendon, which was much contracted and was cut away, and the flexor longus pollicis also required lengthening On the sixth day the dressing was changed on account of a rise of temperature to 99 8° F, unaccompanied by pain or any other disturbance, and a small superficial suppuration was discovered. The temperature immediately fell again to normal and thenceforward the progress of the wound was uneventful In this case the split tendons were cut flush and sutured end to end, and the hand was secured with the wrist in slight flexion Owing to the occurrence of the suppuration passive movement was postponed and shortly after it was commenced the boy's father removed him from the hospital in consequence of his outcry about the discomfort of the passive movement He has been lost sight of

*Remarks by* Mr WARD —The practical importance and the considerable interest both clinical and pathological, of the condition, to which further attention has been drawn by a valuable paper contributed to THE LANCET of Jan 11th, 1902, p 78, by Mr L S Dudgeon, encourages me to hope that reports of additional cases may not be without value I therefore record brief histories of the two cases of this affection most recently under my care, and I propose to supplement them by a few remarks upon some of the views which have been propounded as to its causes and its nature, and upon the indications for, and the results of active surgical treatment My personal experience of the affection goes back well over 20 years, long before, I must confess, I knew of Volkmann's original description. Impressions are fallacious, I know, but if I were to say that I had seen an average of one case a year since 1877 I do not think I should be overstating

The two cases published by my colleague, Mr H Littlewood,[1] about two years ago, and the two which I report, were operated upon in the Leeds General Infirmary between Dec 5th 1898 and Feb 8th, 1901, a little over two years, and I do not think that this much over represents the frequency with which these cases have come up during the last 25 years to consultations of the surgical staff, the odium, generally unmerited of the casualty room and the despair of the surgeons

For a considerable number of years I believed that the condition was the result of one uniform cause—that is, fracture at or near the lower epiphysial line of the humerus treated by the application of an anterior rectangular splint, and it is not until comparatively lately that I have known or heard of any exception, indeed, the history might almost be stereotyped as follows "A child from five to eight years of age sustains a severe injury to the elbow which causes swelling, a deformity which includes some increased prominence of the olecranon and shortening of the forearm, abnormal mobility in certain directions, and crepitus. An anterior (and perhaps a posterior) rectangular splint is applied and the child is allowed to go home. No excessive amount of pain is complained of, or if so it is disregarded, and the child is not brought up again till the blue and swollen condition of the fingers shows that something is seriously wrong Then the splint is removed, disclosing an area indicating severe pressure either a slough or a sore, over the fleshy bellies of the flexor muscles Also splint cannot be re applied and the arm is placed in a sling With the subsidence of the swelling the bony deformity

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[1] THE LANCET [illegible]

# A Mirror
OF
# HOSPITAL PRACTICE,
## BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Procemium.

## LONDON TEMPERANCE HOSPITAL.

### A CASE OF PERFORATED GASTRIC ULCER; LAPAROTOMY; SUCCESSFUL CLOSURE BY SUTURE; DEATH EIGHT DAYS AFTER FROM HÆMORRHAGE FROM DUODENAL ULCER.

(Under the care of Dr. W. J. COLLINS.)

IN one-fifth of the recorded cases of perforating gastric ulcer two perforations are present, but it is very rare for a duodenal ulcer to perforate at the same time as an ulcer of the stomach.[1] Still more rare is it for a duodenal ulcer to perforate some days after the suturing of a gastric ulcer, though it is not so rare for a second gastric ulcer to perforate a few days after the first perforation. Inasmuch as the etiology of duodenal ulcer seems to be similar to that of ulcer of the stomach we need feel no surprise at this occasional coincidence. In the following case the onset of the duodenal perforation does not seem to have been sufficiently acute to render a second laparotomy advisable.

A fairly nourished but rather anæmic young woman, aged 23 years, who had had attacks of dyspepsia but gave no history of hæmatemesis, was admitted to the London Temperance Hospital on the evening of April 8th, 1901, about 12 hours after a sudden and violent attack of pain in the abdomen accompanied by marked collapse. On admission the abdomen was tense and tender in the epigastric region; breathing was thoracic. The temperature was 101° F. and the pulse was 128 and running. Dr. W. J. Collins saw her at once and decided to open the abdomen, diagnosing the presence of a perforated gastric ulcer. Under chloroform the abdomen was opened in the mid line above the umbilicus; gas escaped on incising the peritoneum. The index finger detected a roughened surface and edge high up on the anterior surface close to the cardia. By retracting firmly the left lobe of the liver and the costal cartilages the ulcer was brought into view surrounded by shaggy yellow lymph. The contents of the stomach were escaping into the peritoneum. Three Lembert's sutures were with a little difficulty inserted and then two circular sutures were put in and the ulcer was securely closed. The peritoneum was cleansed as effectually as the desperate condition of the patient permitted and a gauze-drain was inserted down to the sutured ulcer.

On April 9th the patient was fairly well; there was no pain and the abdomen was not distended or tender. The temperature was 101°. She was fed by the rectum. On the 10th she slept for five and a half hours. She was thirsty. A quarter of a grain of morphia was injected hypodermically. The breathing was rapid. On the 12th some turbid serum from the wound was found on the dressing The patient had an attack of parotitis (right). The bowels were opened. On the 13th she said that she felt well; the parotitis was less; the discharge from the wound was rather offensive; the wound was swabbed out with carbolic lotion. On the 14th a dark motion was passed (melæna). The discharge from the wound was purulent. On the 15th anæmia was more marked. The patient was restless and breathless. A tar-coloured motion was passed. On the 16th the stool contained blood-clots. The pulse was very rapid. A copious hæmorrhagic motion was passed and death took place at 3 15 P.M.

*Necropsy.*—The whole of the intestines contained blood. Half an inch from the pylorus there was a duodenal ulcer of the size of a five-shilling piece with undermined edges and covered with blood-clot; the walls of the gut were very thin. The stomach was coated with shaggy lymph round the cardia and there was a small subphrenic collection of pus. The sutures were not seen; the site of the perforated ulcer was watertight and on the inner surface was seen a dimple-like depression measuring one and a quarter inches by a quarter of an inch.

## LEEDS GENERAL INFIRMARY.

### TWO CASES OF VOLKMANN'S CONTRACTURE.

(Under the care of Mr. WARD.)

WHEN the exact etiology and pathology of a morbid condition have not been fully ascertained it is far better in naming it to choose a title which is as little connotative as possible. Therefore the name "Volkmann's contracture" (although there is no doubt that as a rule it is objectionable that a disease should be described by an individual surgeon's or physician's name) is far more suitable for the condition which was first described by that surgeon than "ischæmic paralysis," which attempts unsuccessfully to describe its cause and its nature. The two cases of this condition described below are a useful addition to Mr. L. S. Dudgeon's paper in THE LANCET of Jan. 11th, p. 78. It will probably be found that the condition is fairly common, but its apparent unsuitability for surgical treatment has hitherto prevented most of these patients from entering the hospital wards. It is highly desirable that many cases should be recorded in order that we may be enabled to form a comparison between the two chief methods of treatment—namely, tendon-lengthening and massage accompanied by electrical treatment.

CASE 1.—A young woman, aged 21 years, a weaver, was admitted as an in-patient of the Leeds General Infirmary under the care of Mr. Ward on Jan. 24th, 1900, complaining of stiffness and weakness of the left forearm and hand, with inability to straighten the fingers and wrist, so that she was incapacitated from pursuing her occupation. Six weeks previously she sustained an injury to the forearm in the following manner. She was a power-loom weaver and while at her work she thoughtlessly put her hand into the loom to adjust something in motion. The advancing beam caught her arm and crushed it momentarily against the front frame of the machine, in a space said to be reduced to little more than an inch in width. The arm was instantly released as the beam receded. The arm swelled very much almost immediately. The skin was not broken. She was seen by a medical man who found that there was no fracture and the limb was simply placed in a sling and she supposed that her fingers rested comfortably bent. The swelling subsided slowly and it was not until about three weeks afterwards that attempts were made to straighten the fingers, when it was found to be impossible. These attempts had been steadily persevered in up to the time of her admission, but in spite of them she had grown a little worse. So far as she could tell, sensation had never been interfered with, but she took no special notice of this point just at first, during the worst of the pain and general disturbance. As the swelling subsided a depression was observed on the front of the forearm, about the middle, more marked towards the ulnar side. Briefly, the condition was as follows. The wrist and fingers could not both be straightened at the same time. If she extended the wrist the fingers flexed at the inter-phalangeal joints, the metacarpo-phalangeal remaining extended. If she extended the fingers the wrist flexed to an angle of about 60° with the axis of the limb (Fig. 1), and somewhat more if the middle finger was forcibly extended till it was quite straight. The thumb was not affected. Sensation in the affected fingers was normal. Immediately below the middle of the forearm was a well-marked scar-like depression of the skin, although there was no actual scar. Beneath this depression was a leathery induration apparently in the substance of the muscles. Movement of the fingers showed the depressed patch of skin to be somewhat adherent to the deeper parts. A skiagram revealed distinct thickening and blurring of the interosseous border of the radius, but nothing to indicate any fracture.

Operation was performed on Feb. 12th. The tendons were exposed by turning up a rounded flap just above the annular ligament. The tendons of the ring finger were split for a length of two inches and divided in opposite directions at opposite ends of the split. The finger was then straightened and it was found that the overlapping was reduced from two inches to a quarter of an inch, which was much more than was expected, though, of course, some of this was what may until all the tendons have been divided. Here the additional amount to be allowed for extension of the wrist must be estimated by the judgment of the surgeon. 3. With the fingers and wrist straightened, should the tendons be secured in some degree of tension or with the muscles in complete relaxation? It might be argued that the reproduction of something like the normal muscular tone and tension is more likely to preserve the greatest possible amount of muscular power—that to leave the muscles flaccid involves a certain further degree of contracture before effective voluntary contraction can come into play. On the whole, however, I am inclined to think that it is better not to suture under tension. 4. I was tempted in the second case, after determining the exact amount of lengthening required, to cut the ends flush at slightly different levels for the different tendons, and to suture end to end with the object of securing a much neater junction with less risk of subsequent adhesions and tethering. In this case some suppuration occurred and it caused me much more uneasiness as to the union than if the ends had been left overlapping. 5. I believe that the best position, until passive movement is commenced, is one of slight flexion of the fingers. If the fingers and the wrist are in complete extension it is obvious that no further movement is possible in the only direction which is effective for breaking down adhesions. And if the lengthening has been sufficient, and the operation not performed too early, this slight flexion is not likely to predispose to further contracture.

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[1] Diseases of the Stomach, by Robson and Moynihan, p. 151.

# Medical Societies.

## PATHOLOGICAL SOCIETY OF LONDON.

*Exhibition of Specimens.*

A LABORATORY meeting of this society was held on Feb. 4th, Mr. W. WATSON CHEYNE, the President, being in the chair.

Dr. NORMAN DALTON showed sections of a Syphilitic Patch on the Pharynx showing Hyaline Fragmented Bodies. The patient was undoubtedly syphilitic and died from phlegmonous inflammation of the fauces. One or two white patches were found on the pharynx. These proved to be patches of acute inflammation with infiltration of leucocytes as deep as the muscular layer, and around the vessels a fibrinous exudation. In the connective tissue round the mucous glands numerous hyaline bodies were seen. Many of these when examined with the higher powers of the microscope were found to be broken up into small rounded or slightly angular fragments. They stained deeply with eosin and the orange of Ehrlich-Biondi's stain. The hyaline bodies were also found between the columnar epithelial cells which lined the gland acini. Their position both outside and inside the glands suggested that they were once amœboid cells. There was some doubt as to whether the nuclei which appeared under the low power to be in the bodies really belonged to them. Dr. Dalton thought that they did, but that the nuclei were pushed to the extreme periphery of the cell by the swelling of the cell protoplasm which had undergone the hyaline change. He thought that the bodies were connective-tissue corpuscles which had undergone a hyaline degeneration like Zenker's degeneration of muscle, because (1) they appeared to have been once amœboid; (2) their nuclei (allowing that the nuclei really belonged to them) were like those of young connective-tissue corpuscles; and (3) their close resemblance to certain hyaline bodies which Unna had described in connexion with actinomycosis and which he considered to be degenerated plasma cells (the latter being derived from connective-tissue cells). Dr Dalton also showed the same hyaline bodies in an ulcerated vaginal wall from a case of syphilis. He thought that the degeneration was produced by the syphilitic toxins in these two cases.

Dr. ARTHUR WHITFIELD showed a short series of Specimens stained with the Methyl Green Pyronin Stain of Pappenheim. The series comprised sections of Paget's disease, actinomycosis, syphilis, and a piece of granulation tissue from the interior of an inflamed knee-joint. The object of the stain was to differentiate the cells named by Unna "plasma cells," which were probably not in all cases identical with those described by Waldeyer under the same name. The method of staining was published in the *Monatshefte fur praktische Dermatologie*, vol. xxxiii., No. 2, and in Virchow's *Archives*, vol. clxvi., No. 3. Shortly stated, the method depended on the fact that methyl green, although a basic stain, was limited in its action to the staining of chromatin, while pyronin, also a basic stain, showed a strong affinity for basophile protoplasm. It was thus found that on staining sections by this method one obtained a clear bluish-green colouration of the nuclei of the plasma cells while the protoplasm became bright red. The reaction was identical in the case of the hæmic lymphocytes, but the rim of protoplasm was much smaller. The stain was therefore not capable of distinguishing these cells from one another, but was extremely useful in the study of the cells in inflammatory infiltration to enable the plasma cells to be picked out rapidly, and the nucleus of the plasma cell was distinguished clearly from that of the ordinary lymphocyte. As regarded the factors influencing the certainty of the stain he had found that the stain worked best in specimens that had been hardened in alcohol, that it was also fairly satisfactory in sublimate specimens, but that formalin specimens, although allowing the stain to be used, showed a certain mingling of the colours, the protoplasm becoming slightly purple and the nucleus violet.

Dr. R. T. HEWLETT described some Experiments which he had performed to test whether Diphtheria and Tetanus Antitoxins were absorbed from the Stomach or Rectum. Guinea-pigs were fed with varying amounts of antitoxin and were then injected with a single acute lethal dose of diphtheria or tetanus toxin. In no instance was the slightest protection manifested. Similarly, rabbits received rectal injections of diphtheria or tetanus antitoxin on several successive days, and were then inoculated with minimal doses of toxin, again with the result that not the slightest protection had been conferred by the rectal injections. Dr. Hewlett pointed out that although these results were not new it did not seem to be known generally that antitoxin was not absorbed by the mucous membrane of the stomach or rectum, and reports were frequently being published in the medical journals of cases treated with antitoxin by the mouth.

Dr. C. W. DANIELS showed a specimen of Avian Filaria from British Guiana, sent to him by Dr. C. R. Kennard. The series of embryos were from five species of birds and two of these had filaria of two species, so that in all there were embryos of seven species of filaria. The adult forms, male and female, of three species only were found. The embryos in most species differed markedly from each other. They varied in size, the smallest being only 65μ in length whilst the largest was 256μ. Only one species had a sheath. They differed also in relative proportions, in shape, and particularly in the character of the tails. As regards structure, some stained more readily than others and the nuclei forming the central mass of the embryo was packed more closely in some species than in others. In most filarial embryos there was a gap in the central nuclear mass and sometimes two gaps. The position of this gap and its size were fairly constant in the different individuals of each species. In that of the ostinops it was of unusual size, being about 10μ in length. As regards the adults, the male of the filaria of the crotophaga ani was remarkable in that it was much longer than the female, whilst as a rule to which exceptions were rare the female was the larger. There were two unequal spicules in the male. In the crotophaga ani the adults of two species differed considerably though the embryos differed but slightly. In both there were two unequal spicules, the longer being situated anteriorly. In the smaller of these males the tubular nature of the longer spicule was well shown as well as its connexion with the tubular expansion in the interior into which the vas deferens opened, as the whole of this combined tube was occupied by an air bubble. The adults were found, in the case of the ostinops, in a cyst connected with the craw. In the crotophaga (old witch) they were beneath the loosely attached mucous membrane of the craw. Whether these avian filaria caused any symptoms was unknown. The life-history and intermediate hosts had not been traced. The situation of the adult worms in connexion with the alimentary canal was of interest and suggested that the worms were introduced through the mouth, and in this connexion it was worthy of note that in two at least of the human filariæ the adults were found near the stomach and in these two all attempts at infection of many species of mosquito and of some other insects had failed.

about the elbow becomes more distinct, especially an anterior prominence towards the inner side just above the joint; and presently it is noticed that the fingers are bent and stiff and that they cannot be straightened without coincident bending at the wrist. The fingers are smooth and glossy, with varying degrees of anæsthesia, and (in most cases) ulcers appear on the dorsum of the second and third phalanges." I believe that this history still fits the majority of the cases, but now we know that well-marked exceptions must be admitted.

Speaking from recollection, the earlier cases were all of the severer type, with considerable anæsthesia; frequently with scars or ulcers over the dorsum of the second and third phalanges; usually a scar on the front of the forearm, and such a degree of contracture that any attempt to straighten the fingers simply increased the flexion of the wrist without much effect upon the fingers themselves.

This common occurrence of anæsthesia and trophic ulcerations among the earlier cases led us at first to the opinion that the whole condition was due to splint pressure upon the ulnar and median nerves, but the later appearance of cases possessing unimpaired sensation and preserving the integrity of the intrinsic muscles of the hand led to the surrender of this opinion and to the adoption of the view that local damage of the muscles from severe and prolonged pressure just short of the production of actual gangrene of them, but resulting in destruction of the muscle elements and their later substitution by contracting fibrous tissue, must be regarded as the real and primary cause of the shortening. It is much to be regretted that these earlier cases were not carefully and permanently recorded, but unfortunately, owing to the chronic circumstance of pressure on our beds, they were not taken into the wards; for the failure of a few attempts at forcible extension under anæsthesia, together with the apparently hopeless stationary condition of one or two cases which were kept under occasional observation for a year or two, had developed a discouraging conviction that nothing more could be done for them as in-patients

It will be seen from the history of the accident and its treatment in Case 1 that ischæmia cannot be accepted as the only, the invariable, precursor of the shortening of the muscles. The contusing force was a sudden and momentary one; neither splint nor bandage was applied from beginning to end; and as the injury was at a distinctly lower level than usual it is hardly likely that the muscles could be starved in their main bulk from a protracted interference with their blood-supply. The case reported by Mr. H. L. Barnard[2] emphasises, but not quite so forcibly, this point. On the other hand, Mr. Littlewood's argument from his case where the splint sore was on the back of the forearm is not very strong, for here the pressure is taken by the ulna, not the muscles, and it might fairly be contended that ischæmia of the flexor muscles was caused by the bandages with which the splint was secured, assuming that there was not an anterior splint as well.

The remarks which I have to offer on the two cases recorded above will not, I fear, contribute anything very material to our knowledge of the injury, but for some time yet it may be worth while to report cases as they occur, and especially, perhaps, any which have been subjected to active treatment or which have been known to recover without it.

It is desirable that some confusion and diversity of opinion should, if possible, be cleared up and reconciled. Compare, for example, the two following very positive statements. "It is a result of prolonged fixation of forearm fractures by any form of apparatus which intercepts the free circulation of the blood through the muscles and nerves of the part" (Anderson). "I do not believe that splint pressure has anything to do with the deformity. It will be found that the injuries have been severe and that the flexor muscles have been torn. The torn muscle is replaced by fibrous tissue, and this, contracting, is, I believe, responsible for the deformity" (Littlewood). The first of these statements, except for the error as to the usual seat of the fractures, still remains, in my opinion, the correct explanation of a large majority of the cases, although it must be understood, of course, that it is the pressure on the muscles which is the direct cause of the changes leading to contracture, and not the pressure upon the nerves, which gives rise to those frequently associated manifestations which are not an essential part of the affection.

Case 1, here reported, seems to prove, however, that it is not the explanation of all cases. The simple fact is that the removal or destruction of a length of flexor muscle and the substitution for it of scar tissue may be brought about in a variety of ways.

I still think, in spite of Mr. Littlewood's opinion to the contrary, that in most of the cases where it ensues upon fractures about the elbow it is the unfortunate result of the treatment and not of the original injury. I do not admit that these injuries about the elbow, whether dislocations backward or fractures in the lower end of the humerus, cause such extensive lacerations in the bellies of the flexor muscles as will give rise to serious contracture and structural shortening. If that were so, I fear that Volkmann's contracture would unhappily be far more common than it is, for I have a very decided recollection that some of the earlier cases which I have seen were regarded in the first instance as injuries of no great gravity and not serious of their kind. The lump which the indurated patch sometimes makes in the muscles is found immediately beneath the pressure scar or sore when such exists (Mr. Littlewood's case of dorsal scar notwithstanding).

If the supporters of the "ischæmic" theory and their opponents would each admit that the others are right the ground would be cleared for an understanding. Personally, I am not sorry that the words "ischæmic" and "palsy" are dropping out of the definition. "Volkmann's contracture," although open to the general objection to the use of proper names, is a concise and sufficient label and it involves no theories. The more detailed and descriptive definition given by Mr. Dudgeon is very satisfactory.

A word or two about the "swelling, bony in character, sometimes found at the lower end of the humerus, generally at the inner side," which is occasionally referred to as if it were part of the affection. Of course it is not. It is only present in those cases which are associated with fracture or epiphysial separation at the lower end of the humerus, and is, in fact, the lower end of its diaphysis, from which the lower fragment or the epiphysis has been displaced backwards. It is to be found in most cases of faulty union at this point, whether associated or not with Volkmann's contracture, with which it has no essential connexion. When it is of such degree as to cause mechanical locking and seriously to limit the flexion of the elbow it may readily be removed by the chisel—an operation which I have several times practised with satisfactory results.

The prognosis in Volkmann's contracture is an important matter, for it has a significant bearing upon the question of treatment. Here in Leeds, in spite of the very confident statements made by some authorities that many of the cases eventually recover, we have been accustomed to regard them as hopeless, and certainly some of them have remained under observation for considerable periods without a sign of improvement. If the pathology of the condition is to be regarded as identical with that of the type of torticollis with which comparison has been made this unfavourable view must be admitted to be the correct one. But one somewhat pertinent fact may be noticed. I have never seen or heard of any adult with Volkmann's contracture due to, and persisting from, injury in childhood; and, moreover, although some of our cases were kept under observation for considerable periods, none of them were kept long enough to be accepted as conclusive upon the point.

If it can with any confidence be anticipated that cases will recover under the treatment advocated and carried out by Mr. Dudgeon few surgeons will, I imagine, submit patients to an operation of appreciable uncertainty and in which failure would probably leave greater crippling than before. It is difficult to understand, however, by what natural processes the damaged muscles themselves can undergo repair—at any rate, in those cases in which there is considerable destruction and actual loss of substance, and such cases make a large percentage of the whole.

With regard to the technique of the tendon-lengthening operation there are a few points of detail which deserve comment. 1. I quite agree with Mr. Dudgeon that cases should not be subjected to operation until it is reasonably certain that the contracture has reached its limit. 2. To determine how much lengthening may be necessary in a given case, so as not to denude and to split all the tendons more than can be avoided, it is an advantage to select the tendons of one finger, say the ring finger, to make a two-inch split, to straighten the finger, to observe how much of the overlap has been taken up, and to divide the other tendons accordingly. In the worst cases the wrist cannot be straightened influence of these rays on lupus he attributed to their burning action. No good effect resulted unless the treatment was accompanied by at least some symptoms of burning. He did not think that the Roentgen rays afforded any marked superiority over the best of the old-fashioned methods of treating lupus. The x rays were in the majority of cases inferior to the arc lamp rays in the treatment of lupus.—The PRESIDENT, Dr. ALEXANDER, and Mr. G. P. NEWBOLT spoke, and Dr. TAYLOR replied.

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[2] The Lancet, April 20th, 1901, p. 1138.

# *ROYAL ACADEMY OF MEDICINE IN IRELAND.*

## SURGICAL SECTION.

### *Synovitis.—Pylorectomy.—Exhibition of Cases.*

A MEETING of this section was held on Jan. 17th, Mr. THOMAS MYLES, the President, being in the chair.

Mr. R. L. SWAN read a paper on the Surgical Treatment of Chronic Synovitis. In cases of primary tuberculous synovitis he recommended that the joint should be opened, the fluid evacuated, the synovial membrane irrigated and then thoroughly sterilised with pure carbolic acid, again irrigated with sterilised water, and closed. With proper aseptic precautions he looked on the operation as the best treatment for chronic hydrops articuli of the knee. Rightly carried out the operation placed the synovial membrane in a condition to return to its normal functional activity and the patient recovered a useful limb. He illustrated his paper by the *history of two successful cases. He had not found carbolic* acid the dangerous bactericide that some said it was. He in no way wished to be understood as advocating the operation for disease of the joint complicated with disease of the osseous tissues or cartilage. The operation was intended to place the synovial membrane of the joint in a condition favourable for its recovery.—The PRESIDENT said that in the majority of cases the pathological lesion consisted in pedunculated growths commencing from the alar ligaments. If on opening the joint, especially in children, he found the synovial membranes to be tuberculous, he recommended that they should be dissected out, a procedure which he believed led to recovery.—Mr. E. H. TAYLOR thought that free swabbing with strong carbolic acid devitalised the synovial membranes and the cartilage and left them a prey to the tubercle bacilli in their vicinity. He looked on the method suggested as one not well calculated to give good results in hydrops articuli; the wound healed, but after a little time the limb became shorter and often flexed. There was not true ankylosis. He recommended that the hyaline cartilage should be shaved off the bone and the raw osseous surfaces joined, ensuring a sound limb.—Mr. JOHNSON said that he had under his care a man with hydrops articuli which was benefited for a time under the treatment by rest, but the swelling did not wholly disappear. He opened the joint, irrigated it, and closed it. The fluid removed—about 18 ounces—was highly albuminous. The synovial membrane contained bacilli in large numbers. The incisions, one on each side of, and parallel to, the patellar tendon, healed quickly and well; but they broke down in a week, and not long afterwards the patient developed tuberculous meningitis from which he died.—Mr. H. G. CROLY, Mr. R. F. TOBIN, Dr. W. S. HAUGHTON, and others also took part in the discussion.

Mr. T. E. GORDON read a paper on a successful case of Pylorectomy. The patient, who was 43 years of age, was admitted to the Adelaide Hospital for an abdominal tumour, and on April 2nd, 1901, Mr. Gordon performed the first step in a Roux's operation. The patient made a good recovery with little or no shock. 25 days afterwards the second stage of the operation was *completed by the removal of the pylorus* and about half of the stomach. The intestinal and gastric wounds were sutured with silk, a gauze drain was left in the area of operation, and the wound was closed. The operation occupied one and three-quarter hours. The growth was found to be a columnar-celled cancer. For some days the patient remained in a precarious condition, with a temperature of 102° F. and a pulse of 160. At the end of a week the food was increased in amount and the patient made a good and quick recovery. Mr. Gordon afterwards considered the legitimacy of the operation of pylorectomy, and concluded that in a favourable subject Roux's operation was called for.—The PRESIDENT congratulated Mr. Gordon on the first successful pylorectomy performed in Dublin. In one of his cases he cut down on the stomach with the intention of performing a pylorectomy, but found so much thickening of the gastric walls with what he and his friends thought was cancer that he returned the stomach unopened to the abdomen, and the woman is to-day, after some years, alive and well.—Mr. SWAN also congratulated Mr. Gordon on his great success.

Mr. CROLY showed a case of Amputation at the Hip-joint and a case of Ligation of the External Iliac Artery for Ilio-femoral Aneurysm.

Mr. TOBIN showed a patient, aged 80 years, from whom the Prostate was removed by Enucleation.

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SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.—A meeting of this society was held on Jan. 19th, Mr. A. H. Tubby being in the chair.—Dr. George Carpenter showed a case of Paroxysmal Hæmoglobinuria in a female child, aged three years. An infant sister had been treated at the hospital for congenital syphilis, but the patient showed no signs of that disorder.—Dr. Charles Macalister (Liverpool) suggested that absorption from the nasal discharge, from which the child suffered, might be responsible for the condition.—Dr. G. A. Sutherland called attention to the presence of oxalates in the urine of such cases.—Dr. L. G. Guthrie spoke of two sisters who developed hæmoglobinuria and who were undoubtedly syphilitic.—Dr. Carpenter, in reply, remarked on experiments showing the immediate destructive action of cold on the red blood corpuscles of such cases when topically applied.—Dr. Carpenter *read notes of a case of Suprarenal Sarcoma in a boy, aged* two and a half years, in which the organs were demonstrated by Dr. D. N. Nabarro who had conducted the necropsy. The right kidney was invaded secondarily by the new growth and the left had become hydronephrotic from pressure on its ureter. The mesenteric and pelvic glands were secondarily invaded and some glands under the sterno-mastoid subsequently. The case in its clinical aspect was not unlike tuberculous peritonitis, but the injection of tuberculin gave negative results and confirmed the original opinion.—Mr. Tubby and Mr. Clement Lucas drew attention to the hopelessness of surgical interference in the large majority of cases of renal sarcoma.—Dr. E. Cautley looked upon it as a case of extra-renal sarcoma, with secondary renal attachment, and inquired as to secondary deposits in the skin.—Dr. Carpenter, in reply, said there were no secondary cutaneous deposits. He did not consider it a case for operation, and that opinion was borne out by the post-mortem examination.—Mr. Clement Lucas showed a case of Traumatic Chorea and Musculo-Spiral Paralysis complicating a fracture of the *upper third of the humerus in a girl, aged 11 years.* The chorea developed within half an hour of the injury and was not associated with heart disease or a rheumatic history. The musculo-spiral paralysis was believed to be caused by the callus resulting from movement during repair, and it was proposed to cut down on the seat of fracture and relieve the nerve from pressure. Another interesting point in the case was an abnormal growth of hair on the lower third of the arm and dorsal aspect of the forearm corresponding to the skin supplied by the injured nerve.—Dr. Frederick Taylor asked whether a recent attack of any infectious disorder could be negatived and whether it was certain that there were no choreic movements prior to the accident. He referred to the obscurity surrounding the relationship of chorea to the emotions and shock. How did the traumatism operate? Through the central nervous system, the nerve of the limb, or by the production of shock?—Mr. G. Pernet, Mr. F. Jaffrey, and Dr. Carpenter joined in the discussion and Mr. Clement Lucas replied.—Mr. Tubby showed several cases of Paralytic Talipes Calcaneo-valgus, Equino-valgus, and Equino-varus which had been treated by muscle-grafting. In some of the cases, especially those of calcaneo-valgus, the results were good, also in two of the cases of equino-varus. But the cases of equino-valgus were not so striking, although the improvement was very considerable. In his remarks on the operative procedures which had been alluded to Mr. Tubby said that paralytic cases might be divided for purposes of treatment into three classes: (1) those in which a single muscle or a single group of muscles were affected, and these were capable of satisfactory treatment by tenotomy; (2) those in which at least two groups of muscles were paralysed, and these were fit subjects for muscle-grafting; and (3) those severe cases in which all

Dr. H. S. Wilson showed some Gelatin-stab Cultures of Anthrax and described the conditions under which the characteristic "inverted fir-tree" or arborescent appearance of stab-cultures of the bacillus were best produced. He had made a few gelatin-stabs under varying conditions of medium, of bacillus, &c. Three strengths of gelatin had been used—5 per cent., 7 per cent , and 10 per cent. Two agar-cultures of anthrax obtained from the blood of an inoculated guinea-pig a few minutes after death were grown at 37° C., one for 20 hours and the other for about 70 hours. The 20 hours' culture was seen on microscopical examination to consist mainly of bacilli, whereas the 70 hours' growth consisted almost entirely of free spores. The stab-cultures were grown for eight or nine days at from 18° to 20° C. and then fixed with formalin vapour. The following results were obtained. 1. *10 per cent. gelatin.*—(*a*) Bacilli: liquefaction cup and streak, but no arborescence; and (*b*) spores: liquefaction cup and streak, but no arborescence. 2. *7 per cent gelatin.*—(*a*) Bacilli: liquefaction cup and streak with slight arborescence. (*b*) Spores: no liquefaction cup, but a streak with well-marked arborescent growth. 3. *5 per cent. gelatin.*—(*a*) Bacilli: liquefaction cup and an arborescence better marked than in the case of the 7 per cent. gelatin. (*b*) Spores: no liquefaction cup, but a very fine arborescent growth. In addition to the above, stab-cultures were made in 5 per cent. and 7 per cent. gelatin from bacilli and spores, and were grown in an atmosphere free from oxygen by Buchner's method. In no case was there any liquefaction or any attempt at arborescence. The point therefore, to which he called attention was that to produce the anthrax "fir-tree" it was useless to make stab-cultures in 10 per cent. gelatin, the strength generally employed in laboratories, and the best strength to use was 5 per cent., and apparently a freely sporing culture gave more satisfactory results than did one containing few spores.

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## LIVERPOOL MEDICAL INSTITUTION.

*Gall-stones with Chronic Intestinal Obstruction.—Intestinal Anastomosis – Physics of the Mitral Regurgitant Murmur.—The Treatment of Cancerous Affections of the Skin by means of X Rays.*

A meeting of this society was held on Jan 30th, Mr. Rushton Parker, the President, being in the chair.

Dr. A. C. Wilson described a case of Gall-stones with Chronic Intestinal Obstruction in which many diagnoses had been given by various physicians in Liverpool and London. Eventually an exploratory operation revealed gall-stones in the gall-bladder and duct, which were removed, also a curious mass in the intestine which was not dealt with.—Mr. R. W. Murray described the operation which he had performed in Dr Wilson's case. He believed the lump in the intestine to be an impacted gall-stone. In order to deal satisfactorily with this, he thought that it would be necessary to short-circuit the gut, and would not advise further operation unless the suffering of the patient became unbearable.—The President, Dr. W Macfie Campbell, and Dr. F. A. Gill commented upon the case, and Dr. Wilson replied.

Mr. Murray exhibited a boy, aged 13 years, upon whom he had operated for an Artificial Anus in connexion with the small intestine, complicated with considerable prolapse of the gut. Three years previously the boy had been operated upon for intestinal obstruction, a portion of the small intestine, probably about three feet from the ileo-cæcal valve, being brought to the surface and opened. Prolapse of the bowel resulted, and for three years all fæcal matter escaped from this opening in the small intestine. When first seen by Mr. Murray in May last the child's condition was pitiable; he was wasted and anæmic and he carried his prolapsed gut in a bag attached to his waist. In July Mr. Murray opened the abdomen and attached the working end of the small bowel to the transverse colon, end to end. The large gut was much collapsed, and as it had been lying fallow for three years there was some doubt as to whether it would resume its function. The result, however, was very satisfactory, the bowels acting naturally 48 hours after the operation. The general health and comfort of the patient had greatly improved, although there was still a portion of unused bowel prolapsing from the original wound.

Dr. T. R. Bradshaw read a paper on the Physics of the Mitral Regurgitant Murmur. He said that hitherto no thoroughly satisfactory explanation was forthcoming of the fact that the murmur was heard most plainly at the apex of the left ventricle. He suggested that it was brought about in the following way. The fluid vein in the left auricle set up sonorous vibrations in the still parts of the blood behind the mitral valve. The valve being a thin membrane capable of vibrating transmitted these vibrations to the blood in the ventricle, which conducted them to the apex, the part nearest to the chest wall. He was making experiments with models to ascertain how far this kind of transmission was possible, but so far he had not succeeded in exactly reproducing the conditions artificially as the construction of such a model involved considerable mechanical difficulties.—Dr. J. Barr spoke and Dr. Bradshaw replied.

Dr. G. G. Stopford Taylor read a paper on the Treatment of Cancerous Affections of the Skin by means of the X Rays, illustrating his remarks by lantern slides and patients. Case 1.—This was a case of rodent ulcer involving the right side of the nose, the lacrymal canals, and the eyelids in a patient, aged 82 years. Case 2.—This was a case of rodent ulcer on the left cheek, implicating the outer canthus and the eyelids in a patient, aged 64 years. Case 3 was a case of epithelioma on lupus erythematosus affecting the whole surface of the nose in a patient, aged 59 years. Microscopical confirmation of the diagnosis was obtained. Scraping, followed by x-ray applications, was the treatment carried out. Case 4.—This was a case of a large rodent ulcer of the left side of the scalp and pericranium in a patient, aged 78 years. The foregoing cases were of such a nature as to be beyond operative interference or relief by any other known method. The treatment in the first three cases resulted in complete healing of the ulcerated surfaces, with the formation of the most perfect scar tissue and the disappearance of all traces of the disease. In the fourth case, as the pericranium was involved, only partial healing took place, but the wearying pain which usually attended rodent ulceration was much relieved. As a result of the treatment Dr. Taylor arrived at the following conclusions: (1) that the rays were especially indicated in all inoperable cases of cancer of the skin; (2) that the best results were obtained when the disease was confined entirely to the soft parts; (3) that owing to the complete relief of pain and the superior cosmetic result obtained patients too readily assumed that they were well and neglected to attend, and hence recurrence might occur from failure to complete the treatment; and (4) that the use of x rays was no obstacle but a valuable aid to other methods.—Dr. A. N. Walker thought that the action of x rays on rodent ulcer was not due to their escharotic power, but to some influence which, as it were, turned the scale of growth in favour of the healthy tissues, thereby enabling them to destroy and to absorb the malignant cells. In cases treated by the x rays at the Liverpool Northern Hospital he had noticed that the rolled edge remained in the skin after the ulcer had healed and then gradually disappeared, and in one case in particular of recurrence in which further operation was refused the skin was never broken, but the new growth slowly became absorbed under the influence of the rays.—Dr. A. G. Gullan congratulated Dr. Taylor on the cases, and noted especially the excellent supple character of the skin and the splendid condition of the scar tissue.—Dr. Leslie Roberts said that the x rays were being used for all sorts of cutaneous diseases. There was a want of precision in these experiments which was perhaps unavoidable owing to their ignorance of the nature of the force with which they were dealing. But they could not doubt that in the end all this promiscuous experimenting would lead to the discovery of some definite principles which would serve to guide the judgment in the selection of cases for treatment. He believed that the effects on the tissues of the skin of the x rays were, broadly speaking, of two orders—(1) those of a kind analogous to *burning;* and (2) *specific* effects. Roentgen rays appeared to exert a specific action in degenerative epithelium. The growth of hair, nails, and the horny cuticle were rapidly affected, and all these were forms of physiological degenerative epithelium. Rodent ulcer was a purely epithelial disease, and there could be no question that the rays caused a dissolution of the new cell growth. The same was true of epithelioma and possibly, to some extent, of other forms of cancer. It was much to be regretted that they did not possess exact information as to the microscopical condition of the scar of rodent ulcer after healing by x rays The remedial a woman, aged 37 years, the subject of Diffuse Symmetrical Scleroderma. It affected the skin of the face, neck, thorax, and to a less extent the upper extremities. It came on about six months ago and reached its maximum intensity in five months, since which time it had improved.—Mr. F. Marsh showed a case of Carcinoma of the Sigmoid Flexure in a boy, aged 15 years, who was admitted into the Queen's Hospital, Birmingham, on June 26th, 1901, for pain in the epigastrium and passing of blood with the fæces. The passing of blood began six months prior to his admission. The pain, which was intermittent and referred to the epigastrium, only commenced a month before. Per rectum an indistinct fulness could be felt to the left in the recto-vesical pouch. Blood and mucus followed the withdrawal of the finger. On July 5th a median incision was made and a growth was found in the lower three inches of the sigmoid. The growth was excised with a margin of healthy bowel, some enlarged mesenteric glands were removed, and with considerable difficulty the two ends of the intestine, the middle of the sigmoid, and the upper end of the rectum were joined as accurately as the position of the parts would allow with Lembert sutures. A good recovery was made, the bowels acted regularly without difficulty, and the boy went home well on August 7th. Microscopical examination showed that the growth was a columnar carcinoma. The subsequent history, however, pointed to recurrence, as the brother of the boy reported some four months after the operation that there was a return of blood in the fæces, but Mr. Marsh had not had an opportunity of examining him.—Mr. Christopher Martin showed a Kidney removed on Feb. 11th for Calculous Pyonephrosis from a woman, aged 40 years. The patient bore the operation well and made an uninterrupted recovery.—Mr. J. F. Hall-Edwards read a paper, illustrated by lantern slides, on Experiences with the Imperial Yeomanry Hospital in South Africa.

# Reviews and Notices of Books.

*The Healing of Nerves* By CHARLES A. BALLANCE, M.S. Lond., F.R.C.S. Eng., Assistant Surgeon to St. Thomas's Hospital; and PURVES STEWART, M.A., M.D. Edin., Assistant Physician to the Westminster Hospital. Illustrated by 16 Plates and one Figure in the Text. London: Macmillan and Co., Limited. 1902. 4to, pp. 112. Price 12*s.* 6*d.*

IN the preface to this treatise the authors state that most of the work was completed by the end of 1899, but the absence of Mr. Ballance at the South African war for more than a year has delayed its publication until the present date. The subject of the volume is one of great interest and has attracted the attention of many observers. The experiments required are not difficult to perform, and they can be practised whilst the animal is under chloroform; but the subsequent microscopical investigation demands a thorough knowledge of the modern methods of staining and mounting, and Mr. Ballance has been fortunate, as he himself points out, in obtaining the assistance of so able a coadjutor as Dr. J. Purves Stewart. The animals on which experiments were made were monkeys, dogs, and cats, and the points which the authors proposed to investigate were the following:—the process of degeneration in a peripheral nerve after injury both without and with immediate suture of the two ends; the process of regeneration in a divided nerve-trunk which has been divided and reunited by suture; the process of regeneration, if any, in the distal segment of a divided nerve, the cut ends of which have not been reunited by suture; and lastly, the changes which occur in nerve grafts. The literature of the regeneration of nerves after injury and a good historical *résumé* and bibliography will be found appended to an article published in 1892 by Professor W. H. Howell and Dr. G. C Huber, in the *Journal of Physiology*, and to articles by Galeotti and Levi in "Ziegler's Beitrage" for 1895 and by Dr. Kennedy in the "Philosophical Transactions" for 1897. On the strength of statements made by Dr. Waller, Professor Ranvier, Professor Kölliker, and Professor His, it has been generally accepted that after division of a nerve new axis cylinders are developed in the form of outgrowths from the axis cylinders in the central segment which, inclosing the medullary sheaths of the distal segment, replace the old axis cylinders which have undergone degeneration. Another view, however, has been advanced which the authors term the "peripheral" theory and to which they give their entire adhesion. According to this the peripheral segments of the cut fibres undergo complete degeneration whilst new fibres in the distal segment—axis cylinders, medullary sheaths, and neurilemmata alike—are formed from pre-existing cells in the distal segment itself, and after their formation become attached to those of the central segment, thereby restoring the conductivity of the nerve-fibre. A small portion of the proximal segments of the cut fibres undergoes degeneration, but this process does not extend to any considerable distance up the nerves towards the cells which form their trophic centres. The successive changes that take place in the process of degeneration have been very carefully worked out by the authors and constitute an interesting history. Within six hours after the initial blood extravasation consequent on the cut an invasion of leucocytes takes place, reaching its maximum about the eighteenth hour. After three days the leucocytes are gradually and largely replaced by connective-tissue cells. These begin to proliferate and on the fourth day indent the fatty substance of the myelin sheaths and then absorb both sheaths and axis cylinders, the whole process occupying several weeks. In the meanwhile, commencing about the second day, the neurilemma cells proliferate, the young cells sending forth fine protoplasmic processes from their extremities in the direction of the original nerve. The smaller nerves resist the degenerative process longer than the larger ones. In the process of regeneration the proximal extremity of the cut nerves exhibits at a very early period—that is to say, within 24 hours—a primitive end-bulb, produced by the curling up of the loose ends of the divided fibres. This acts as a scaffold on which the permanent end-bulb is deposited. The earliest signs of regeneration in the distal segments of the cut nerves occur at the end of three weeks; numerous longitudinal "spider cells" appear in the distal segment and in the intermediate scar tissue which shoot out young beaded axis cylinders from their opposite poles. These are new axons which overlap and coalesce with one another. New medullary sheaths then appear inclosing the axons about the fourth week, and gradually the regeneration becomes complete and the cut nerve functionally active. The regeneration of a cut nerve is not therefore affected by the growth of the proximal extremities of the axis cylinders, but is accomplished by the development from longitudinal chains of cells of axons which fuse together and become inclosed in medullary sheaths. The treatise, though short, is well deserving of attentive study.

*Text-book of Pharmacology and Therapeutics.* Edited by W. HALE WHITE, M.D., F.R.C.P. Lond., Physician to, and Lecturer on Medicine at, Guy's Hospital, London. London and Edinburgh: Young J. Pentland. 1901. Pp. viii.-1040.

THE title of this work accurately describes what manner of book it is and implies what it is not. Here we find no pharmacopœia or materia medica and no description of universal, but only of medical, therapeutics—no book for students preparing for examination, but a standard work of reference for the library of the practitioner. Handicapped as pharmacy in England still is by reason of the lack of a universal system of weights and measures, it has been found necessary to use the English system for clinical descriptions and directions while the laboratory details are given in the decimal system.

the muscles around a limb were useless, and for these arthrodesis was recommended. After speaking of the limitations of muscle-grafting and indicating its scope, and pointing out that as there was a diminution of power applicable to a given joint the best results could not be perfect, Mr. Tubby yet thought that muscle-grafting was a scientific and practical procedure, for it distributed what voluntary power was left around an articulation and so it became well-balanced, although too often weak. The indications and methods of operating in arthrodesis were then alluded to and three cases were shown. A case of infantile spastic paralysis affecting the upper extremity was brought forward in which considerable improvement had been obtained by converting the pronator radii teres into a supinator, and by section of the flexor carpi radialis the patient now had the power of voluntary but partial supination of the forearm. The method adopted was fully described in the *British Medical Journal* of Sept. 7th, 1901, and from an experience of six cases Mr. Tubby thought the operation promised well.—Mr. Clement Lucas and Dr. A. E. Sansom spoke of the value of Mr. Tubby's suggestions, and Mr. Tubby replied.—Mr. Walter Edmunds and Dr. Carpenter showed a case of Myositis Ossificans in a female, aged four years, one of a family of eight. The disorder had been noticed six months and recently had rapidly advanced. The affected muscles were in parts infiltrated and in others displayed bony plates. There was fusion of two phalanges of the great toes, a condition which had been recognised as occurring in these cases. Microscopical examination of a portion of an infiltrated muscle showed fibro-nuclear tissue alone.—Dr. W. A. Milligan read notes on a case of Contracted Granular Kidney in a boy, aged seven years. The chief symptoms were pallor, wasting, headache, and polyuria. The heart was slightly hypertrophied, the skin was bronzed, and the urine was of low specific gravity and albuminous. Later the patient developed albuminuric retinitis, and epistaxis and cutaneous hæmorrhages occurred. Four weeks before death the heart began to fail, the extremities became dropsical, giving place to general anasarca with anuria, and the child died comatose. The kidneys, macroscopical and microscopical, were typical of the condition.—Dr. Carpenter inquired as to a history of syphilis in the case and said that he had not yet detected albuminuric retinitis in cases of contracted granular kidney in children; but he had seen that condition in a child, aged eight years, who suffered from a large white kidney which was verified post mortem.—Dr. Sansom regarded it as one of typical interstitial nephritis, but thought that acute parenchymatous nephritis had been grafted on it.—Mr. Sydney Stephenson thought it quite possible that retinitis might be as common in interstitial nephritis in children as it was relatively in that disorder in adults. His own experience had furnished him with two such instances, the latter of them two days since.—Mr. Stephenson read (for Dr. Lewis Marshall of Nottingham) notes on a case of Thyroid Dislocation of the Hip in a child, aged nine years, of four months' duration, confirmed by x rays. There were two points worthy of note: a previous synovitis of the hip-joint had existed and reduction was quite easily effected by manipulation.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Jan. 21st, Mr. P. E. Miall being in the chair.—Cases and specimens were shown by Mr. R. Mercer, Dr. H. J. Campbell, Dr. B. H. Slater, and Dr. R. H. Crowley.—Dr. Nicholson Dobie read notes on a case of Distension and Hernia of the Gall-bladder. The patient was a woman, aged 60 years, who for two years had complained of pain in the umbilical region when she was moving about. There was no pain when she was at rest in bed. For about 12 months she had noticed a lump in the body. There was no history of jaundice. Examination of the abdomen showed a large ventral hernia in the middle line below the umbilicus. The hernia was reducible easily and it contained a tumour which when returned to the abdominal cavity could be moved about freely. The tumour was tense and fluctuating and was of about the size of a fœtal head at full term. On the right side of the tumour was a hard projection one and a half inches long and of the size of three fingers. On Dec. 4th, 1901, the abdomen was opened in the middle line below the umbilicus. The tumour was found to be a greatly distended gall-bladder with thickened and congested walls. There was no adhesion. In a pouch on the right side was a large gall-stone cylindrical in shape and weighing eight and a half drachms. The gall-bladder was opened, the stone was removed, and the gall-bladder was then stitched to the upper end of the abdominal incision and the rest of the wound closed. The wound healed by first intention except for the biliary fistula. On Dec. 27th the patient had an attack of right hemiplegia with complete loss of speech.—Mr. Mercer read the notes on a case of Pyloric Obstruction—Gastro-jejunostomy. The patient was a woman, aged 45 years. In March, 1899, oöphorectomy had been performed for dysmenorrhœa and ovarian neuralgia. In September, 1899, symptoms of gastric disturbance began with pain and vomiting. Blood was present in the vomit on one occasion. Notwithstanding treatment by rest in bed, dieting, and gastric lavage, relief was never more than temporary, and as she was becoming more and more emaciated and weak operative measures were advised. She was admitted to a hospital and the abdomen was opened in January, 1901. A band was found stretching from the greater curvature of the stomach near the pylorus to the scar of the previous operation. This was divided and in addition the pylorus was stretched by the fingers, the stomach wall being invaginated into it. For three months the patient did well but then the old symptoms began to return, and by August she had fallen back to much the same condition as before and appeared to be dying slowly from starvation. At the patient's request a further operation was undertaken by Mr. Mercer at home in October, 1901. On opening the abdominal cavity the transverse colon was found to be adherent to the scar and the intestines were matted together; after some difficulty the jejunum was brought up into the wound and united to the posterior portion of the stomach. The pylorus was embedded in a mass of adherent intestines and was not seen. The shock after the operation was not severe, but there was very persistent vomiting which was stercoraceous on the morning of the third day. The stomach was washed out with permanganate of potash solution and a turpentine enema administered. The vomiting now ceased and the patient was able to take nourishment. A month after the operation she was taking solid food and was rapidly regaining her strength and weight. She did well for a time, but recently (January, 1902) the old symptoms of pain and vomiting had returned.—Dr. C. F. M. Althorp read notes on three cases of New Growth in the Large Intestine.—Mr. J. Basil Hall read a paper entitled "Some Observations on Dilatation of the Stomach and a Modification of Posterior Gastro-jejunostomy," illustrated by five cases.

CLINICAL SOCIETY OF MANCHESTER.—A meeting of this society was held on Jan. 21st, Dr. A. Wahltuch being in the chair.—Mr. J. Howson Ray related a case of Strangulated Femoral Hernia occurring in a man, aged 53 years, where the sac was found to contain about three drachms of foul-smelling pus and a gangrenous loop of small intestine which had already given way. The symptoms were masked by alcoholic mania. The patient was sent into the Salford Royal Hospital by Mr. J. Cantley of Higher Broughton, and was operated upon by Mr. Ray about half an hour after admission. The gangrenous bowel—about three and a half inches long—was excised and the ends of the gut were united by continuous catgut sutures, including all the coats of the intestine, whilst Lembert's sutures of fine silk were used in two layers outside. No button or bobbin was employed. The sac was removed and a gauze drain was left for a few days with a small-sized drainage-tube just entering the peritoneum. Feeding was entirely per rectum for the first week. On the eighth day there was some fæcal matter noticed about the wound and for a week longer fæces discharged at the groin as well as per rectum. In the course of the fifth week the wound had entirely healed and the patient's mind was practically clear. He left the hospital quite well eight weeks after admission. The patient was shown to the meeting, as also the specimen removed.—Mr. J. E. Platt gave a demonstration on Diseases of the Tongue and showed cases of smoker's patches, leukoplakia, atrophy of papillæ, erythema migrans, lichen planus, secondary and tertiary syphilitic affections, tuberculous ulcer, dental ulcer, nævoid papilloma, and epithelioma. He advocated the use of ointments with a basis of vaseline and lanolin, as recommended by Mr. H. T. Butlin, for the treatment of certain affections of the tongue, several of the cases having derived great benefit from their application.

MIDLAND MEDICAL SOCIETY.—A meeting of this society was held on Jan. 22nd, Mr. Arthur Oakes, the President, being in the chair.—Mr. W. F. Haslam showed was thus able to trace the gastric movements with great precision. The curious constrictions that occur and the march of the peristaltic waves are very distinctly shown, and they serve to modify the views generally accepted on the authority of Dr. Beaumont and Dr. Brinton. Two remarkable cases of ablation of the whole stomach, with preservation of life for a considerable period, are recorded. The whole chapter on Digestion, without containing much *that is novel, gives a good résumé of our present knowledge* of that function. The chapter on Voice and Speech, with the illustrative photographs of the larynx, chiefly giving Professor French's views, is highly instructive.

The section on the Circulation is the least satisfactory one in the book. We are unable to find any account of the nerves distributed to the heart except a few lines under the heads of the Medulla Oblongata and Spinal Cord. It is true that our knowledge of the relations of the nervous system to the heart is still very imperfect, and that much of what is known admits of more than one explanation, but this hardly justifies its almost entire omission in such a treatise as this. Again, Professor Raymond can hardly have seen Stephen Hale's "Statical Essays" or he would not have named him "Stephen Hall." His "classic experiment" was originally performed *in 1702, and not in 1727, and he did not introduce* a goose-quill into the femoral artery of a horse, but, as he says very explicitly, "a *brass* pipe whose bore was one-sixth of an inch in diameter, and to that, by means of another brass pipe which was fitly adapted to it," he fixed "a glass tube of nearly the same diameter, which was nine feet in length." Here and there we have noticed a few slips of the pen—as, for example, that noted above, and "Halle," on p. 357, which is a misprint for *Haller*. The explanation which Professor Raymond gives of the fact that the moon seems larger to an observer when near the horizon than when near the zenith is not satisfactory. "Near the horizon," he says, "we have terrestrial objects to compare it with, while when in the zenith there is nothing with which to compare it." But it *may be said that the moon looks large when rising on* Salisbury Plain, on which there is no conspicuous terrestrial object with which it can be compared, and looks small at its zenith when close to the vane of the spire of Salisbury Cathedral, the size and distance of which are well known. It is probably an affair of refraction. The book is well got up and well printed, and may be regarded as a trustworthy guide for the student and a useful work of reference for the general practitioner. The illustrations are numerous and are well executed.

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*The Sanitary Inspector's Handbook.* By ALBERT TAYLOR, Member of the Sanitary Institute; Holder of the Inspector of Nuisances Certificate of the Sanitary Institute; Demonstrator to the Students of the Sanitary Institute; Sanitary Inspector to the City of Westminster; late Chief Sanitary Inspector to the Vestry of St. George, Hanover-square, London; formerly Chief Inspector of Nuisances, Wigan; and Sanitary Inspector of Wallasey. Third edition. London: H. K. Lewis. 1901. Pp. 408 Price 6s.

THIS book is intended chiefly for the use of students preparing for the various examinations in sanitary subjects which are held to test the knowledge of those who wish to become sanitary inspectors in England and Scotland. The qualifications of the author to write on the subject are fully given on the title-page and are duly quoted above and the fact that the book has already passed through two editions proves that the work has been appreciated.

The amount of information which a well-qualified sanitary inspector must possess on a great variety of subjects appears at first sight to be almost appalling. He should have a general knowledge of the provisions of the Public Health Acts and a practical knowledge of what constitutes a nuisance from a legal point of view, and should understand clearly the exact procedure to be adopted in serving the statutory notices before taking the legal proceedings which are occasionally necessary. Order, method, and accuracy are essential for the due performance of his duties, and without the exercise of these qualities his official books and diary would be worse than useless. A practical knowledge of drainage and of water-closets is essential, *and the testing of drains is an important part of* his daily work. He will do well to possess a general knowledge of the problems connected with water-supply and of the laws which bear upon it, and it is essential that he shall be able to collect a sample of water *secundum artem* for the use of an analyst. While a knowledge of infectious disease is advantageous a practical knowledge of the methods of disinfection is necessary. A sanitary inspector should also understand the theory of ventilation and be capable of making accurate measurements of cubic spaces. It is not likely that he will have to deal frequently with undecagons and duodecagons, but he will find in Mr. Taylor's book (at page 250) information as to how he should proceed in such circumstances and a table bearing on the subject having figures which extend to seven *decimal places An ideal sanitary inspector should under*stand the law on meat inspection and the by-laws and regulations which are in force regarding it, and should have a knowledge of the normal appearance and of the various morbid appearances presented by the organs of all the animals which are used as food by man. Slaughter-houses come under his supervision, lodging-houses give him trouble, and his duties in regard to canal-boats are not always easy of execution The supervision of the sanitation of factories and workshops falls under his care, and his duties in connexion with dairies, cowsheds, and milkshops are by no means light The due execution of the provisions of the Sale of Food and Drugs and Margarine Acts is an onerous responsibility, especially as the sanitary inspector has no fixity of tenure and his appointment is often made by gentlemen interested in the sale of food. Mr. Taylor's book deals with all the questions mentioned. It should prove useful, not only to those who are, or who wish to become, sanitary inspectors but also to the laymen whose duties as members of municipal bodies necessitate a general knowledge on those sanitary matters over which they exercise authority.

The book on the whole is a good one, but there are a few little things which might with advantage be altered in the next edition. There is no necessity (page 187) to perpetuate the unsavoury opinion of the River Pollution Commissioners that "river water to which sewage gains access" is "palatable." Mr Taylor is also very lax as to his views on the smoke nuisance—a matter with which it may be hoped that the civic authorities of Westminster will deal The book contains one quotation from the work of a metropolitan officer of health which is rather curious. It relates to the evils of overcrowding. Everyone is familiar with the ill-effects of intemperance and other sinful courses as described by sensational writers, but even with these, as a rule, "death ends the scene." This does not appear to be the case in the matter of overcrowding. The ill-effects produced are "pulmonary tuberculosis, continued fever, generally impaired health, a putrid condition of the body, followed by *death, mania, boils*," and *so on*. The idea of having boils after death adds a new terror to overcrowding.

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## LIBRARY TABLE.

*Diseases of the Nose and Throat.* By J. PRICE-BROWN, M.D., L.R.C.P. Edin., Laryngologist to the Toronto Western Hospital and to the Protestant Orphans' Home. With 159 Engravings and six Coloured Plates. London: Henry Kimpton. 1901. Pp 471. Price 7s. 6d.—This is the first

The authors of the various chapters and sections are 29 in number, and include professors of the University of Michigan and teachers at the colleges of Philadelphia, in addition to members of the staffs of most of the London general hospitals. The classification of the drugs leaves much to be desired from the point of view of the reader who intends steadily to read through the work, but for reference purposes the index to a great extent makes up for shortcomings. For the most part the medicines are grouped according to "their pharmacological affinities, but in some instances the arrangement depends upon the convenience of keeping together several minor drugs described by the same author." The administration of anæsthetics is thoroughly dealt with by Mr. G. Rowell of Guy's Hospital, while the Pharmacology of Chloroform itself is the subject of one of the articles by Dr. J. Rose Bradford and Dr. Leonard Hill, F.R.S. Dr. R. Stockman of Glasgow University deals with opium and quotes Sir George Birdwood on the "opium habit," besides giving a *résumé* of the views of the gentlemen who sat on the Royal Commission on Opium-taking. The important and interesting section on Organo-therapy has been intrusted to Dr. H. W. G. Mackenzie of St. Thomas's Hospital, while the articles on Serum-therapy are from the pen of Dr. J. W. Washbourn of Guy's Hospital. The chapters devoted to Diet occupy 25 pages and contain the views of Dr. Sidney H. C. Martin, F.R.S. There is an excellent and very readable article on the Effects of Rest, Exercise, and Baths on Cases of Chronic Heart Disease. This section will be found of the greatest use to general practitioners, containing as it does a discussion about the Nauheim method of treating the disease.

As the diseases which are giving rise to most investigation, experiment, and discussion at the present day are those due to tuberculous infection, we naturally turn to a book like this to find the fullest and latest authoritative views about the open-air treatment of pulmonary tuberculosis. There is a section devoted to this subject, it is true, but only the main features of the system are dealt with, and those all too briefly. We are of opinion that this article should have been written by a physician who has had many years of practical experience of the system, and that there ought to be more "physiological light" thrown on the *rationale* of the method. "Undoubtedly a great deal of dyspepsia is promoted by an undue quantity of liquid food, and appetite for solid food is proportionately diminished." Theoretically this may be true enough, but the reader who is referring to this subject in this book should read also the views of medical men who have themselves been sufferers from the disease and have recovered. Such practitioners have seen many cases actually undergoing treatment in addition to the knowledge and experience gained *in propriâ personâ*. It is true that the subject is a large one, and will attain considerable proportions in the future. If a medical man in a large practice wishes for up-to-date practical information and advice about the open-air treatment of pulmonary tuberculosis he will do well to look elsewhere for it than in this otherwise excellent work.

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*Human Physiology, prepared with special reference to Students of Medicine.* By JOSEPH HOWARD RAYMOND, A.M., M.D., Professor of Physiology and Hygiene in the Long Island College Hospital. Second edition, with 443 Illustrations, some of which are coloured, and Four Full-page Lithographic Plates. London and Philadelphia: W. B. Saunders and Co. 1901. 8vo Pp. 668 Price 15*s.* net.

THE domain of physiology is of such wide extent and is so rapidly enlarging that it is not difficult for an author who undertakes to write a treatise upon it to present the more important facts in a novel way and to expatiate upon others that are usually passed over with brevity. At the same time, in any work that proposes to give a *résumé* of physiology in the compass of 600 or 700 pages a large portion of it can only represent facts that are generally accepted and are contained in most of its predecessors. It is convenient, no doubt, for a professor to publish a book devoted to the subject on which he lectures. It brings to a focus his own knowledge, and it enables his class to read up the lecture of the day, and so fulfils its purpose; but as nearly every college professor has written a book of the same kind Professor Raymond can hardly expect that his "Human Physiology" will displace the works of Halliburton, Hall, Howell, Waller, Starling, or Foster on the subject. Still, it is a very creditable performance, and whilst the men attending his lectures will doubtless study it attentively it may well be read with care by those who are in view of any examination on physiology or who wish to get a new reading of familiar physiological facts.

Professor Raymond divides his book into five parts: Histology; Physiological Chemistry; the Nutritive Functions; the Nervous Functions; and the Reproductive Functions. The chapter on Histology is briefly but well given, and the illustrations are excellent. He accepts Schäfer's views of the structure of muscle, but makes no mention of the peculiarities of the smaller vessels. The chapter on Physiological Chemistry contains the facts usually given under this heading and passes by an easy transition into the consideration of Food, under which heading some interesting facts are given. Thus, speaking of sugar, the author quotes a bulletin issued by the United States Department of Agriculture and written by Mary H. Abel. It appears from this that between 7,000,000 and 8,000,000 tons of cane sugar are used annually in the different countries of the world, England consuming in 1895 86 pounds per head: the United States, 64 pounds; and Italy, Greece, and Turkey less than 7 pounds. By a slip of the pen, it is stated that two-thirds of the *cane* sugar now used are derived from the sugar *beet.* We suppose "crystallised" should be substituted for "cane." It is remarkable that the sugar beet of 1806 contained only 6 per cent. of sugar, whilst that of to-day contains 15 per cent. Miss Abel thinks that the Americans use too much sugar in their cuisine, or rather that they use it with too many kinds of food. The daily quantity of sugar that should not be much exceeded is from four to five ounces. Speaking of vegetarian diets he draws attention to a quotation from Gubler made by Dr. Alanus, himself a vegetarian, that vegetable food, being richer in mineral salts than that of animal origin, introduces more of these salts into the blood as a result of which there is a tendency to an atheromatous condition of the arteries. This belief is borne out by the frequency of atheromatous degeneration of the arteries in the rice-eating natives of Bombay and Calcutta. Hence, purely vegetable diet does not appear to be the normal food of man. The rations of soldiers in the United States army and those of the men in the English and German armies are given and are instructively compared. The section on Alcohol is worthy of perusal, as it gives the results of Professor Atwater's experiments, in which two and one-half ounces of pure alcohol were given in divided doses. This quantity is equal to that contained in about three glasses of whisky or in a bottle of claret. The experiments showed that whilst about two parts per cent. were discharged by the several emunctories of the body the rest was consumed or oxidised like any other food and was not different in this respect from fat, starch, or sugar.

The section on the Movements of the Stomach, which in most works on physiology is merely an echo of the observations of Dr. Beaumont on Alexis St. Martin, are diversified here by an account of these movements as observed by Dr. Cannon who experimented upon a cat to which subnitrate of bismuth had been administered. This salt renders the stomach opaque to the Roentgen rays and Dr. Cannon even now have been omitted the student must refer to the larger text-books.

*Pocket Formulary for the Treatment of Disease in Children.* By LUDWIG FREYBERGER, M.D. Vienna, M.R.C.P. Lond., Physician to the St Pancras and Northern Dispensary; late Clinical Assistant, Hospital for Sick Children, Great Ormond-street. Third edition. London: Rebman, Limited. 1901. Pp. 260. Price 7*s.* 6*d.*—The second edition of this useful and well-arranged little volume was favourably reviewed in THE LANCET of Sept. 29th, 1900, p. 948, and we are glad to see that the demand for it has justified the bringing-out of a third edition in a slightly enlarged form. The drugs described are for the most part those of the British Pharmacopœia, but some serviceable additions have been taken from the Pharmacopœia of the British Pharmaceutical Conference, the United States Pharmacopœia, and a few of the continental ones. The arrangement of the drugs being alphabetical is convenient for reference; under each of them the uses, therapeutics, and doses at different ages are given, together with suggestions for flavouring and complete prescriptions, two or more in number. In the appendix there are other alphabetical indexes in which drugs are classified according to their properties—e.g., alterantia, anæsthetica, antacida, &c., and diseases are similarly arranged from Acne to Zymotic Diarrhœa (Cholera infantum). Dr. Freyberger has succeeded in compressing much information into a moderate compass.

"*Who's Who*" *for 1902.* London: Adam and Charles Black. Pp. 1424. Price 5*s.*—"Who's Who" is certainly one of the most useful books of reference that we possess. There are but few changes in the plan of the issue for this year as compared with that for last year, except that the list of those who have received the Victoria Cross, which appeared last year in an incomplete form, has this year been omitted altogether. So have the articles on the Church of England and that on the Church of Rome. Altogether, Part I. has been cut down by 20 pages, and yet the whole book this year consists of 1424 pages, as against 1234 last year. The increase, therefore, must be in the biographies, some of which might very well be cut down. But as a whole the publication is most useful and one to which we constantly have occasion to refer.

*Whitaker's Peerage, 1902.* London: J. Whitaker and Sons, Limited. 1902. Pp. 647. Price 2*s.* 6*d.*—Whitaker is always modest. His book is not only a peerage, but a baronetage, a knightage, a list of Companions of Orders and of bishops, both spiritual peers and others. The Lords of Session are also given The printing, paper, and binding of the book are unexceptionable and the amount of information contained is marvellous. Especially useful are the accounts of branches of the family of a present holder of a title, Altogether an admirable book.

*The Local Government Annual and Official Directory, 1902.* Edited by S. EDGECUMBE ROGERS. London: The *Local Government Journal* Office. Price 1*s.* 6*d.*—This book claims to be "the most complete Local Government Directory." It may be so, but the text is so sandwiched with advertisements that it is the most irritating book of reference which we have ever come across. Such an arrangement of advertisements in a book of reference is unpardonable, and we advise Mr. Rogers to see that in his next edition the advertisements are relegated to their proper place—namely, before and after the text of the book.

*Herbert Fry's Royal Guide to the London Charities.* Edited by JOHN LANE. London: Chatto and Windus. 1902. Pp. 293. Price 1*s* 6*d.*—This little book has reached its thirty-eighth annual issue. We have nothing new to say about it. It will serve a most useful purpose, first as a book of reference for the poor, who are anxious to obtain relief, by telling them where to go; and secondly, for the charitable, by giving them details of various institutions to which their money may profitably be given. The book still contains information about a number of controversial "religious" societies which by no stretch of language can be called "charities." These societies, we notice, do not make any return of "persons benefited," but we cannot think that they should be in a book of this kind at all.

# Looking Back.

FROM

## THE LANCET, *SUNDAY, FEB.* 8, 1824.

WE are perfectly aware that in the history of JONES'S case,[1] which we communicated to the public, there are two defects.—First; the slight account of the man's state previous to the operation, which was owing to the very short notice that was given of it, thereby preventing us from obtaining those particulars which we otherwise should have acquired.—Secondly; what is so properly complained of by our correspondent viz.—the omission of the appearances of the removed limb. This arose from the bone not having been exhibited, a circumstance which we exceedingly regret. No operator should ever omit, in justice to those who are present, and to his own character as a surgeon, to exhibit the parts which are removed, in order that all may see the reasons for which the operation was performed.—In consequence of Sir ASTLEY COOPER having omitted to do this, an impression exists in the minds of some, that he was *not* justified in the course he adopted, *of* removing the limb from the joint. Had the appearances of the bone been shown to the students, the profession would then have had sufficient *data* for judging of the propriety or impropriety of the operation, and the present impression would most probably never have existed.

From the number of operations performed at the Borough hospitals, some persons think that the knife is occasionally resorted to in cases where it might be dispensed with. In answer to this, we would only state at present, that the size of these institutions should be borne in mind; and the celebrity which the surgeons belonging to these institutions, have obtained for their skill in the use of the knife. We must confess, however, that a great rage for operations exists at the Borough; *the pupils are extremely anxious to see them* performed, and the surgeons appear equally anxious to obtain a reputation by performing them. The surgeons and students of surgery, however, should remember that there is something else besides the mere mode of operating—that there is another important point connected with *operative surgery*—the time when operations *should* be performed. To know how to operate well, a man must possess some manual dexterity, and an acquaintance with anatomy; different operations requiring these qualities in a different degree. To know when operations ought to be performed, and when they ought not, requires more extensive attainments, and can only be learnt by those who investigate disease, and *watch its effects with a degree of attention* which few seems disposed to bestow. The principles of medicine must be thoroughly understood. An acquaintance with various remedies, diet and temperature, on various complaints, must also be possessed—knowledge which can only be attained by the most laborious study and diligent observation—To remove a limb, or to come to see it removed, demand little exertion on the part either of the surgeon or student, compared with a patient examination into the nature of the disease, for which the operation is to be performed; and of the chances of amelioration a patient may possess, from the trial of different means on the complaint under which he labours. There are some cases in *which there* cannot exist a doubt as to the propriety of operating; where, on the prompt skill of a surgeon, the life of a patient depends. We do not wish to discourage the performance of operations, when they are necessary; but we make these remarks on account of the misdirection which the minds of the students appear to receive from looking only at the manner in which the operator uses the knife, without ever enquiring into the reasons for which the operation is performed.

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[1] Vide account of Amputation at the Hip Joint under the heading "Looking Back" in THE LANCET, Jan. 18th, 1902, p. 172. The above editorial observations were elicited by a letter from a correspondent.

Canadian text-book on Diseases of the Nose and Throat, and as such deserves a welcome apart from the merit which it possesses. Dr. Price-Brown tells us that he has been stimulated to publish his work on account of the indifferent knowledge possessed by the profession at large of diseased conditions peculiar to the nose and throat. He says that the book is intended for the use of general practitioners, and that the anatomy of the parts is only touched upon sufficiently to enable the readers to treat such diseases as they meet with in practice. He wisely omits diphtheria from the book as being thoroughly dealt with in works on general medicine. The subject matter is very clearly rendered, and much thought and space have been devoted to treatment, each disease not only having its most approved and useful medicinal remedies enumerated, but carefully selected prescriptions are added, both Dr. Price-Brown's and those of other well-known authorities, though, in common with most transatlantic specialists, oily sprays and nebulæ are more advocated than is the custom here. In discussing the etiology of hypertrophic rhinitis the author suggests that the habit of always putting a child to sleep upon the same side has an influence or tendency to cause this condition. We are doubtful as to the correctness of this observation, especially as deviations of the septum are more commonly towards the left and the side on which most people sleep is the right, and if nasal respiration was conducted in nasally healthy people only through the upper nostril the septum should more often bulge towards the right side. Total removal of the inferior turbinate is condemned in Canada on account of the dry climate. In atrophic rhinitis and naso-pharyngitis the regular use of a post-nasal syringe or spray, in addition to nasal irrigation, is strongly recommended, and Dr. Price-Brown is also in favour of vibratory massage, using a probe covered with cotton-wool soaked in albolene. He believes that there is ample evidence to show that fibrinous rhinitis is a disease distinct from nasal diphtheria and he differentiates between œdematous and vasomotor rhinitis, which seems to be a purely arbitrary separation. We consider that evidence in favour of the separation is indifferent, and we strongly deprecate the home use of solutions of cocaine, which he advocates, as being liable to set up the cocaine habit. The removal of adenoids is not recommended by the author unless the growth is large; for the smaller hypertrophies an alcoholic spray is advised—a form of treatment that appears to be worthy of trial. Dr. Price-Brown's book is one which will be of special value to those in general practice. It is written by one who has had a long experience of general practice with a full knowledge of the special subjects treated of, and we believe it will prove a useful book of reference to busy practitioners. The illustrations, with the exception of some good coloured photographs of sections of the head, are chiefly reproduced from other works.

*Elementary Practical Hygiene.* Section I. By WILLIAM S. FURNEAUX. London, New York, and Bombay: Longmans, Green, and Co. 1901. Pp. 239. 8vo. Illustrated. Price 2*s.* 6*d.*—The grand importance of making the education of the young a preliminary and foundation of their later education is now beginning to be realised in England. People object to more "science" in schools because children are already taught far more than they can truly assimilate and "cramming" has to be resorted to. This is because both parents and ordinary school teachers have so little knowledge of what "science" really is. If they knew what science is they would not sanction for an instant the system of education that so largely prevails among us. With every desire to do justice to the efforts of those who are responsible for the carrying-out of school routine, what better can we say of our expensive educations for the young than that when our boys and girls leave school they have nothing but a mere smattering of a large number of different subjects? To what but widespread ignorance of hygiene and domestic science can we refer the fact that here is a nation with a splendid past, a glorious future before it, and yet a nation with scarcely a healthy family in it? We medical men can vouch for the truth of this statement of universal poor health. A nation, then, that cannot keep itself in good moral and physical health needs knowledge of some sort very badly. And if this is not applied domestic science—the principles of hygiene—what is it? Such a book as that of Mr. W. S. Furneaux is one of those which are beginning to be appreciated as harbingers of the healthier times to which we may surely look forward. The book is interesting, well illustrated, well written, and to be understood of all who are to any extent intelligent. The experiments are all simple and need no expensive apparatus. "Science," people must be taught, is not dry, but interesting, not abstruse, but simple. The book is a really valuable one, and the attention of all schoolmasters, governesses, and parents should be directed to it.

*Index for Surgical Records.* By CHARLES W. CATHCART, F.R.C.S. Eng. and Edin., Surgeon to the Royal Infirmary, Edinburgh. Edinburgh: A. & D. Padon.—We have received from Messrs. A. & D. Padon, of 13, St. Andrew-square, Edinburgh, a specimen of their "Index of Surgical Records," which is an attempt to apply the card system, so much in vogue now in dealing with business documents, to the arrangement of notes of surgical and medical cases. One objection undoubtedly to clinical note-taking is that the recorded observations of the students are seldom of any personal use to them afterwards. Mr. Cathcart would provide the student with an indexing portfolio with 32 pockets, each of which is arranged for the reception of notes concerning a different organ or physiological tissue, pocket 8, for example, being for the eye; pocket 17 for the peritoneum, mesentery, and omentum; and pocket 31 being for the lungs and pleura. A scheme of classification is provided whereby the notes could be best arranged within their separate pockets. Undoubtedly the idea is a good one, and one that might appeal with force to an orderly and ambitious student. With a properly kept portfolio he would be able in a moment to put his hand on the record of all his past experiences.

*The Pocket Gray.* By the late EDWARD COTTERELL, F.R.C.S. Fifth edition, revised by C. H. FAGGE, M.B., M.S. Lond., F.R.C.S. Eng., Senior Demonstrator of Anatomy, Guy's Hospital. London: Baillière, Tindall, and Cox. 1901. Pp. 269, small 8vo. Price 3*s.* 6*d.* net.—The usefulness of this volume in its former editions was not a little impaired by its doubtful accuracy in matters of small detail. Candidates for the Fellowship of the Royal Colleges of Surgeons need to know their minute anatomy very well, and stand in urgent need of a small book which should contain all details without unessential verbiage, yet be thoroughly trustworthy and accurate. Mr. Fagge has set to work to supply students with such a little book, which is still within the limits of a pocket volume and yet will be found to contain all the anatomical knowledge necessary for examination purposes in a concise and categorical form. Here and there in this fifth edition are amplifications of the descriptions of viscera and investing membranes. There is only one actually new departure in this edition and that is a most welcome one—the addition of the action of each individual muscle to its anatomical description. Always held high in the estimation of students, the "Pocket Gray" will soon be considered indispensable, and for those who have completed their dissections there will be no more popular way of refreshing the memory for details than by studying this little book. The additions and alterations that have been made have not added appreciably to its bulk, and for the few important details that indeed relieve the Government of a great and constantly recurring source of anxiety, for it will lessen its responsibility, while from the point of view of the people of London the very fact that the control of the metropolitan water companies rests with a well-qualified Government department is a distinct advantage. There are doubtless some people who profess that popular control necessarily ensures efficiency. Experience does not prove this. *The Government Bill, judged from Mr.* LONG'S exposition of it, and as viewed in the light of a knowledge of the facts, appears at first sight to be an "honest endeavour" to disembarrass the Local Government Board of some of the most useful and the most arduous of its present duties. We are glad that the Bill has at last been introduced, and trust that it will receive the careful consideration which it deserves.

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## Suspected Poisoning by Arsenic in Beer at Halifax.

FEW features of the Manchester epidemic of arsenic-poisoning among beer-drinkers were more striking than the occurrence of peripheral neuritis, with or without symptoms specially indicative of its arsenical origin, in persons whose daily dose of arsenic in beer must have been quite small. And this circumstance has given rise to some interesting speculations, well worth pursuing by the aid of experiment, as to whether the toxic action of arsenious acid is enhanced by simultaneous administration of alcohol; or whether, in process of brewing, a compound of arsenic may be formed which has greater toxic properties with respect to nerve-tissue than are possessed by arsenious acid. However this may be, it is certain that the possible danger of small amounts of arsenic in beer cannot be disregarded.

It is now known that glucose and invert sugar are not the only substances used in brewing which are liable to be arsenical. Malt itself, on account of its exposure in the kiln to products of combustion, may contain very appreciable quantities. We have no doubt that brewers as a whole are fully alive to the necessity of exercising the greatest care in the selection of their various materials and in excluding arsenic from their beer, but the evidence given at an inquest held last week by Mr. E. H. HILLS, coroner for Halifax, goes to suggest that the precautions adopted are not invariably efficacious. At this inquest it was stated that samples of beer collected by the coroner's officer from three publicans in Halifax were sent to Mr. A. H. ALLEN, the public analyst of Sheffield, who found in them respectively one-eighteenth, one-twenty-fourth, and one-sixteenth of a grain of arsenic per gallon. Mr. ALLEN, it may be noted, is a member of the joint committee appointed by the Society of Public Analysts and the Chemical Society to examine methods of determining arsenic in beer, and although it appears from a local press report that statements were made on behalf of the brewers that other samples of their beers had been pronounced free from arsenic, there need be no hesitation in accepting Mr. ALLEN'S results in respect of the samples submitted to him. Such quantities of arsenic in beer must, we think, be considered undoubtedly dangerous. In the particular case before the coroner the victim who drank beer represented by the above samples appears to have been an old man who suffered from bronchitis which the jury found to be the cause of death. But on admission to the Halifax Workhouse Hospital he showed marked pigmentation, foot-drop, extreme tenderness of the muscles of the calf, and running at the eyes—symptoms which, as Dr. E. S. REYNOLDS and others have shown, were frequently met with during the Manchester outbreak. After death, which resulted from cardiac failure, a post-mortem examination was made and samples of the viscera were sent to Mr. ALLEN who found arsenic in the liver to the extent of about one-fortieth of a grain—a result not unlike those obtained in fatal cases during the Manchester outbreak. Having regard to these facts we are in complete agreement with the observation of the coroner that Dr. J. F. HODGSON, the resident medical officer of the workhouse hospital, acted rightly in reporting the case in order that an inquest might be held.

We publish on p. 399 an interesting letter from Dr. HODGSON with reference to the little outbreak in the hospital. For in addition to the fatal case, other patients presenting symptoms suggestive of poisoning by arsenic in beer have within the last few weeks been admitted into the same workhouse hospital, and arsenic has been recovered from the urine in certain of these cases. Although thus far these suspicious cases are few, it seems important, in view of recent experience, that they should be made the subject of official inquiry. The Arsenical Poisoning Commission appears to have been represented at the inquest, and it is to be hoped that the facts will be fully ascertained and laid before that body. In its first report the Commission advised certain precautions by which arsenic could be kept out of beer, and recommended as a provisional safeguard that standard tests for arsenic in ingredients of beer should be laid down by the Board of Inland Revenue and should be made compulsory at breweries. These tests, however, have not yet been promulgated, and the occurrence at Halifax suggests that the presence of arsenic in beer may still be detected at the bedside earlier than in the laboratory. Having regard to this possibility it seems very desirable that the occurrence in relation to beer of alcoholic neuritis, or other forms of illness which suggest the possibility of arsenic, should continue to be closely watched by medical officers of hospitals and workhouse infirmaries and by the public authorities concerned. We congratulate Dr. HODGSON on having been alive to the situation.

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## The Reform of the Army Medical Service.

IT may be in the recollection of our readers that a communication from Professor T. CLIFFORD ALLBUTT upon the causes of the neglect of the Army Medical Service among certain university students, and upon the means proposed to increase its attractions, was published in the *Times* in November last. In a subsequent letter which appeared in that journal on Feb. 3rd Professor ALLBUTT returns to the subject, and, in ratification of the correctness of the impressions and opinions that he had previously expressed—to the effect that the lack of scientific spirit and method in the service is the main cause of the

THE LANCET.

*LONDON: SATURDAY, FEBRUARY 8, 1902*

# The Metropolitan Water-supply.

ON Jan. 31st Mr. LONG, the President of the Local Government Board, introduced into Parliament the Government "Bill for establishing a Water Board to manage the supply of water within London and certain adjoining districts, for transferring to the Water Board the undertakings of the metropolitan water companies, and for other purposes connected therewith." An abstract of this Bill will be found on page 392. In the course of a very able speech Mr. LONG emphasised a point on which we have frequently had to insist—the fact that the question of the water-supply of London has no relation to party politics. "There is a general and widespread desire," said the President of the Local Government Board, "that some reasonable scheme should be produced which will remove this question of the administration of the London water-supply from the region of political controversy." Fortunately for the Government Mr. LONG has been impressed with the difficulties of the subject with which it has been his fate to deal and his speech shows that he has bestowed time and thought upon the matter. We can only give within the limits of this article a brief outline of the manner in which Mr. LONG proposes that the London water question shall be "finally settled"; but readers of THE LANCET have considerable knowledge of the various points of a most difficult and delicate question, so that they will be able in a great measure to complete the picture for themselves.

A Water Board is to be established to regulate the supply of the area called "Water London." This body is to consist of representatives of the City of London, the Metropolitan boroughs, the borough of West Ham, the district councils of East Ham, Leyton, and Walthamstow, the county councils of London, Kent, Middlesex, Surrey, and Hertfordshire, and the Conservancies of the Thames and the Lee. The present undertakings of the metropolitan water companies are to be acquired either by agreement or by purchase, and payment for these properties is to be made in water-stock which is to yield a fixed interest of 3 per cent. The purchase price is to be settled by a specially appointed court of arbitration consisting of the Right Hon. Sir EDWARD FRY, formerly a Lord Justice of Appeal; Sir HUGH OWEN, G.C.B., late Permanent Secretary to the Local Government Board; and Sir JOHN WOLFE BARRY, K C B, the well-known engineer. The terms of the arbitration are to be unfettered, except that the arbitrators are not to allow anything for compulsory purchase—a point insisted upon by Lord LLANDAFF who declined to entertain the idea suggested by counsel that a shareholder in a water company could take a "sentimental interest" in a filter-bed. Such are the main lines on which the Bill is founded. It is to be regretted that in the course of his speech Mr. LONG made an inexplicable statement in regard to the London County Council which was calculated to cause annoyance to the majority of that body and could not conceivably be of service to anyone. Mr. LONG said that "if the Council felt aggrieved because they had not by this time become the water authority they must blame themselves rather than the Government or Parliament." This statement, puzzling to those who hold that the London County Council has no just claim to jurisdiction over "Water London," could not fail to be irritating to admirers of the proceedings of the London County Council, and it may have caused Sir H. CAMPBELL-BANNERMAN to give vent to some of the banalities with which he continued the debate.

No time need be spent in the contemplation of any arguments for or against the Bill which have their origin in party strife. We desire now to recall briefly the measures which have been recommended by THE LANCET for the final and satisfactory settlement of the London water question. The necessity which exists for an ample supply of good water is not obviated by the differences which exist among contending political factions as to what body or bodies would best manage the undertakings of the water companies, a fortuitous concourse of trading associations which at present give an intermittent and often unsatisfactory supply. We must insist once more on the fact that an ideal supply of water for London would ensure that the quality of the water should be pure and derived from sources beyond the suspicion of pollution, and that the quantity should be adequate, not only for domestic supplies, but sufficient to give an unstinted amount for municipal purposes. The public fountains should not be allowed to run dry, the ornamental waters of London and the canals should be clear and bright, a state of things which could only be made possible by frequent changes of the water, necessarily involving a supply greatly in excess of that which obtains to-day. It is of importance that the people of London should not be misled in this matter. It is obvious that a mere change of ownership of the existing sources will neither increase the quantity of water nor ensure its purity. At the present time the metropolitan water companies are legally, and should be in deed and in truth, controlled in many essential matters by the Local Government Board. We have frequently found it necessary to refer to the neglect displayed by the Board in carrying out its duties in this respect; and we have urged on the Government the duty which was imposed on it to obtain for the Board the additional powers of control which the BALFOUR and LLANDAFF Commissions advised were necessary for the protection of the people of London. If these powers had been obtained, as advised by these successive Royal Commissions and as we have persistently advocated, a large amount of information at present withheld by the water companies would have been in the possession of the Local Government Board.

It must not be taken for granted that purchase on behalf of the people of London of the metropolitan water companies' undertakings would be advantageous to the people. It cannot be said that the speech in which Mr. LONG introduced the measure brought forward any serious argument in favour of that hypothesis. Should the Bill pass it will

An allowance of £12 will be paid to every medical officer on first appointment for the purchase of camp outfit, particulars of which are given. The ordinary tour of residential service is one year, followed by leave with full pay during the voyages to and from England, and for four or two months clear in England, according as the officer *is returning for further service in West Africa or not.* Every medical officer, unless specially exempted, is engaged in the first instance on probation for one year, and if he is found not qualified for efficient service his appointment may be cancelled at any time within the year. Private practice is allowed under certain conditions. Free furnished single quarters are provided at all the recognised stations; further information on this point may be obtained at the Colonial Office. On attaining the age of 50 years, or after 18 years' service, an officer is qualified for a pension, or in the alternative he may retire at the end of nine years with a gratuity. Applicants for appointment must be of European parentage, and be between 25 and 35 years of age, and must possess a complete double qualification. Preference will be given to unmarried candidates. They should, in the first instance, apply in writing to the Assistant Private Secretary to the Secretary of State, Colonial Office, Downing-street, London, S.W., stating their qualifications generally and inclosing a certificate of birth. A form of application will then be forwarded to them to fill up and to return together with testimonials. Candidates selected for appointment will be required to attend either the London or the Liverpool School of Tropical Medicine, the cost of the tuition, fees, board, and residence, being borne by the Government.

## VACCINATION AND SMALL-POX.

THE Registrar-General's return for the week ending Jan. 25th contains a table and explanatory remarks, which appear to us so important at the present time as to deserve insertion in our columns. We cannot doubt that this information will be welcomed by those amongst the anti-vaccinationists (if there be any) who still desire to know the truth in such matters. In the following table the deaths from small-pox which have been registered from the beginning of the present epidemic down to Jan. 11th, 1902, are classified in minuter detail as regards vaccination than was possible at the date of issue of the several weekly returns:—

| — | All ages. | Ages at death. Under one year | 1-5 | 5-10. | 10-15. | 15-20. | 20-40. | 40-60. | 60 and upwards. |
|---|---|---|---|---|---|---|---|---|---|
| Vaccinated in infancy only ... ... ... ... | 130 | — | — | — | 1 | 3 | 76 | 45 | 5 |
| Revaccinated *more* than 10 years ago ... | 3 | — | — | — | — | — | 1 | 1 | 1 |
| Revaccinated *less* than 10 years ago .. | — | — | — | — | — | — | — | — | — |
| Vaccinated, only after infection by small-pox ... ... ... ... | 14 | 7 | 2 | — | — | 1 | 4 | — | — |
| Unvaccinated ... ... | 116 | 10 | 35 | 14 | 16 | 15 | 19 | 6 | 1 |
| No evidence of vaccination ... ... ... | 9 | — | — | — | 1 | — | 5 | 3 | — |
| Stated to have been vaccinated; scars, if any, obscured ... | 28 | — | — | 3 | 1 | — | 12 | 10 | 2 |
| Total ... ... ... | 300 | 17 | 37 | 17 | 19 | 19 | 117 | 65 | 9 |

The table shows that out of those children and young person under 20 years in the population of London who were not protected by vaccination, 100 have recently died from small-pox; whilst only four deaths from that disease have occurred among those of the same ages who were ascertained to have been vaccinated in infancy. There are also five cases in which the evidence was insufficient to warrant a definite statement as to vaccination. If the extreme course be taken of counting these five cases with the *vaccinated, the figures will show at least 100 deaths from* small-pox among the unvaccinated section of the population under 20 years of age, and at most nine deaths among the vaccinated section at the same ages. At ages over 20 years there were 30 deaths of persons who were admittedly unvaccinated, 126 of persons who had been vaccinated in infancy but not revaccinated, and three of persons who had been revaccinated. In all these three cases revaccination had taken place more than 10 years ago, and in two of them it is uncertain whether the operation was successful. There are also 32 cases at these ages in which the facts as to vaccination could not be definitely ascertained. In 24 of these cases statements were made to the effect that the deceased had been vaccinated, but in none of them was it claimed that the deceased had been revaccinated. Medical practitioners would greatly facilitate the classification of deaths from small-pox in the Registrar-General's office, if they would add to their certificates (*a*) the duration of the disease (i.e., the time between attack and death), and (*b*) the date of vaccination when this is known.

## LABELS AND LIABILITIES.

IN our issue of Jan. 4th, p. 44, we referred, in regard to a recent regulation of the General Medical Council, to Section 17 of the Pharmacy Act of 1868 and expressed the opinion that according to this section medical men who dispensed their own medicines containing scheduled poisons were, if they obeyed the strict letter of the law, compelled to label whatever vessels contained the medicines in question with their names and addresses. If this reading of the Act is correct, as we believe it to be, a new difficulty arises for medical men dispensing scheduled poisons. As a correspondent points out (his letter will be found in another column) the practitioner seems to be torn between the appearance of self-advertisement and a breach of the law. This arises from the condition before referred to which, according to the Pharmacy Act of 1868, applies alike to medical practitioners and to persons registered under that Act. Although the former are specially exempted from certain conditions imposed upon the latter as regards medicine containing a scheduled poison, yet this provision includes them too—viz., "that such medicine be distinctly labeled with the name and address of the seller and the ingredients thereof be entered with name of person to whom sold or delivered in a book to be kept by the seller for that purpose." The second part of this provision is answered by the practice, universal we imagine with even the most busy or more careless of practitioners, of entering prescriptions in a book against the name of the patient for whom the medicine was prescribed. Such a practice is obviously necessary even from the merely business point of view to facilitate the accurate making up of accounts. It is the first part of the condition, however, which has so perturbed our correspondent, and we cordially sympathise with his consternation. It seems to him to savour of advertisement and, in a way, to level the position of the medical man who dispenses his own medicine to that of the druggist in his shop for the practitioner thus to label with his name and address the bottles or boxes in which medicines are sent or given out that happen to contain as ingredients one or more of the scheduled poisons. If the law did not happen to require such a step would it not be exactly the kind of thing to which the General Medical Council, sensitive of the dignity and propriety of indifference of the more highly educated graduates in medicine—he quotes from a letter received by him from an able and experienced army medical officer. As a rule, army medical officers, from scruples which if at times inconvenient or even fastidious are nevertheless to be honoured, regard themselves as precluded from public controversy in such matters even after their retirement from the army. We may therefore attach some importance to such expressions of opinion when we get them.

Professor ALLBUTT'S correspondent shows that he is animated by a proper appreciation of science, and he knows how to express his views vigorously. In regard to the proposed multiplicity of examinations he strongly supports the objections entertained by Professor ALLBUTT, and, we may add, by almost everybody else who has given any thought to Mr. BRODRICK'S scheme in the form in which it was originally published; and he calls attention to the writing up of case-books without any regard to the interest of the cases recorded as one of the bugbears of station hospital life, at the same time pointing out how these case-books could be greatly turned to account, if properly used, in forming an estimate of a medical officer's ability, merits, and fitness for promotion. The fact must, we think, be admitted that there has hitherto been little or no encouragement in the service for the cultivation of a scientific spirit or for the exhibition of professional merit. Professional skill and zeal led nowhere and brought no success or satisfaction beyond that which belongs to a sense of duty conscientiously done. It has been through military rather than medical channels that rewards have come to the Army Medical Service. We have often lamented that this should be so, as our readers know, and have expressed keen hopes of seeing it altered, and medical officers relieved, as far as practicable, of many irksome clerical duties so that they may have more leisure for important study. Professor ALLBUTT'S correspondent also alludes to the supply of medical and surgical appliances and instruments for the Army Medical Service. It is needless to say that all that is required for the sick and wounded in our army should be available and should be of the best patterns. But it has to be recognised that the supply of instruments and remedies, and their preservation in a good state under all the conditions affecting the army at home and abroad, must be often attended with financial and administrative difficulties, especially considering how the tendency is for such stores to become obsolete.

Two other points in Professor ALLBUTT'S letter call for comment. He writes:—

> "However welcome an increase of pay may be to all of us, whatsoever our callings in life, such increase is not a cardinal factor in the reformation of the Army Medical Service. As in the combatant ranks, so in the scientific, there are many able men who would find compensatory attractions in the service. ...... The medical officer, as such, lies under no social disadvantage; on home and foreign stations alike, a well-bred and pleasantly-tempered man finds himself received on terms of intimacy and equality in all military and social circles."

These are the views alike of Professor ALLBUTT and of his correspondent. Whilst concurring generally in them we cannot shut our eyes to a matter which medical officers may consider it undignified to notice, but which should not be altogether ignored—namely, the reprehensibly exclusive action of some of the service clubs in regard to the medical officers of the army. Young men of good social standing and training will not join a service in which their brother officers refuse them social equality. As long as the army medical officers find it difficult to secure election to the service clubs, simply because of the branch of the service to which they belong, so long will a certain section of young medical men hold aloof from that branch. Nor do we think that the question of pay can be left quite so much in the background as Professor ALLBUTT would leave it. Many letters in our columns have shown that the question is a very prominent one in the minds of the officers of the service.

Dr. C. B. BALL, a member of the new Advisory Board, has recently delivered an address to the Dublin Branch of the British Medical Association, on the Re-organisation of the Army Medical Service, in which he recognised that the pecuniary considerations must not be neglected. His assurance that no intention existed to deprive medical officers of their right to retire under existing regulations on £1 a day after 20 years' service is satisfactory. Although we never quite believed that such an intention really existed, it must be confessed that the wording of the report of Mr. BRODRICK'S Committee in this respect was vague. In some other matters—as regards the questions of examinations and of increased pay to medical officers whilst serving in India for example—Dr. BALL expressed his belief that certain changes would be made and a satisfactory settlement would be arrived at. He likewise gave some interesting details relating to the proposed establishment of a large military hospital in London with a staff college attached. This he regarded as a very important step and one which, he said, to his surprise, had attracted but little notice. He will find, however, that this was a point specially dwelt upon in the series of articles upon the Army Medical Service which appeared in THE LANCET during the past year.

# Annotations.

"Ne quid nimis."

## THE WEST AFRICAN MEDICAL STAFF.

THE Colonial Office has announced that the medical services of the West African colonies and protectorates —viz., the Gambia, Sierra Leone, the Gold Coast, Lagos, Southern Nigeria, and Northern Nigeria—will in future form one service under the name of the West African Medical Staff. All the medical officers will be selected by the Secretary of State for the Colonies, and will be on one list of employment and promotion. The grades and salaries are as follows: principal medical officer, with a minimum salary of £1000, rising by annual increments of £50 to a maximum of £1200; deputy principal medical officer, with a salary of £700, rising by annual increments of £25 to £800; senior medical officers, with salaries of £600, rising by annual increments of £20 to £700; and medical officers, with salaries of £400, rising by annual increments of £20 to £500. For Sierra Leone and Lagos the principal medical officer has £800 per annum, rising to £1000. Various extra allowances are made under the head of horse or hammock allowance, out-of-pocket travelling expenses, field or bush allowance, and allowances on military expeditions.

cough, the commoner nervous lesions being convulsions or paralyses. The development of paralyses is due to a "cerebral lesion of an inflammatory or mechanical character," resulting from the whooping cough. 2. The following table gives a *résumé* of the nervous accidents which may result:—

- 1. Psychoses
  - *a* Delirium, hallucinations.
  - *b* Depression of spirits (apathy).
  - *c* Imbecility.
- 2. Neuroses
  - *a* Hysterical attacks.
  - *b* Epileptiform attacks.
  - *c* Choreiform and other convulsive attacks.
- 3. Motor Troubles
  - *a* Convulsive—e.g., eclampsia, cramps, and spasm of the glottis.
  - *b* Paralytic—e.g., hemiplegia, monoplegia, and aphasia.
- 4. Sensory Troubles
  - *a* Anæsthesia.
  - *b* Deafness.
  - *c* Blindness.
- 5. Rare forms of sclerosis—e.g., bulbar and disseminated sclerosis and possibly Friedreich's disease.

3. The total number of cases of paralyses in whooping cough investigated was 83. Of these 25 were recorded prior to 1880, 18 were recorded during the period 1880 to 1890, 10 during the period 1890 to 1895, and 30 during the period 1895 to 1901. Most of the cases included in the last group were studied personally and from his observations Dr. Valentin concludes that such paralyses must be more frequent than is commonly supposed since during six years 30 cases were observed. 4. In 62 cases the ages are mentioned, 58 being children of from one to 12 years of age. The largest proportion of paralyses was met with during the ages from two to six years inclusive. 5. The proportion of paralyses in boys was one half of that of girls and as whooping cough in general affects children in the proportion of four boys to five girls (as shown by the extensive statistical tables of Dr. West), it is concluded that the female child has a greater proclivity to paralysis from whooping cough than has the male. 6. The cerebral paralyses observed were distributed as follows: 16 were examples of monoplegia (of the arm and less frequently of the face) or loss of speech or sight; 40 were cases of hemiplegia (right sided in 21, left sided in 15, and not stated in four), while paraplegia was rarer and affected only five or six cases. Right-sided hemiplegia was often accompanied by aphasia. 7. Paralyses from ponto-bulbar or spinal lesions were distinctly rare, only two cases of each class having been met with. 8. Necropsies conducted in several cases showed that the nervous lesions underlying the paralyses were hæmorrhage and softening and that occasionally minute hæmorrhages gave rise to small foci of sclerosis. 9. The prognosis in the case of paralyses from whooping cough was very grave. Of 64 cases specially investigated in this connexion it was found that 14 patients died, 22 remained permanently paralysed and enfeebled, and the rest (two-fifths of the whole number) recovered almost completely.

## THE CAUSATION OF EPILEPSY.

AN interesting discussion at the New York Academy of Medicine on the Causation of Epilepsy recorded in the *Medical News* of Jan. 11th was opened by Dr. Louise Robinovitch, who based her observations on a large number of cases studied at the Asile St. Anne, Paris, under Professor Magnan during the last few years. From these observations it appeared that in the majority of cases a history of alcoholism could be obtained in the parents of the epileptics. Epilepsy in this respect seemed to be associated collaterally with insanity. Thus of 140 patients whose histories were carefully followed up 90 proved to be descendants of alcoholic parents—a proportion of 64 per cent. In addition to this must be noted the proclivity to infantile convulsions in the offspring of alcoholic parents. Dr. W. C. Hollopeter of Philadelphia cited the case of a professional friend whose brothers were epileptic, this condition being probably the result of parental alcoholic intemperance. Dr. Bell of New Jersey stated that he had under his care a family of seven children, most of whom suffered from some form of nervous disorder resulting from the hereditary taint transmitted by the father who was a confirmed dipsomaniac. In another case known to him of a family of six children, five of whom were neurotic, ancestral alcoholism was held to be the predisposing cause. He, however, cited the case of a young woman who had epileptic attacks regularly before and after her catamenia, probably as the result of malarial infection, alcoholism as a cause being positively excluded in this instance. Dr. Berg contended that many working men who took from six to eight glasses of beer a day (the equivalent of two litres of *vin ordinaire* in France) could not be designated as alcoholics. Dr. Robinovitch, in reply, stated that two litres of wine were regarded as excessive in France by the highest medical authorities and that such an amount of alcohol was more prejudicial to the excitable Frenchman than to the phlegmatic German, and that it predisposed to epilepsy.

## SMALL-POX IN LONDON.

THE number of cases of small-pox in London continues to increase. Thus on Friday, Jan. 31st, there were 93 fresh cases notified and removed; on Saturday, Feb. 1st, there were 75 fresh cases; on Sunday, Feb. 2nd, there were 42 fresh cases; on Monday, Feb. 3rd, there were 75 fresh cases; on Tuesday, Feb. 4th, there were 32 fresh cases; and on Wednesday, Feb. 5th, there were 37 fresh cases. No medical man wants to be told that vaccination and revaccination are the sheet-anchors in the struggle against small-pox, but it is often difficult to persuade persons who ought to be vaccinated or revaccinated to undergo the operation. The reasons for this are various. In the case of a very few persons it is due to sheer pigheaded obstinacy, in many to ignorance, and in many more to a fear that they will lose a day's work or even more owing to being laid up. In reference to this point the Rev. S. A. Barnett writes from Toynbee Hall to the *Times* of Feb. 4th as follows:—

> A firm employing a large number of people in this neighbourhood gave notice that a doctor would attend at the works and that no one should lose wages on account of loss of time consequent on the operation. The people in response to this notice willingly offered themselves, even the anti-vaccinators." Perhaps, Sir, other firms and employers learning through your columns of such public-spirited action may themselves do likewise and so the plague may be stayed.

We warmly congratulate the firm in question upon their action, and can only echo Canon Barnett's plea that other firms and employers should go and do likewise.

## THE COMING OF THE SANITARY ENGINEER.

THE address to the Institute of Sanitary Engineers at the opening meeting of the session of 1902, which was held recently, was given by Dr. J. C. Thresh, the President of the Institute. He pointed out that sanitary engineers existed more than 2000 years ago and that the remains of the sanitary works of ancient Rome still excited our wonder and admiration. But when the Roman empire and Rome itself were destroyed by the barbarian invasions aqueducts were thrown down and the escaping waters flowed over the plain and forming marshes greatly contributed to the spread of malaria, while the sewers were choked up so that plagues and fevers had a fertile breeding ground. Mediæval cities with their crowded populations were in a filthy condition and even as late as the year 1842 the report of the Royal Commission appointed to examine into the sanitary condition of the labouring population revealed an appalling state of matters. In 1848 the first Public Health Act was passed and the sanitary engineer, after having been in abeyance for some 1500 years, again came into existence.

the profession, would make vigorous objection? As a matter of fact, such a practice is obviously distasteful to the general medical practitioner, for we imagine that this little piece of legal requirement will be news to many, as the practice of it is certainly by most honoured far more in the breach than in the observance. We are unaware that either the General Medical Council or any legal body has ever found fault with a practitioner for thus ignoring a provision of the law and we very much doubt whether such a contingency will arise. To this extent, therefore, our correspondent's fears are ill-founded and we can only wish him, and doubtless hundreds of his fellows, a continued immunity from interference for neglecting a legal requirement the observation of which appears derogatory to their professional dignity. The subject of the sale of poisons is, however, now under the consideration of a Parliamentary committee.

## THE POLICE OF LONDON IN 1900.

THE report annually issued by the Chief Commissioner of Police of the Metropolis, like some other works of the same kind, loses a little of its interest owing to the length of time apparently necessary for its compilation. At the beginning of 1902 we feel an indifference towards the statistics of 1900 that we should not feel towards those of 1901. If, for example, the tables that Sir Edward Bradford now submits to us showed a sudden increase of a particular form of crime, or an unwonted mortality in the police force from some unusual cause, we should feel that, as far as extraneous influence or criticism was concerned, the opportunity was over. The present report, however, does not show anything abnormal, although it contains much that is of interest. Turning to the section of it which is signed by Mr. A. O. Mackellar, chief surgeon of the metropolitan police, we find the average daily diminution of this little army of about 15,800 men from sickness to have been 3·33 per cent. The different form adopted in the reports of the county and borough police forces does not enable us to make a general comparison as to this, but if we turn to the statistics of the county and borough police forces for the year ending Sept. 29th, 1900, and observe the Liverpool figures for example, we see that the conditions of London life render the lot of a Metropolitan constable a happier one than that of his comrade in the north. During the three days in which the Liverpool police were inspected over 5 per cent. were absent through being on the sick-list, while there were 1363 convictions in 1899 for assaults committed on the Liverpool police, a body of 1460 men, as compared with 2807 convictions for assaults in 1900 upon the London force, which has an authorised strength of 15,847. Assaults are, of course, not the only causes of the injuries which put a policeman on the sick-list. Mr. Mackellar divides these injuries into two classes—those received in the execution of duty and those received from accidental causes whilst on duty. In the former class 2867 men, when making arrests, were assaulted or injured by prisoners and other persons, 77 were injured when stopping runaway horses, and 53 were bitten by dogs and seven by horses. As instances of the second class may be mentioned 291 cases of injury by slipping in the streets or when examining premises, while 101 cases arose from accidents connected with horses. The liability of the police to suffer from disease may best be gauged by the tables of deaths and of the causes of retirement through being invalided. Pneumonia accounts for 20 out of a total of 86 deaths, but two of these cases appear to have been among army reservists serving in Africa. Cardiac disease caused death in six instances. Disease of lungs accounts for 15 cases of retirement, "rheumatism, rheumatic gout, and sciatica" for 12, neurasthenia for eight, cardiac disease for eight, and varicose veins for seven, the total number of retirements also being 86. In another table we find the number of men placed on the sick-list owing to diseases due to exposure in the first half of the year compared with those similarly affected in the second half.

*Table of the Chief Diseases of Exposure in 1900.*

| Disease. | Half-year ending June. | Half-year ending December. |
|---|---|---|
| Rheumatism, "chronic and muscular" ... .. . | 521 | 451 |
| Catarrh . .. . . . . . | 1490 | 626 |
| Bronchitis . . | 184 | 62 |
| Tonsillitis .. ... | 250 | 221 |
| Totals ... . . ... | 2445 | 1360 |

Of the sick and injured of the police there were admitted to general hospitals on the recommendation of the chief surgeon or divisional surgeons, and with the consent of the Commissioner, 202, and to cottage hospitals 100. Evidence of the high moral standard maintained in the metropolitan police is to be found in the fact that in this large force of men in the prime of life there were only 18 cases during the year of suspension from duty owing to venereal disease. Passing from vital statistics to other matters, the figures relating to the licensing of public vehicles are of some medical interest. Many Londoners as they pass middle age are inclined to regret the preponderance of hansom cabs over the steadier and less draughty variety with four wheels, particularly in cold and wet weather, and are also obliged frequently to find fault with the odoriferous and insanitary qualities of the "four-wheeler." The numerical preponderance of the hansom cab is not so great in fact as it is apparently, but no doubt a large number of "four-wheelers" are exclusively employed at railway-stations. In 1900 there were 7,531 two-wheeled hackney carriages licensed and 3721 four-wheeled, being an increase of 87 four-wheeled and a decrease of 28 two-wheeled vehicles. By the way, we note that the official name for a four-wheeled cab is a "clarence," a title originally given to vehicles of the brougham class out of compliment to the Duke of Clarence, afterwards William IV. In perusing this portion of the Commissioner's report we might speculate on the cerebral conditions which cause 3239 persons to leave their purses and 180 persons to leave their watches in public carriages; the other articles, such as rugs and umbrellas, found by drivers and conductors and deposited with the police being more suggestive of temporary forgetfulness. We regret to observe that although the convictions for furious driving appear to have a tendency to diminish, the convictions for drunkenness among cab-drivers and omnibus-men were higher in 1900 than in the preceding year. The increase, however, is not important, and, as we have said, we feel inclined to regard 1900 with an indifference that we should not accord to 1901.

## PARALYSES IN WHOOPING-COUGH.

DR. PAUL VALENTIN of Paris in a recent *Thèse de Paris* (1901) refers to the little-known subject of paralyses in whooping-cough, a matter of practical importance especially in regard to prognosis. The occasional occurrence of paralysis after whooping-cough was noticed in the eighteenth century by Sydenham, who noticed the fact that infants affected with it may have difficulty in walking. Dr. Valentin has collected from medical literature a total of 83 observations on paralyses in whooping-cough, including a number of personal observations, and summarises his results as follows. 1. Psychoses and neuroses are rare accidents of whooping-of plague was threatened. It is evident, however, that no trustworthy method has yet been discovered. From the partial success obtained by Dr. Abel, however, it may be hoped that further investigations will be made and also that the statement will be corroborated that the Danysz bacillus is harmless to man and to domestic animals.

## POPULAR LECTURES ON HEALTH QUESTIONS.

SANITARY science is of comparatively modern creation, and the slowness with which its teachings are accepted in some quarters makes it all the more desirable that every means should be used to arouse general interest in measures which have for their object the preservation of health. Popular lectures may do good service in this respect, provided that the lecturers are themselves well informed and possess the valuable faculty of imparting their knowledge in an easy and untechnical manner. In a lecture on Matters connected with the Life and Health of the Public, delivered at Southend by Dr. J. T. C Nash, the medical officer of health, both these conditions have been realised, and the Health Committee of that town has acted in the public interest by having a summary of it printed and extracts made for distribution. Dr. Nash showed that free ventilation, efficient disinfection, and general cleanliness, municipal and personal, were synonymous with the destruction of pathogenic bacteria, and conversely that municipal and personal uncleanliness were the principal factors in the production of disease. Under the heading of small-pox he explained in simple but impressive phraseology that efficient vaccination was the only protective against the infection, but that after the lapse of some years the immunity gradually became less and revaccination was required.

## CHOLERA AND FAMINE IN BENGAL.

IN a paper entitled "Bengal—the Land and its People," read before the Society of Arts on Jan. 23rd, Mr. Francis Henry Skrine made some interesting remarks on the origin of cholera and famine in our Eastern dependency. Mr. Skrine, although not a medical man, has had a large Indian experience, and in 1891, whilst magistrate-collector of Rungpore, he was more than once officially thanked by the lieutenant-governor of the province for the work done by him in connexion with an outbreak of cholera. The disease, he says, is indigenous to Bengal, but there is reason to suppose that its appearance in an epidemic form is of comparatively modern date. The Mughal sovereigns used to spend the greater part of each year in perambulating their empire, attended by hundreds of thousands of followers, but these progresses would be impossible at the present day, for a "camp" on anything like the old scale would speedily be dispersed by cholera. Some soldiers disbanded after the European peace obtained grants of waste land in 1816 in the Sundarban, an alluvial tract on the fringe of the Bay of Bengal, and in clearing the ground and bringing the soil under cultivation they seem to have let loose the cholera germ. In 1817 Jessor, the district to which the Sundarban at that time belonged, was desolated by cholera. The disease then spread to Calcutta, caused many deaths in Lord Hastings's army opposed to the Pindaris, and travelled to Eastern Europe by the caravan routes, striking Paris and London in 1831. In Indian towns with a pure water-supply cholera appears only in a sporadic form; in country districts it is connected with the tax on salt, for salt is so dear that it is seldom given to cattle which satisfy their craving by devouring excrementitious matter, and in this way Mr. Skrine believes milk is infected with the cholera germ. In the causation of famine the most important factor is an ill-distributed and improvident peasant proletariat and the next is the deterioration in the productive power of the soil. The staff of life is rice, and if the crop fails, as it must do if the monsoons in July and October do not bring rain, there is nothing cheaper to fall back upon. An acre of land unreached by silt from the rivers now produces only 800 pounds of food grain, whereas in the days of Akbar the average yield was 1400 pounds.

## A PLEA FOR THE SEALED MILK-CAN.

THE milk supplied to towns necessarily travels some distance from the point of production before it reaches the consumer, and it is desirable that on its journey by road or rail precautions should be taken, not only to prevent its contamination, but its adulteration also. If milk can be watered *in transitu*, and there is no doubt that such adulteration often takes place on the way from the milk-shop to the house, the milk has necessarily also been exposed to the risk of contamination. The man with the barrow is not always above suspicion. There is no doubt that often good genuine milk is sent out of the shop and is afterwards mysteriously mixed with water before delivery. When large vendors are convicted of selling watered milk the defence is invariably raised that the milk was sold exactly as it was received from the farmer. Then when the farmer declares that he dispatched the milk just as it came from his cows, suspicion falls upon the railway servant or the inference is made that the tampering occurred on the railway. In both cases, therefore, of the tampering with milk, on the barrow and in the train, we possess a strong argument in favour of all milk, wholesale or retail, being supplied in sealed cans. It, however, has been stated pretty freely in court that the railway companies will not allow milk consignors to seal or to lock their cans, as it would interfere with the examination, the measuring, or the weighing of the contents. As a matter of fact this is not so, as has recently been shown by the medical officer of health of Islington, who has elicited a very definite answer upon the subject from the Railway Companies' Association. The reply was to the effect that "senders have been for a long time allowed to send milk in sealed cans, the companies accepting the declaration of the senders as to the quantity conveyed, no extra charge being made." The only condition which the companies require to be fulfilled is that the true weight of each can shall be stamped on the outside of the can, so that in case of doubt the quantity of milk within the can can be approximately ascertained by allowing 10¼ pounds for each gallon of milk declared. There is thus no difficulty in senders protecting themselves against alleged loss of milk *in transitu* by sealing, padlocking, or otherwise fastening the cans. It would be better still if the companies refused altogether to carry milk except in fastened cans—a step which, if adopted, would undoubtedly reduce the rate of milk adulteration and at the same time destroy the common and miserable defence of the large wholesale milk vendors that the farmer, the railway servant, in fact anybody but themselves was guilty.

## SMALL-POX AND ISOLATION.

ISOLATION hospitals are without doubt most useful institutions, but unless they are managed with a due regard to the risk of infection they become neither more nor less than centres of extreme danger. If we may judge from certain statements made at a meeting of the Barnet Rural District Council held on Jan. 23rd, the Clare Hall Small-pox Hospital at South Mimms seems to be managed in a manner which may mildly be stigmatised as careless. A letter was read from Mr. Sirey, landlord of the Guinea Inn at Ridge, wherein he contended that "this hospital or lodging-house for small-pox is not an isolation hospital at all" The writer also stated that the engineer and various members of the staff lived in the village, also that some of the patients, when well enough

Much still remained to be done, especially, concluded Dr. Thresh, with regard to the question of the housing of the working-classes. He pointed out that in many rural districts the local sanitary authorities had no control over the materials of which buildings were to be constructed and he suggested that the Institute should consider this subject with a view to improve the regulations of the Local Government Board. He might have added that in many instances the local builder is a member of the town council or sanitary authority with disastrous results. Not so very long ago our contemporary *Truth* pointed out a disgraceful state of matters existing at Reigate. Our sanitation has undoubtedly improved within the last 50 years, but the shoddy house built upon what is euphemistically termed "made ground" is still to be found. The penalties for insanitary or defective building or plumbing should be made really prohibitive.

## THE DISTRIBUTION OF PLAGUE.

A TELEGRAM from the Governor of the Mauritius, received at the Colonial Office on Jan 31st, states that for the week ending Jan. 30th there were 12 cases of bubonic plague, of which 9 proved fatal. As regards Egypt, during the week ending Jan. 26th 15 cases and 16 deaths have occurred from plague in Egypt: 14 cases and 14 deaths have been reported from Tantah, 1 case and 1 death from near Zifteh, and 1 death from Mit Ghamr. During the last week only 7 deaths have occurred out of hospital, in comparison with 13 during the week ending Jan. 19th. The disease at Tantah is confined chiefly to the Soudanese population, and this accounts for the heavy hospital mortality, as these people succumb to the disease much more readily than do the Fellaheen.

## EXAMINATION OF THE BLOOD FOR THE TYPHOID BACILLUS AS A MEANS OF EARLY DIAGNOSIS OF TYPHOID FEVER.

TYPHOID bacilli have been found by a number of observers to be present in the blood with great frequency—in from 70 to 80 per cent. of their cases. At the meeting of the Société Médicale des Hôpitaux of Paris on Dec. 27th, 1901, M. Jules Courmont pointed out the great value of this fact in the early diagnosis of typhoid fever, especially when Widal's reaction failed. He examined the blood in nine cases and succeeded in obtaining the bacillus in pure culture in all. The blood was taken aseptically at the bend of the elbow and was cultivated in small flasks containing 20 cubic centimetres, and in larger ones containing from 300 to 1000 cubic centimetres, of bouillon. Into the smaller ones some drops of blood were received and into the larger ones from two to four cubic centimetres. Incubation took place at 37° C The bacilli obtained showed all the typical characters of typhoid bacilli. M. Courmont drew the following very important conclusions. 1. The typhoid bacillus was present in the blood in all ordinary and grave forms of typhoid fever (the question of slight and abortive forms he reserved). 2. It appeared early in the disease. He found it as early as the fifth day (he had not an opportunity of examining the blood earlier) It remained in the blood until the end of the third week It might persist longer in fatal or prolonged cases At necropsies it might be found in the general circulation. The best method of obtaining cultures was to cultivate from two to four cubic centimetres of blood immediately after it was taken in from 300 to 500 cubic centimetres of bouillon. If the bouillon was not turbid at the end of 24 hours the deposit should be shaken up. With the small quantities of bouillon M. Courmont [illegible] successful in only 21 per cent. of the cases. The agglutinability of the bacilli was usually inferior to that of those employed in Widal's test; it increased in the successive generations in bouillon until it became equal to that of Widal's test. There was no relation between the presence of the typhoid bacillus in the blood and the agglutinating power of the serum. The bacillus was found in the blood in four cases at an earlier period than that at which the Widal reaction could be obtained. In two it was found on the fifth and ninth days respectively, while Widal's reaction was not obtained until the twenty-second and forty-fifth days. These observations show the great diagnostic value of examination of the blood for the typhoid bacillus, especially when Widal's test is negative.

## THE NEW MEDICAL OFFICER TO THE LONDON SCHOOL BOARD.

DR. JAMES KERR of Bradford has been elected to the post of medical officer to the London School Board. Dr. Kerr, who has acted as medical superintendent of the Bradford School Board, was educated at Cambridge and St. Bartholomew's Hospital, graduating as M.D. in 1891. He is well acquainted with the various subjects bearing on school hygiene and has written much on the subject. Dr. Kerr will receive a salary, to commence with, of £800 per annum, which will eventually rise to £1000. We are glad to see that he is to give his whole time to the service of the Board.

## DANYSZ'S VIRUS AS A DESTROYER OF RATS.

SOME years ago Dr. Danysz of Paris discovered a bacillus which has been called the bacillus typhi murium (Danysz). It was shown to be pathogenic for rats, and its discoverer suggested that it might be employed instead of other poisons to kill these animals. It was further urged that the bacillus was harmless to man and domestic animals. Further investigations went to show, however, that when practically applied the proposed method was not satisfactory. In THE LANCET of August 17th, 1901, p. 440, we published a communication by Dr. Klein and Dr. Herbert Williams, entitled "Experiments with the Danysz Rat Bacillus." These observers showed that when rats were fed with cultures of the bacillus death only resulted in about 33 per cent. of the animals. But when a number of rats were fed on guinea-pigs which had died after inoculation with virulent culture the percentage of dead rats was certainly increased. When, however, similar experiments were tried in a warehouse the results were entirely negative. The observers also added a useful warning when they said that all laboratory experiments on rats kept in captivity must be conducted with care, since these animals are liable to succumb spontaneously. In THE LANCET of Sept 28th, 1901, p. 868, we drew attention to similar experiments conducted by Dr. M. J. Rosenau, assistant surgeon, United States Marine Hospital Service; his results showed that this virus was not likely to prove of any special value as a rat destroyer on a wholesale scale. In our Berlin letter of last week (Feb. 1st, p. 341), we published the results of investigations by Dr. Abel, a medical officer of the city of Hamburg. He found that by feeding rats on the livers and spleens of rats that had died after inoculations of the bacillus the toxic action could be continued through six generations. Attempts were then made to destroy rats in some localities where they happened to be abundant, pieces of bread treated with cultures of the bacilli being placed where the rats would be likely to find them. The results presented considerable variety, but were more successful than in the attempts which we have referred to above. If by means of the Danysz bacillus measures could be adopted by which rats could be destroyed the plan would be of considerable value where an epidemic but which will not necessarily be the area at present denominated "Water London." The Water Board is to be "a body corporate with a common seal" and will have power to acquire and to hold land. The Board is to consist of a chairman and vice-chairman and 67 members; the chairman and vice-chairman are to be appointed by the Board and will receive such salaries as the Board may determine. The constitution and proceedings of the Board are set forth at length in one of the schedules (Schedule 4, p. 24). They are necessarily of a complicated nature, and it would be useless to attempt to give a summary of them.

The arrangements for the transfer to the Water Board of the undertakings of the companies is provided for in the Bill in Clauses 2 to 8. Payment for the property of the companies is to be made in a newly created security to be called "water stock." On taking over the businesses of the companies the Board will exercise "all the rights, powers, and privileges of the companies" and will be subject to "all the duties, obligations, and liabilities" of the companies under all the Acts, "whether local or general," which at present affect them. After the issue of the water stock to the companies in payment for their properties the Chamberlain of the City of London will be under the obligation to deliver to the Water Board the stock at present held by him (under what are generally known as the sinking fund clauses of the companies' Acts). The stock so delivered will be cancelled and extinguished. Provisions are made for the exclusion of certain districts (now in Water London) from the government of the Board and for the supply in bulk of certain districts and persons.

Provisions for the redemption of the present debenture stock of the companies are made in Clauses 9 and 10.

The financial arrangements of the Board are dealt with in Clauses 11 to 17 inclusive. A "water fund" is to be established and all payments by the Board are to be made from that fund. Should there be a deficiency in the "water fund" any sum required to meet this is to be made good by the City of London and the parishes in the county of London and in the boroughs and urban districts outside London the councils of which are for the time being entitled to be represented on the Water Board in proportion to the rateable value appearing in the valuation lists. The amount of money so required is to be raised (1) in the case of the City from the consolidated rate; (2) in the case of a parish in a metropolitan borough from the general rate; and (3) in any other parish from the poor-rate.

Provisions are made for the Water Board as to the terms on which money may be borrowed, as to the issue of water stock (which is to bear interest at the rate of 3 per cent. per annum), and as to the way in which loans are to be discharged (the essential feature being that the water stock issued in payment for the companies' undertakings must be redeemed within a period of 80 years). The accounts of the Water Board are to be subject to public audit and ratepayers are to have the right to make objection to and, if they shall think fit, to appeal against them.

For the purpose of arbitration a special court is appointed. It consists of the Right Hon. Sir Edward Fry, Sir Hugh Owen, G.C.B., and Sir John Wolfe Barry, K.C.B. Provisions are made as to the rules to be observed by the arbitrators.

Clauses 19 to 28, which are grouped together as "Miscellaneous," deal with the subsidiary powers of the Water Board, the power of the Local Government Board to make provisional orders for certain purposes, provisions as to local inquiries, the publication by the Board of an annual report (which is to be laid before Parliament by the Local Government Board), and the "dissolution of water companies" (the New River Company alone is to survive, presumably as a land company, for it has great possessions). Provisions are made also as to "qualification of justices" (whose capacity to act will not be interfered with because they hold water stock) and local authorities are to be allowed to be heard against any Bill promoted by the Water Board (a privilege which should not be distasteful to the Parliamentary Bar).

Clauses 29–40 inclusive relate to "transitory provisions" for the maintenance of the undertakings of the water companies until (Clause 29) and after (Clause 30) the day appointed for their transfer to the Board. Clause 31 provides that anyone authorised by the Water Board "shall have free access to the works of any metropolitan water company for the purpose of inspecting those works." The remaining clauses deal with the payment of dividends to companies till the issue of water stock, with temporary advances (to meet the immediate necessities of the Water Board on its formation), with existing contracts and existing by-laws, with the treatment of the present officers and servants of the water companies, and with the compensation to be given to the auditor of the companies' accounts. There are transitory provisions as to the supply of water in bulk, and power is given to the Local Government Board to remove some minor difficulties which may arise. The last section of the Act provides that "all costs, charges, and expenses preliminary to and of and incidental to the preparing, applying for, obtaining, and passing of the Act incurred by the Local Government Board shall be repaid to that Board by the Water Board when established under this Act."

## "TACHIOL," A NEW ANTISEPTIC.

A NEW antiseptic, which seems likely to take a high place among those at present in use, was the subject of a communication made to the Royal Medical Academy of Rome on Jan. 26th by Professor Durante, to whose notice it was brought by Paternò, Professor of Pharmaceutical Chemistry in the University of Rome, who by experiments on bacterial cultures had already noted its great germicidal power. This new antiseptic agent is the fluoride of silver and has been christened "tachiol." Dr. Perez, one of Durante's assistants, is now engaged in making a complete investigation of its properties, a full account of which is promised shortly. Meanwhile the results already obtained are interesting and promising. The object aimed at in the inquiry has been threefold—namely, (1) to establish the germicidal effects of the preparation; (2) to ascertain its toxic power; and (3) to determine its possible therapeutic applications. In regard to its bactericidal properties, it appears certain that in solution of 1 in 150,000 it kills in the space of one minute the most resistant pyogenic organisms, such as the staphylococcus pyogenes aureus. A solution of 1 in 200,000 was found sufficient to kill in one minute the typhoid bacillus. With the spores of the anthrax bacillus the result varied, probably owing to the different degrees of resistance in these spores, but a solution of 1 in 1000 sufficed in from 20 to 30 minutes to kill completely spores obtained at a temperature of 18° C., which resisted steam for 15 minutes. In all cases, however, by contact with such a solution for the space of one minute, a large proportion of the spores lost their power of development. Compared, therefore, with other antiseptics, such as sublimate, and carbolic acid and its derivatives, tachiol takes a foremost place as a germicide, especially when in contact with albuminoid bodies under which condition sublimate loses much of its bactericidal power. The toxic power of tachiol, on the other hand, is much feebler than that of other antiseptics, a fact which constitutes one of the chief advantages of the new preparation. Injected into guinea-pigs and rabbits no ill-effects are observed until the quantity exceeds *one centigramme per 100 grammes of* the animal's weight. Larger doses are poisonous. As to the therapeutic uses of the antiseptic, this was tested on a large scale in different surgical affections either by disinfecting cavities or suppurating sinuses, or by endoarticular injection in tuberculous synovitis, or by treating various cases of endometritis, proctitis, and cystitis. Solutions varying in strength from 1 in 1000 to as much as 1 in 100 were employed for most of these; in cystitis and endometritis solutions of 1 in 5000 or 1 in 10,000 were used. In all cases the injection was well tolerated and no ill-effects were produced. The suppurative process was arrested in a relatively short time and an examination of the cultures made after the first application demonstrated an almost complete disappearance of the germs. Indolent ulcers were stimulated and the process of cicatrisation was hastened to a notable degree. In some cases of tuberculous disease with formation of fistulous sinuses gradual healing and complete obliteration occurred, in others associated with suppuration the discharge lost its purulent character and a remarkable improvement took place in the local conditions, although, up to the present time at least, the tuberculous foci have not been entirely destroyed. In cases of tuberculous synovitis with lesions of bone the results were not so marked, probably because the action of the salt is chiefly local and requires actual contact in order to be fully exercised. Absorption does, to walk in the grounds, had scaled the fence and had gone to the public-house. Female convalescents had been seen shaking hands with, and talking to, people over the fence. Councillor Clarke stated that the Local Government Board had been communicated with, but had replied that it had no authority to interfere. After some further discussion it was decided to send Mr. Sirey's letter to the Local Government Board, Councillor Clarke mentioning that there were 50 men working on the place at the present time. The other night he watched the gate and saw 29 men come out, 14 of whom were going to St. Albans. When asked if they were disinfected before leaving they replied "No." We can scarcely believe that such a monstrous state of matters as is implied in the above quoted statements really exists, but perhaps the South Mimms Small-pox Hospital authorities will kindly explain or deny the charges made. Our columns are open to them.

AT a meeting of the Medical Committee of the Hospital for Consumption and Diseases of the Chest, Brompton, held on Feb. 5th, it was unanimously resolved :—

> That the medical staff of the Brompton Hospital repudiate all responsibility for statements with reference to treatment of consumption by intravenous injection which have recently appeared in a daily journal The treatment in question is being tried by some members of the staff, but as yet no trustworthy results have been demonstrated.

THE Edinburgh University Club of London will hold its annual dinner at the Criterion Restaurant on Wednesday next, Feb. 12th, at 7.15 P.M., under the chairmanship of Dr. T. J. Maclagan.

PROFESSOR VON BERGMANN has been appointed a member of the German Privy Council.

# Pharmacological Notes.

### THE INJECTION OF OXYGENATED WATER IN THE TREATMENT OF INFANTILE DYSENTERY.

DR. ROCAZ,[1] in a contribution to the Société de Médecine et de Chirurgie de Bordeaux, recommends the injection of oxygenated water in the treatment of dysentery of children, especially where there is suppuration. Similar treatment has been employed previously by Blech in cases of the gastro-enteritis of children. Oxygenated water is scarcely toxic and is employed as a powerful antiseptic. Two or three injections are administered daily of oxygenated water ("10 volumes" in strength) diluted with five times its volume of warm sterilised water. Each of these injections is preceded by an evacuant injection. The quantity of liquid used depends on the age of the patient and still more on the toleration of the large intestine. In order to be efficacious the injection should be maintained as long as possible and should penetrate deeply. To this end it is well to employ a rather long but very supple tube, since the largest dysenteric lesions are situated on a level with the rectum. The patient should lie first on one side, then on the other, in order to bathe the whole of the colon with the liquid. Thus administered the injections are easily tolerated and cause no pain. Dr. Rocaz has treated 12 severe cases of dysentery by this method in children aged from two to 12 years ; all have improved rapidly after the first two or three days. The stools quickly change in appearance and contain less pus, and less blood, and are less frequent, the sphincter regains its function, tenesmus and abdominal pains disappear, fever, when present, subsides, the general condition improves, and in eight or 10 days the affection is completely relieved. It is necessary, however, to continue the treatment several days after apparent recovery until the stools become normal both in quantity and in quality, otherwise a relapse may ensue. Two cases are particularly mentioned. In the first a girl, aged eight years, was put under the treatment, though her recovery was not expected. vil-smelling pus, mixed with blood, was constantly escaping from the anus. In two days the odour was less fœtid and the patient gradually recovered. The other patient, a child three years old, was put under the treatment after having been affected with dysentery for more than a month. In addition to the usual symptoms fever and vomiting were in evidence, but they all disappeared in eight days.

### THE URINE OF NURSLINGS.

M. E. Lesné and M. P. Merklen[2] have examined the urine of healthy nurslings and of those suffering from gastro-enteritis. They point out that the urine of the latter resembles normal urine in colour, in density, and in quantity ; its composition approaches the normal, and there are other points of resemblance. When, however, the attack of gastro-enteritis is severe certain modifications are observed. Thus the quantity passed is less, as also is the quantity of urea, chlorides, and of certain other normal constituents, while certain salts may increase in quantity and pathological constituents—e.g., albumin and indican—may make their appearance; the urine also has a higher density.

### DYMAL : A NEW ANTISEPTIC POWDER.

This substance, dymal,[3] on account of its cheapness, provided that clinical reports continue to be favourable, should prove of service in cutaneous affections where large quantities of medicaments are required. Dymal is an odourless impalpable powder ; it may be used in the dry state or in the form of a 10 per cent. ointment, or as a local absorbent and antiseptic. It has been found useful for burns, ulcers, and running eczema ; in scaly eczema and in psoriasis its action is but little marked. In intertrigo dymal exercises a soothing and drying action. In ichthyosis an ointment with a wool-fat basis is recommended because of its prompt action on the itching surface. Ulcers of the leg and cutaneous gangrene lose their repulsive appearance and characteristic odour under the influence of this powder.

### THE VALUE OF LECITHINS AND NUCLEINS.

Dr. J. Laumonier[4] summarises at some length our present knowledge of the lecithins and nucleins. With regard to the lecithins he considers them to be stimulating to the general nutrition, principally on account of the phosphorus which they contain and by the action which they have on the nervous system. However, in their effect the isolated lecithins, of which the principal ingredient is glycerophosphoric acid, do not seem to be superior to the glycerophosphates or even to cod-liver oil. Considering that this oil contains organic bases and phosphates, besides possessing tonic and stimulating properties, it appears to be superior to the costly lecithin. But if lecithin be considered to occur in the yelk of egg, then it is necessary to study the nucleins which accompany it and assist its action. Dr. Laumonier discusses the discovery, constitution, sources, classification, and other points connected with the nucleins, and draws the conclusion that insufficient clinical observations have been made to warrant any definite statement regarding their value as remedial agents.

# THE LONDON WATER BILL.

THE Government measure introduced by Mr. Long is entitled, "A Bill for Establishing a Water Board to Manage the Supply of Water within London and Certain Adjoining Districts, for Transferring to the Water Board the Undertakings of the Metropolitan Water Companies, and for other Purposes connected therewith." The Bill was prepared and brought in by Mr. Long, Mr Ritchie, the Attorney-General, and Mr. Grant Lawson. It consists of 40 clauses and six schedules which occupy together 28 pages. The first clause deals with the establishment of the Water Board, its composition and chief duties. The Board is to be established for the purpose of acquiring by purchase and of managing and carrying on the undertakings of the metropolitan water companies, and to undertake the duties of supplying water within an area which will be defined, that the fee of five guineas should be increased to six guineas and should be paid on each occasion of admission to Parts I. and II. of the examination.

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[1] Bulletin de la Société de Pharmacie de Bordeaux, November, 1901, page 331.

[2] Les Nouveaux Remèdes de Pharmacologie, Dec. 8th, 1901, p. 538.

[3] Ibid., p. 552.

[4] Ibid., Dec. 8th and 24th, 1901, pp. 529 and 553.

After some further formal business the PRESIDENT dissolved the Comitia.

# THE ARMY MEDICAL SCHOOL, NETLEY.

## DISTRIBUTION OF PRIZES.

IN the lecture hall of the Army Medical School, Netley, on Jan. 31st, the result of the examination lately held at the school was promulgated, and the prizes were distributed by Surgeon-General W. Taylor, C.B. (Director-General of the Army Medical Service), in the presence of Colonel W. J. Charlton (Principal Medical Officer at Netley), Lieutenant-Colonel G. Wilson, Colonel K. Macleod (Professor of Military Medicine), Colonel W. F. Stevenson, C.B. (Professor of Military Surgery), Dr. A. E. Wright (Professor of Pathology), Colonel H. Cayley, C.M.G., I.M.S., Lieutenant-Colonel W. E. Webb, Major W. Dick, and the military staff of the Royal Victoria Hospital.

Colonel MACLEOD read a report which stated that the work of the session had been most satisfactory. Out of the 27 surgeons-on-probation who had undergone the final examination 26 had proved themselves fitted to receive His Majesty's commission. 23 surgeons-on-probation of the Indian Medical Service had passed an examination in company and stretcher drill and had received certificates to that effect. They had given evidence of punctuality, diligence, and capacity in the pursuit of their studies, and their conduct while passing through the school had been excellent, and there had been a good tone throughout the school. The Herbert prize, consisting of about £20, given in memory of the late Right Hon. Sidney Herbert, who was President of the Royal Commission which resulted in the foundation of the Army Medical School, and which was awarded at the end of each course of instruction to the surgeon-on-probation who had evinced the highest proficiency in the special subjects taught at the Army Medical School, was awarded to T. S. B. Williams, I.M.S. The Martin gold medal, which was given to the surgeon-on-probation who took the highest place in military medicine and was intended to commemorate the late Sir Ranald Martin, was awarded to E. Bissett, I.M.S. The Professor of Medicine desired to call attention to the names of Surgeons-on-probation H. B. Steen, A. E. J. Lister, and A. W. Greig, all of the Indian Medical Service, as having particularly distinguished themselves throughout the examinations in military and tropical medicine. The Parkes memorial bronze medal, given to the surgeon-on-probation who took the highest place in hygiene, and which formed part of a memorial to commemorate the great services of the late Professor E. A. Parkes, had been won by A. E. J. Lister, I.M.S. The second prize in hygiene, a book presented by Mrs. De Chaumont in memory of her husband, the late Professor F. De Chaumont, F.R.S., was awarded to T. S. B. Williams, I.M.S., who gained the second place in this department of study. The Professor of Hygiene desired to make mention of Surgeon-on-probation R. J. Bradley, who had also particularly distinguished himself in military hygiene. The Montefiore prizes, two in number, which were founded by Mr. Nathaniel Montefiore, were awarded to Surgeons-on-probation E. A. Loch and A. W. Overbeck-Wright, both of the Indian Medical Service The first prize consisted of a medal with a cheque for £21, and the second of seven guineas. The Professor of Military Surgery desired that the names of the following gentlemen should be honourably mentioned in his department of study – J. E. Clements, R. E. Lloyd, and T. S. B. Williams, all of the Indian Medical Service. The prizes in pathology, which consisted of books and an oil immersion lens, presented on this occasion by Professor Wright, were awarded to Surgeons-on-probation T. S. B. Williams and A. W. Overbeck-Wright, both of the Indian Medical Service, while the name of A. W. Greig, I.M.S., was worthy of special mention as a pathologist. The prize-books for clinical and ward work, presented in memory of Surgeon-General Maclean, for many years professor of military medicine, were awarded to A. E. J. Lister, I.M.S. The prize for hospital administration, consisting of a bronze medal and £5, which had been established by Mrs. Marshall Webb in memory of her husband, the late Surgeon-Major-General W. M. Webb, who once held the office of Assistant Professor of Military Medicine in the school, had been awarded to S. H. L. Abbott, I.M.S. From a report issued by Lieutenant-Colonel W. E. Webb, it appeared that the results of the examination on this subject which had been held as a separate one for the first time, and to which all the surgeons-on-probation were subjected, had been on the whole very satisfactory.

Surgeon-General TAYLOR, having distributed the prizes, addressed the young officers who had been awarded His Majesty's commission, expressing the pleasure which it gave him to be present on such an interesting occasion, because the Royal Victoria Hospital at Netley was associated with many of his happiest days. He should like to take the opportunity of thanking Mrs. Webb for the prize which she had given in memory of her late husband, whom he remembered as a distinguished officer and gentleman, respected wherever he went. Speaking to those who had been students there recently he would remind them that they had hard work before them and their lives were in front of them. Perhaps before he proceeded further he might try to allay a little anxiety which existed in the minds of some of the officers of the school. There seemed to be an idea abroad that their death-warrant had been sounded, but that, he thought, only existed in the air. The man in the street knew it, but they did not know it at headquarters, and if there should be any change it would only be one of translation. Let them hope and believe that the translation would be for the improvement of the service so that it might soar to a higher sphere. Addressing the Indian medical officers he said he was in a position to do so, though he had not the honour to belong to their service, for he had served in the country in which they had chosen to spend their lives. It was a difficult thing to choose a career, but he congratulated them on their choice. The records of their service were far beyond dispute, and they had had in their service men who were historical and whose names would go down to posterity, not only as belonging to their profession, but as pioneers of civilisation who had done more for the welding together of their great Indian Empire than the men of almost any other service. It would be invidious to mention names, but they were all historical, and they could find them for themselves now that they were starting in their career. There was one great principle which he should like to impress upon them with all the power and force he could command, and it was that they had still a lot to learn from the time they first stepped on board the ship that was to take them out to India, and they should keep on learning until their last voyage home. They would find themselves in a land that was new to them, and there they would again have a lot to learn. They should store up knowledge for future use and should remember that to stand still was dangerous. He sometimes heard it said that both the Indian Medical Service and the Army Medical Service, to which he had the honour to belong, were not considered careers fit for men anxious to get on in their profession. That was all nonsense, absolute nonsense, because in the smallest station they could go to in India—it might be 500 miles from anywhere—they might obtain more surgical experience and practice than elsewhere, and it was not opportunities that would be wanted but capacity to take advantage of them. He urged them not to forget in their careers that they were professional men and that they should be kind, cheerful, and sympathetic with their patients. He wished them all a most successful career in the field to which they were going, and hoped that they would do well and come back to their own country to spend the later days of their lives with the full knowledge that they had done their duty with all their might.

Colonel CHARLTON also addressed those who had received commissions, trusting that they would never regret the day that they joined the Royal Army Medical Corps or the Indian Medical Service. He also expressed regret and sorrow at the loss they had sustained by the death of Surgeon-General R. Harvey, late Director General of the Indian Medical Service, who came there on the occasion of the last distribution of prizes. He had the privilege of serving under him and never met a kinder, more courteous, or abler medical man; he was thoroughly well-cultured and distinguished in his profession and just as successful as an administrator. They should all try to profit by the bright example of those who preceded them and to maintain at all times the honour of their service.

The company was afterwards entertained at luncheon by however, take place and the action extends to a certain, though as yet undetermined, distance through the tissues. But perhaps the most important application of tachiol in these experiments was made to determine its action in certain septicæmias, especially in anthrax septicæmia. The results were most remarkable. Of seven rabbits inoculated in the subcutaneous cellular tissue with virulent anthrax and either immediately after or within one, three, six, 12, 24, or 30 hours injected hypodermically with a solution of 10 centigrammes per 1000 grammes of weight, only those injected after 24 and 30 hours had any anthrax bacilli in their blood, and none of them showed any symptom beyond a local and transitory œdema. Three rabbits inoculated as controls with the same culture of anthrax died within 48 hours. It was also found that the substance could be safely injected into the veins, but in quantities not exceeding from four to five grammes at a time. More than this produced embolic phenomena, although by means of fractional injections of from one to three grammes extended over from three to four days as much as 10 centigrammes per 1000 grammes of animal could be thus introduced with impunity. Doubtless much experience of the new antiseptic will be required before it can be safely affirmed that it is an efficient remedy in septicæmia, but enough has been seen of its action to warrant the hope that in tachiol we possess a substance of an unirritating and but slightly toxic nature and of very high germicidal power.

## ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN ordinary meeting of the Comitia was held on Jan. 30th, Sir WILLIAM SELBY CHURCH, Bart., the President, being in the chair.

The PRESIDENT announced that His Majesty the King had graciously consented to continue to be an honorary Fellow of the College

The SENIOR CENSOR (Dr. T. T. WHIPHAM) proposed, and the TREASURER (Sir DYCE DUCKWORTH) seconded, the following motion, which was unanimously carried and ordered to be forwarded to the proper quarter :—

> The President and Fellows of the Royal College of Physicians of London are deeply sensible of the great honour which the King has been pleased to confer on them by graciously consenting to remain an honorary Fellow of their body. They desire to assure His Majesty of their devoted loyalty to his Throne and Person and to beg His Majesty's acceptance of this expression of their gratitude and dutiful allegiance.

The PRESIDENT announced that he had appointed Dr. D. Ferrier Harveian Orator, and Dr. C. J. Cullingworth Bradshaw Lecturer for the year, and that the Council had appointed Dr. H. T. Bulstrode Milroy Lecturer for 1903.

The following gentlemen having passed the required examination were admitted Members of the College: Arthur Stanley Barnes, M.B., L.R.C.P. Lond. ; John Charlton Briscoe, M.B., L.R.C.P. Lond. ; Arthur Edmund Carver, M.B., B.A. Cantab., L.R.C.P. Lond. ; Otto Fritz Frankau Grunbaum, M.A., M.B. Cantab. ; Richard Crawshaw Holt, M.D. Durh. ; Charles Hunter, M.A., M.B. Aberd. ; William McCallin, M.D R U.I. ; Sheffield Henry Morier Neave, L R.C.P. Lond. ; and Charles Gabriel Seligmann, M.B., L.R C.P. Lond.

Licences to practise physic were granted to 118 gentlemen, and diplomas in public health (conjointly with the Royal College of Surgeons of England) to 26 gentlemen.

The College seal was set to a "Declaration of trust" settling the foundation of the FitzPatrick Endowed Lectureship.

The following communications were received :—

1. From the President of the proposed Egyptian Medical Congress of December, 1902, inviting the President of the College to accept the honorary presidency of the Congress.—The PRESIDENT stated that he had accepted the office.

2. From the Owens College, Manchester, inviting the Royal College of Physicians of London to send a representative to be the guest of the College at the celebration of the jubilee of its foundation, March 12th and 13th, 1902.—The PRESIDENT, at the request of the College, consented to represent the College.

3. From the Queen Victoria's Jubilee Institute for Nurses asking the College to appoint a representative on the Council. —Sir Dyce Duckworth was re-elected.

4. From Lady Priestley offering for the acceptance of the College a portrait of the late Sir William O. Priestley, M.D. Edin., F.R.C P. Lond.—The PRESIDENT, in accepting the gift, proposed that the grateful thanks of the College be accorded to Lady Priestley.—The motion was adopted.

5. From Mr. Thomas Wakley, jun., L.R.C.P. Lond., offering for the acceptance of the College two medals impressed with the head of Sir William Browne, a former President of the College (1765).—Dr. J. F. PAYNE explained the origin of the medals and proposed that the cordial thanks of the College be given to Mr. Wakley for the gift.—This was seconded by the TREASURER and was carried with acclamation.

6. From the Dean of the Medical Faculty, University of Edinburgh, reporting the award of the Charles Murchison scholarship in July last to Robert Veitch Clark, M.A. Edin.

7. From Mr. Cowell reporting the proceedings of the Council of the Royal College of Surgeons of England.

Dr. S. J. Gee, Sir R. Douglas Powell, Dr. F. H. Champneys, and Dr. S. J. Sharkey were elected councillors.

A report was received from the representative of the College in the General Medical Council on the proceedings of the Council affecting the College at the November session.

94, Gloucester-place, Portman-square, W., Jan. 20th, 1902.

DEAR DR. LIVEING,—I have to report for the information of the College that at the meeting of the General Council of Medical Education and Registration in November and December, 1901, it was resolved *on the motion of Dr. McVail*.—

"That a committee be appointed to prepare a report on the differences that exist between certain licensing bodies on the one hand, and the General Medical Council on the other, regarding the courses and conditions of study, and the recognition of the institutions and schools in which the required courses may be taken; and that the report be considered by the Medical Council at a special meeting when the Council will decide what action, if any, shall be taken, and in particular whether the circumstances are such as to require action to be taken under Section 20 of the Act of 1858."

I was nominated to serve on this committee with the representative of the Royal College of Surgeons of England. A considerable minority voted against this resolution. Section XX. of the Medical Act of 1858 is. "In case it appear to the General Council that the course of study and examinations to be gone through in order to obtain any such qualification from any such College or body are not such as to secure the possession by persons obtaining such qualification of the requisite knowledge and skill for the efficient practice of their profession, it shall be lawful for such General Council to represent the same to Her Majesty's most honourable Privy Council."

On Dec. 3rd, 1901, when the list of scientific institutions, study at which will be recognised by the Council as entitling a medical student (who has complied with the other conditions) to place his name on the Register, came before the Council I moved as an amendment.—

"That the list of *scientific institutions, other than universities or* schools of medicine, do consist of the teaching institutions where physics, chemistry, and elementary biology are taught, recognised by each licensing body, as stated in the list forwarded each year, provided that the list in each case be accompanied by the statement that after due inspection the licensing body is satisfied that each institution so recognised possesses sufficient laboratory accommodation and appliances for the efficient teaching of the required subjects."

The amendment was seconded by the representative of the Royal College of Surgeons of England, but was not carried. Had the amendment been carried it might have afforded the General Council a means of completing its Register of medical students, a matter to which importance is attached by some members of the Council, but which no longer directly affects the regulations for our Licence. In view of the difficulties into which an attempt to assume powers which do not belong to it has led the General Council it seemed right to take this conciliatory step.

These were the only proceedings directly or indirectly affecting our College. The special meeting of the General Council is to be held at the end of February, 1902

I remain, dear Dr. Liveing, yours faithfully,
NORMAN MOORE.

The quarterly report of the Financial Committee of the College was received and adopted.

A report was received and adopted from the Committee of Management dated Dec. 6th last. This report dealt with three subjects. 1. The teaching of the administration of anæsthetics to candidates for the diploma of L.R C.P. and M.R.C.S. The following now stands as the regulation dealing with the subject :—

> That every candidate who passes the Second Examination of this Board or an examination at a university recognised in lieu of it, on or after May 1st next be required to produce before entering for the Final Examination a certificate of having received at a recognised medical school and hospital instruction in the administration of anæsthetics to the satisfaction of his teachers.

2. The committee also recommend that the North-Western University, Chicago, should be added to the list of universities recognised by the Board at which students might complete the curriculum of professional study and the graduates of which in medicine, on fulfilment of the necessary conditions, might be admitted to the final examination. 3. The fees for the diploma in public health. The committee recommended

has shown that telegraphic messages may be transmitted without the use of wires." A very interesting portion of Sir Lauder Brunton's address referred to the prophet Mahomet, and he invited his hearers to speculate on the question how far the history of the world would have been altered if the prophet had undergone a course of treatment of bromide of potassium. The prophet was described as being subject to attacks in which he fell to the ground foaming at the mouth and bellowing like a bull and he had related himself how he saw sudden visions of light and heard voices. According to Sir Lauder Brunton it was during these epileptic conditions that Mahomet received the utterances which he afterwards wrote partly on skins and partly on sheep's blade-bones from which was formed the Koran. Passing on to discuss the question of Samson's strength, Sir Lauder Brunton took the opportunity of observing that his remarks were in no way intended to ridicule Holy Writ. In his opinion Samson was really an epileptic, and in this connexion he described how he had been shown at an asylum a slight, weakly-looking man, who in a fit of epileptic mania had driven his fist through a two-inch oaken door. Touching the remarkable passage, "Samson said, I will go out and shake myself," it was possible that a parallel might be traced in the preliminary contortions and swayings performed by the howling Dervishes, and Sir Lauder Brunton reminded his audience that the Berserkers could bring themselves into such a state of fury that when they went into battle they required no armour.

## ASYLUM REPORTS.

*Lanark and Govan District Asylum, Kirklands (Report for the year ending April, 1901).*—The average number of patients resident during the year was 179, including 90 males and 89 females. The admissions during the year amounted to 107, and of these 61 were males and 46 were females. Of these 102 were first admissions. Dr. James H. Skeen, the medical superintendent, states in his report that the admissions for the year numbered more than for any year since 1888. "The admissions continue to show a large proportion of cases broken down in health from various and severe forms of bodily ailment. A large number of the cases admitted were *manifestly* beyond hope of cure. ...... 53 of the total [admissions] were of this hopeless class." There was an increase in the number of cases admitted whose insanity was due to alcoholism, either primarily or in conjunction with other causes. Alcoholism thus considered was responsible for 25·7 per cent. of the cases admitted. If the effects of alcoholism in producing weakened offspring were taken into account the damage done by alcoholism would probably have to be regarded as higher. The number of patients discharged as recovered during the year amounted to 23, or 12·8 per cent. of the average number resident. Most of these recoveries have been good, and such discharged patients ought, says Dr. Skeen, to do well in the world if assisted by friends "Our Poor-law authorities do excellent work in helping on such cases ...... but it is seldom such persons care to call again upon an inspector of poor. Is there not work here for some society to help such cases? Discharged prisoners have their future looked after and their life ordered for them if they care. Why not our discharged recovered asylum patients?" Of those discharged unrecovered *the largest* proportion—viz., 58—was transferred to other asylums. The deaths during the year amounted to 16—viz., seven males and nine females, or 8·9 per cent. of the average number resident. Of the deaths one was due to accidental choking, one to phthisis, one to senile decay, two each to epilepsy, cerebral hæmorrhage, and cerebral softening, three to cardiac disease, and the rest to other causes. Two patients escaped during the year, one being a female patient who broke parole The health of the institution has on the whole been good. In concluding his report Dr. Skeen refers to the increase in the maintenance rate. Clothing and food stuffs have risen in price and the increased cost of fuel was another cause of the increase. The Commissioner in Lunacy states in his report that the patients were found to be neatly dressed and efficiently cared for. There was a general absence of excitement among the patients and an air of contentment prevailed. The condition of the dormitories and bedding was very satisfactory. The medical case-books and registers were examined and found to be regularly and accurately kept. The committee of management states in its report that a separate wash-house and laundry are being erected at a cost of between £1600 and £1700. For the first half of the year the rate of board of district patients was fixed at 9*s.* per week, but for the rest of the year it was raised to 9*s.* 6*d.* per patient per week. The weekly charge for out-district patients was fixed at 12*s.* 4*d.* per head.

*Lanark District Asylum, Hartwood (Report for the year ending May 15th, 1901).*—The average number of patients resident during the year was 690 and comprised 365 males and 325 females. The admissions during the year amounted to 205—viz., 107 males and 98 males. Of these 147 were first admissions. Dr. A. Campbell Clark, the medical superintendent, states in his report that among the admissions were 27 patients over the age of 60 years. The number of patients discharged as recovered during the year was 101—viz., 55 males and 46 females, or 14·6 per cent. of the average number resident. The deaths during the year amounted to 47—viz., 28 males and 19 females, or 6·8 per cent. as calculated on the same basis. Of the deaths one was due to shock and collapse from burns, one to fracture of the skull and cerebral concussion, three were due to cerebral and cerebellar hæmorrhage, six to general paralysis of the insane, seven to phthisis and other forms of tuberculosis, nine to cardiac disease with complications, and the rest to other causes. The number of accidents during the year was eight, but of these only two were serious. One patient escaped during the year and could not be re-captured. "The industrial employment of the patients still continues to receive considerable attention, and on an average 72 per cent. of the males and 68 per cent. of the females were industrially employed daily. Of the males 52 per cent. were engaged in garden and field labour." The Commissioner in Lunacy states in his report that every part of the institution was clean and in excellent order both on the male and female sides, the day rooms were bright and most comfortably furnished, the warming of the building was even and excellent, and the medical case-books and registers were carefully and correctly kept. The board of management states in its report that the weekly charge of maintenance for district pauper patients had been kept at 8*s.* 9*d.* per head, notwithstanding the considerable rise in the price of commodities.

## VITAL STATISTICS.

### HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8238 births and 5115 deaths were registered during the week ending Feb. 1st. The annual rate of mortality in these towns, which had been 18·2, 17·7, and 17·7 per 1000 in the three preceding weeks, rose again last week to 17·9 per 1000. In London the death-rate was 18·8 per 1000, while it averaged 17·6 in the 75 other large towns. The lowest death-rates in these towns were 7·2 in York, 9·2 in Burton-upon-Trent, 9·3 in Wallasey, 9·7 in Hornsey, 9·8 in Walthamstow and in Barrow-in-Furness, and 10·2 in Birkenhead; the highest rates were 23·6 in Halifax, 24·3 in St. Helens, 25·0 in Rhondda, 25·9 in Merthyr Tydfil, 26·1 in Ipswich, 26·5 in Newport (Mon.), and 30·3 in Great Yarmouth. The 5115 deaths in these towns last week included 444 which were referred to the principal zymotic diseases, against 534 and 512 in the two preceding weeks; of these 101 resulted from whooping-cough, 85 from measles, 85 from diphtheria, 60 from scarlet fever, 43 from small-pox, 39 from diarrhœa, and 31 from "fever" (principally enteric). No death from any of these diseases was registered last week in 14 of the large towns, including Hornsey, Walthamstow, Southampton, Norwich, Derby, York, and eight other smaller towns; the highest zymotic death-rates were recorded in Willesden, East Ham, West Bromwich, St. Helens, Middlesbrough, Stockton-on-Tees, West Hartlepool, and Merthyr Tydfil. The greatest proportional mortality from measles occurred in Northampton and in St. Helens; from scarlet fever in Newcastle and in South Shields; from diphtheria in Willesden, East Ham, West Hartlepool, Cardiff, and Merthyr Tydfil; from whooping-cough in Aston Manor, Leicester, Liverpool, and West Hartlepool; from "fever" in St. Helens; and from diarrhœa in West Bromwich and Middlesbrough. 39 fatal cases of small-pox were registered in London, two in Willesden, one in Tottenham, and one in West Ham, but the officers of the Royal Army Medical Corps in their fine mess-room.

The following list shows the positions of the officers who obtained commissions:—

### INDIAN MEDICAL SERVICE.

List of surgeons-on-probation who were successful at both the London and Netley examinations. The prizes are awarded for marks gained in the special subjects taught at the Army Medical School. The final positions of these gentlemen are determined by the marks gained in London added to those gained at Netley, and the combined numbers are accordingly shown in the list which follows:—

JANUARY 31ST, 1902.

| | Marks. |
|---|---|
| *1. A. E. J. Lister ... ... | 5881 |
| †2. T. S. B. Williams ... | 5860 |
| ‡3. S. H. L. Abbott ... ... | 5674 |
| 4. A. W. Greig ... ... ... | 5519 |
| 5. R. E. Lloyd ... ... ... | 5422 |
| 6. J. E. Clements ... ... | 5409 |
| 7. H. B. Steen ... ... ... | 5330 |
| **8. E. Bisset ... ... ... | 5322 |
| 9. R. J. Bradley . ... | 5241 |
| 10. J. Woods ... .. ... | 5239 |
| ††11. A. W. Overbeck-Wright ... ... ... | 5160 |
| 12. D. Munro ... ... ... | 5063 |
| ‡‡13. E. A. Loch ... ... ... | 5033 |
| 14. T. W. Harley ... .. | 4809 |
| 15. J. W. McCoy ... ... | 4631 |
| 16. R. L. Hagger ... ... | 4566 |
| 17. R. M. Carter ... ... | 4531 |
| 18. R. D. Willcocks .. ... | 4513 |
| 19. T. G. F. Paterson ... | 4379 |
| 20. D. G. R. S. Baker ... | 4358 |
| 21. J. R. J. Tyrrell ... ... | 4259 |
| 22. D. G. Rai ... ... ... | 4091 |
| 23. R. M. Barron ... ... | 4036 |
| 24. W. R. J. Scroggie ... | 3833 |
| 25. L. P. Farrell ... ... ... | 3817 |

### ROYAL ARMY MEDICAL CORPS.

B. A. Craig.

* Gained the Parkes Memorial Medal and the Maclean Prize for Clinical and Ward work.

† Gained the Herbert Prize, the Prize in Pathology presented by Professor Wright, and the De Chaumont Prize in Hygiene.

‡ Gained the Marshall Webb Prize of £5 and Medal.

** Gained the Martin Memorial Medal.

†† Gained the Second Montefiore Prize of £7 7s., and the Prize in Pathology.

‡‡ Gained the First Montefiore Prize of £21 and Medal.

## STATISTICAL REPORT OF THE HEALTH OF THE NAVY FOR 1900.[1]

WE may congratulate Sir Henry F. Norbury, K.C.B., the Director-General of the Medical Department of the Royal Navy, on the preparation and issue of an unusually good and interesting report concerning the health of the navy and the work done by the officers of his department. To the general reader Parliamentary publications, and especially those dealing with statistics, cannot at best be regarded as an enticing form of literature, however interesting they may prove to statisticians or however necessary they may be for the information of the two Houses of Parliament. While every complaint to which the seamen of the Royal Navy are liable is, for statistical purposes, recorded in this report, there is besides a good deal which is well worth reading to be found in the numerous papers published in the appendix, and it is to these rather than to the figures and ratios which form one of the most prominent features of the report itself that our readers will probably turn.

To begin with the general aspect of the health of the navy from a statistical point of view we gather from the introductory summary of results that after making allowance for exceptional conditions on the Cape of Good Hope, the West Coast of Africa, and the China stations, the health returns for the total force serving afloat may be regarded as satisfactory. To touch upon some of the points we may say that the death-rate per 1000 was 7 27, showing an increase of 1 86 per 1000 as compared with the previous year, and of 2 09 in comparison with the ratio of the last three years. The stations which exhibit the highest death-rates are the Cape of Good Hope and West Coast of Africa (20 03), China (17·34), and the East Indies (13 92). The lowest mortality was on the North America and the West Indies station—viz., 3 59. 378 cases of wounds in action are recorded. Of these, 18 cases with five deaths occurred in South Africa, and 360 cases with 69 fatalities in China. These two stations are responsible for a large increase in the number of cases of enteric fever and dysentery, the deaths from which diseases in the total force numbered respectively 124 and 27, as compared with 41 and 12 in 1899.

The total force serving afloat in 1900 was 95,830. The total number of cases of disease and injury entered on the sick list was 84,550, which is in the ratio of 882·29 per 1000—an increase as compared with the previous years but a decrease of 11·22 per 1000 as compared with the average ratio of the last three years. There is a reduction in the ratio of cases as compared with 1899 on the Home, the Pacific, the Cape of Good Hope, and the West Coast of Africa and the Australia stations, but an increase in the remaining stations. The lowest sick-rate was on the South-East Coast of America station and the highest on the China station.

The invaliding ratio of the total force is 35·83 per 1000, which shows a considerable increase, the highest rate being on the China station (54 52 per 1000). The total number of men invalided was 3434, of whom 3124 were for disease and 310 for injury. The ratio of invaliding for disease alone was 32·59 per 1000 and for injury 3·23 per 1000. A new table has been added this year (page 16) showing the disease or injury together with the age and length of service of the persons finally invalided from the service. The death ratio per 1000 was, as we have said, 7·27, of which 4·96 were from diseases.

As regards general diseases we may mention that there were 464 entries for enteric fever with 98 invalidings and 124 deaths, attributable in great part to the prevalence of this disease in those places where warlike operations were in progress—China, South Africa, and the West Coast of Africa. There were 13 cases of small-pox altogether (one of which was fatal). Five out of six cases of cerebro-spinal fever—all on the Home station—terminated fatally. Mediterranean fever gave an increased number of cases as compared with 1899. Under the head of "dysentery" there were 420 cases returned with 79 invalidings and 27 deaths—the increased incidence of the disease being due to the same causes that augmented the totals of enteric fever—viz., military operations in South Africa and China.

The statistical information grouped in the section "Hospitals" (page 19, *et seq.*) is interesting as illustrative of the nature and results of the diseases and injuries treated in naval hospital practice; and the notes and remarks on the different stations (pp. 28 to 65) may be referred to as containing many interesting and instructive observations—especially those on the Mediterranean, the Cape of Good Hope, the West Coast of Africa, and the China stations.

The Appendix to the report strikes us as a whole as being unusually good, several of the papers in particular being excellent and containing information of a practical and scientific character which it will well repay medical officers of our public services to read. We had marked many passages in some of these papers for reference and remark, but we must content ourselves by simply expressing our opinion in regard to them and to the report and its appendix as a whole. To those of our readers who are interested in matters of naval and military medicine, hygiene, climatology, and medical experiences in modern warfare we would commend such papers as "Some Observations on Recruiting," by Fleet Surgeon E. H. Williams; "Malarial Fever on the Zambesi and Shiré Rivers," by Surgeon R. T. Gilmour; "Medical Notes of the Western Naval Brigade—South Africa, 1899–1900," by Deputy Inspector-General James Porter, R.N.; "The Naval Brigade in North China," by Staff Surgeon Edward B. Pickthorn; and the paper on a "Case of Death from Syncope Caused by Caisson Disease," by Fleet Surgeon Archibald McKinlay. The reports by Deputy Inspector-General Porter and Staff Surgeon Pickthorn are full of interesting descriptions and instructive medical details.

## SPIRITUALISM AND HALLUCINATIONS.

SIR LAUDER BRUNTON, in the course of a fascinating address delivered before the British Association of Nurses at Orchard-street, London, W., on Jan. 21st, stated his belief that an explanation of the action of one mind upon another when two persons are sundered by a considerable distance can be looked for in the direction of "brain waves passing from one to the other in some sort the same way as Marconi

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[1] Statistical Report of the Health of the Navy for the Year 1900. (Presented by His Majesty's command.) Ordered by the House of Commons to be printed, August 8th, 1901. London: Printed for His Majesty's Stationery Office by Eyre and Spottiswoode, Printers to the Ki[illegible] Excelle[illegible] Majesty. Price 1s. 1*d*.

# Correspondence.

"Audi alteram partem."

## A POINT IN THE ETIOLOGY OF ALCOHOLIC PERIPHERAL NEURITIS.

*To the Editors of* THE LANCET.

SIRS,—The reappearance of cases of chronic arsenical poisoning amongst beer-drinkers occurring a fairly considerable time after the Manchester epidemic must be regarded with great interest by those who now maintain that all cases of so-called "alcoholic" peripheral neuritis are not alcoholic but arsenical in origin.

In October, 1901, three persons suffering from the effects of chronic arsenical poisoning were admitted to the Halifax Union Poor-law Hospital. During January, 1902, four cases were admitted. These numbers, of course, compared with those of 1900 are very small. All the cases are of recent date and vary much in the severity of their symptoms, which in all cases are quite characteristic of chronic arsenical poisoning. Sufficient arsenic was found in the Halifax beer by Mr. Alfred Henry Allen of Sheffield, public analyst for the West Riding of Yorkshire, to account for these symptoms of arsenical poisoning. He found $\frac{1}{18}$th, $\frac{1}{24}$th, and $\frac{1}{16}$th of a grain per gallon of arsenic in the three samples of beer examined by him. Arsenic has been obtained from the urine of some of the patients, and in the case of the man who died it was detected in the tissues. In the stomach and two or three feet of small intestine Mr. Allen obtained indications of arsenic representing not more than $\frac{1}{200}$th part of a grain. In three ounces of liver he found not more than $\frac{1}{100}$th part of a grain. These quantities, though but small, would work out fairly large were the weights of the whole organs taken into consideration. A person would only be required to drink eight half-pints of the worst beer in order to obtain an average medicinal dose of arsenic ($\frac{1}{30}$th part of a grain), but here all are admittedly heavy drinkers and not likely to stop at that quantity.

With beer containing arsenic in injurious quantities, a history of the patients being heavy drinkers, and the clinical symptoms of chronic arsenical poisoning, it was not difficult to arrive at a correct diagnosis. Before the Manchester epidemic it is quite easy to see that a correct diagnosis might not have been made. It is obvious that arsenic as a causal agent in the production of "alcoholic" peripheral neuritis has been overlooked for the last 20 years, its share in the production being only found out when the quantity of arsenic contained in the beer was in such large amounts as to cause the increase in numbers of cases of peripheral neuritis to assume epidemic proportions. The most likely way in which arsenic gains access to beer, now that the brewing sugars are pure, is through the malt. This source will always have been there as long as the present methods of drying malt in the kilns have been used, providing fuel containing arsenic has been used. The grain in the kiln is exposed to the products of combustion of either coke or anthracite coal. Some cokes are known to contain quite large amounts of arsenic. If such fuel is being used then that used in the north must contain a much larger quantity of arsenic than that used in the south, thus accounting for the outbreak here and the rarity of the disease in the south. The susceptibility of different persons to the action of arsenic must also be taken into account as well as the conditions under which a man lives. With some persons very small medicinal doses of arsenic soon produce serious symptoms. Persons doing heavy work do not seem to be very susceptible to the influence of arsenic; this will account for the rarity of arsenical beer-poisoning amongst brewers' draymen, many of whom drink far more beer during the course of the day's work than an habitual drunkard. In the above cases the persons have not worked or their work has been of a sedentary character.

In Manchester and district since the use of brewing sugars containing arsenic has been discontinued, peripheral neuritis and alcoholic hearts have almost vanished, and from what I can hear from hospitals in surrounding towns there has been a similar and striking diminution in the number of cases of peripheral neuritis. The finding of arsenic as the factor in the production of the Manchester epidemic caused many to doubt the action of alcohol itself as the chief factor in the causation of peripheral neuritis, but the above facts prove undoubtedly, or at any rate go a long way towards proving, that the so-called "alcoholic" peripheral neuritis is not alcoholic but arsenical in origin. If this be so then it is not surprising that the cases of peripheral neuritis are few, for they will now be confined to the heavy drinkers and those specially susceptible to the action of arsenic.—I am, Sirs, yours faithfully,

J. F. HODGSON, M.B., Ch.B. Vict.,
Resident Medical Officer, Halifax Union Poor-law Hospital.
Feb. 3rd, 1902.

## THE SANATORIUM TREATMENT OF CONSUMPTION.

*To the Editors of* THE LANCET.

SIRS,—It afforded me considerable pleasure to see that Mr. E. D. Marriott had apparently realised the inaccuracy of his statement that the financial problem involved in the erection of sanatoriums for the treatment of consumption was absolutely insoluble, and that he had altered his antagonistic attitude to the extent of saying "these institutions may form one of the lines along which we have to work." He, however, returned to the charge by repeating his assertions that the "atmosphere" of sanatoriums is more likely to lead to secondary infection than the "atmosphere" of ordinary houses, and that sanatorium treatment does not involve anything which cannot be carried out at home. Mere repetition of an assertion, however, even when couched in somewhat exaggerated language, does not necessarily constitute proof. I hesitate to trespass further on your space by referring to well-known facts, as it seems almost hopeless to attempt to convert your correspondent in view of his declaration that he "neither has nor wants to have anything to do with the attitude of Germany in this matter," although the bulk of our knowledge on sanatoriums is derived from the 40 years' experience which our neighbours have had on this subject.

As regards the question of liability of secondary infection at sanatoriums I would call Mr. Marriott's attention to a number of experiments which have been carried out in Germany, America, and this country upon the infectivity of the dust found in sanatoriums and in houses in which a consumptive has lodged. These experiments were carefully considered by the members of the council of the National Association for the Prevention of Tuberculosis before they adopted the following resolution:—

> Having understood that apprehensions have been entertained as to the spread of consumption from sanatoria established for the treatment of this disease, the Council of the National Association for the Prevention of Consumption desire to express their opinion that there is no danger of communication from any well-conducted hospital for consumption or from any sanatorium where the open air treatment for this disease is properly carried out; and, further, that the inhabitants of houses in the immediate neighbourhood of such institutions are perfectly safe from local propagation from this source.

The council of this association is composed of eminent members of the medical profession and their opinion is entitled to some weight. I may, perhaps, be allowed to quote one or two of these experiments. Cornet in his work, 13 years ago, on this subject showed that in most cases where tuberculous patients, or a single patient, occupied a room of an ordinary house, the dust from this source contained tubercle bacilli which were sufficiently virulent to kill guinea-pigs. Dr. Biggs of New York and Dr. H. Coates of Manchester have confirmed this statement. Dr. Coates recently found virulent tubercle bacilli in over 68 per cent. of dirty houses and in 50 per cent. of clean houses.[1] On the other hand Dr. I. Hance of the Adirondack Cottage Sanatorium proved by the inoculation of guinea-pigs that out of 17 cottages, inhabited by consumptives for so long a period as 10 years, 16 were absolutely free from infectious material. In the seventeenth cottage a patient had disobeyed instructions and had expectorated wherever convenient. Dr. Achtermann, when he was connected with the Brehmer Sanatorium, tested by means of inoculation the dust from the corridors, recreation rooms, water-closets, and patients' bedrooms during a period which extended over several years. Only once did he find evidence of tubercle bacilli and then from dust on a washing board where a sputum flask had stood. These figures prove, if they prove nothing else, that not one in any other of the 76 large towns. The number of small-pox patients under treatment in the Metropolitan Asylums hospitals, which had been 873, 877, and 870 at the end of the three preceding weeks, had risen again to 1136 on Saturday, Feb. 1st; 499 new cases were admitted during the week, against 306, 213, and 204 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital was 2555, against numbers decreasing from 3137 to 2658 on the five preceding Saturdays; 226 new cases were admitted during the week, against 250, 288, and 299 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 366, 307, and 357 in the three preceding weeks, further rose last week to 374, but were 69 below the corrected average. The causes of 55, or 1 1 per cent., of the deaths in the 76 large towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Leicester, Nottingham, Salford, Leeds, Newcastle, and 44 other smaller towns; the largest proportions of uncertified deaths were registered in Willesden, Birmingham, Liverpool, St. Helens, and Blackburn.

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[1] The percentages were probably higher, as in some cases the dust killed the guinea-pigs before it was possible to ascertain the presence of tuberculosis.

### HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·8 and 20·3 per 1000 in the two preceding weeks, increased again to 21·8 per 1000 during the week ending Feb. 1st, and exceeded by 3·9 per 1000 the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 10·9 in Perth and 18 6 in Paisley to 23·1 in Aberdeen and 23·2 in Glasgow. The 704 deaths in these towns included 23 which were referred to measles, 19 to whooping-cough, eight to diarrhœa, seven to scarlet fever, five to diphtheria, three to "fever," and one to small-pox. In all 66 deaths resulted from these principal zymotic diseases last week, against 56, 63, and 76 in the three preceding weeks. These 66 deaths were equal to an annual rate of 2 0 per 1000, which was 0·4 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of measles, which had been 23 and 31 in the two preceding weeks, declined again last week to 23, of which 16 were registered in Glasgow and five in Dundee. The deaths from whooping-cough, which had been five, 11, and 13 in the three preceding weeks, further increased to 19 last week, and included 12 in Glasgow, four in Aberdeen, and two in Leith. The fatal cases of diarrhœa, which had been 13 and 20 in the two preceding weeks, declined again to eight last week, of which two were registered in Glasgow and two in Dundee. The deaths from scarlet fever, which had been six and four in the two preceding weeks, rose again to seven last week, and included five in Glasgow and two in Greenock. The fatal cases of diphtheria, which had been six and five in the two preceding weeks, were again five last week, and included two in Glasgow, where two of the three deaths from "fever" and the fatal case of small-pox were also registered. The deaths referred to diseases of the respiratory organs in these towns, which had been 176 and 128 in the two preceding weeks, rose again to 141 last week, and were 18 above the number in the corresponding period of last year. The causes of 37, or more than 5 per cent., of the deaths in these eight towns last week were not certified.

### HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 25·0, 23·4, and 20·9 per 1000 in the three preceding weeks, rose again to 22·7 per 1000 during the week ending Feb. 1st. During the past four weeks the death-rate has averaged 22·0 per 1000, the rates during the same period being 18·3 in London and 18·7 in Edinburgh. The 165 deaths of persons belonging to Dublin registered during the week under notice showed an excess over the number in the preceding week, and included four which were referred to the principal zymotic diseases, against 10, six, and eight in the three preceding weeks; of these one resulted from measles, one from scarlet fever, one from diphtheria, and one from whooping-cough. These four deaths were equal to an annual rate of 0 6 per 1000, the zymotic death-rates during the same period being 1 8 in London and 0·3 in Edinburgh. The 165 deaths in Dublin last week included 20 of children under one year of age and 46 of persons aged upwards of 60 years; the deaths both of infants and of elderly persons showed a slight decline from the numbers recorded in the preceding week. Four inquest cases and two deaths from violence were registered; and 55, or one-third, of the deaths occurred in public institutions. The causes of five, or more than 3 per cent., of the deaths in Dublin last week were not certified.

## THE SERVICES.

### ROYAL NAVY MEDICAL SERVICE.

Staff Surgeon Ernest Edward Bray has been placed on the retired list at his own request.

The following appointments are notified:—Surgeons: A. La T. Darley to the *Britannia* for the *Racer*; J. N. Robertson to the *Goldfinch*; G. C. C. Ross to the *Magnificent*; W. L. Martin to the *Tamar*; and H. R. H. Denny to the *Vivid* for the *Thistle*.

### ROYAL ARMY MEDICAL CORPS.

Colonel N. B. Major, from half-pay, to be Colonel (dated Jan. 4th, 1902). Lieutenant-Colonel E. H. Joynt is placed on retired pay (dated Jan. 19th, 1902). Civil Surgeon Leonard Cotterill to be Lieutenant (dated Dec. 5th, 1901).

Colonel R. C. Eaton, Officiating Principal Medical Officer, Bombay command, is granted six months' leave to proceed to Genoa for the benefit of his health. Captain C. E. Pollock is selected for duty in the Scottish District.

### VOLUNTEER CORPS.

*Rifle*: The Queen's Rifle Volunteer Brigade, the Royal Scots (Lothian Regiment): Robert Abernethy to be Surgeon-Lieutenant. 1st (Brecknockshire) Volunteer Battalion the South Wales Borderers: Surgeon-Lieutenant H. Williams resigns his commission. 1st Volunteer Battalion the Dorsetshire Regiment: Surgeon-Lieutenant W. G. Brett to be Surgeon-Captain.

### VOLUNTEER MEDICAL STAFF CORPS.

The Manchester Companies: David William Stevens Muir to be Surgeon-Lieutenant.

### SOUTH AFRICAN WAR NOTES.

Lieutenant A. O. B. Wroughton, R.A.M.C., is reported to be slightly improved (Feb. 1st).

Civil Surgeon Bensusan is reported to be improving (Feb. 2nd).

Civil Surgeon Fort, no change (Feb. 1st).

Civil Surgeon Penn is reported to be a little better (Feb. 1st).

Civil Surgeon Armstrong is reported somewhat improved (Feb. 2nd).

### THE ADVISORY BOARD.

In commenting upon the War Office proposals for the carrying out of the work of the Advisory Board for the Army Medical Service the *Army and Navy Gazette* makes some pertinent remarks. According to the constitution of the board junior officers will sit and deliberate on the promotion of their seniors. There are two comparatively junior officer of the Royal Army Medical Corps on the board—a lieutenant-colonel and a major. Can it be right, asks our service contemporary, that these officers should be allowed a voice in the question, for instance, of the promotion of their seniors, or, for the matter of that, in any detail in which the acts of their seniors are concerned? It is contrary to the rules of the service and the precedent is a dangerous one.

INCONSISTENCY OF A "CONSCIENTIOUS OBJECTOR."—At the Exeter Police-court on Jan. 27th a parent applied for a certificate of exemption from vaccination for his child, stating that several members of his family had suffered from the effects of vaccination. The mayor, who was on the bench, asked the man if he had a servant who contracted small-pox and his child had been in company with the servant what he would do under the circumstances. The conscientious objector promptly replied that he would have the child vaccinated. The magistrates did not grant him an exemption order.

strengthened by the fact that vaccination ran an ordinary course. I suspect that not a few people who think themselves *immune through having already had an attack of* small-pox are buoying themselves up with a false belief, having had chicken-pox and not small-pox. The only means of obtaining any degree of assurance as to immunity to small-pox is to submit to vaccination and see the result.

I am, Sirs, yours faithfully,
J. T. C. NASH, M.D. Edin., D.P.H. Cantab.,
Medical Officer of Health.
Southend-on Sea, Jan. 28th, 1902.

# FIRST AID FOR PRIMARY HÆMORRHAGE: THE WRONG INSTRUCTION GIVEN TO AMBULANCE CLASSES.

*To the Editors of* THE LANCET.

SIRS,—I have read with the greatest gratification the leading article in THE LANCET of Jan. 25th, p. 238, and as I have been connected with the ambulance movement ever since its commencement I can thoroughly endorse all you say. The teaching of the St. John Ambulance Association is excellent in every way and the treatment of hæmorrhage, the most important of all matters which the first-aid student has to deal with, is thoroughly taught. The efficiency of the men in the St. John Ambulance Brigade is tested annually and no man is allowed on duty in the streets of London except those who have passed the re-qualifying examination; so the general public may know that in the men of this brigade they have those upon whom they can thoroughly rely. With the general public who hold certificates of ambulance work, however, no such precaution is taken; they attend ambulance lectures and afterwards fail to keep up their knowledge, and relying upon the fact of having once gone through a course of instruction, sometimes several years ago, presume to render "first aid" on the strength of what has been largely forgotten.

I have suggested, and I hope it may sooner or later be adopted, that students who take an interest in this work and have presented themselves for examination on three occasions shall have further power of periodical re-examination if they desire to keep themselves efficient in this, one of the most useful subjects which they can learn. The first-aid movement has rendered incalculable benefit to many a sufferer and to judge or to condemn it on account of one or two mistakes in the face of the numerous benefits conferred upon so many would be palpably unjust. The remedy lies in greater severity in the matter of examinations, as to whom certificates of efficiency are granted, and in the necessity of making those certificates which are gained only applicable to one year, or at the most two years, from the date of issue.

I am, Sirs, yours obediently,
SAMUEL OSBORN,
Chief Surgeon, Metropolitan Corps, St. John Ambulance Brigade.
Feb. 3rd, 1902.

*To the Editors of* THE LANCET.

SIRS,—If Mr. Walter G Spencer will kindly re-peruse my letter in THE LANCET of Jan. 18th, p. 194, he will see that I do not ask him to say what *he* would have done but "what the comrades ought to have done" in the sad case which I quoted. Mr. Spencer says: "It must be some kind of very large chaff-cutter to draw in *both* a man's legs—they would first be crushed by the rollers before being cut off. The result would not be different from a railway accident. Owing to the shock and the crushed ends of the arteries there would be no great arterial hæmorrhage." But the poor man died from hæmorrhage. We know that Mr Spencer is an excellent surgeon and we feel sure that if he had been present "the rapid and efficient application of a tourniquet" would have been accomplished, and further, I believe that the man's life would have been saved. Mr. Spencer advises "that the instruction to an elementary class as regards such an accident should be that elevation and local pressure is to be applied at once and the tourniquet reserved until the patient is anæsthetised and the surgeon ready to explore the injury"; are there accidents which do require "the rapid and efficient application of a tourniquet" to save life? The St. John Ambulance Association says that there are, and you, Sirs, in your excellent leading article on this subject in THE LANCET of Jan. 25th, p. 238, also say there are; your words are pointed and cannot be misunderstood. You write: "*To solve the problem of the correct treatment of hæmorrhage we must* go back to general surgical principles. In the first place, we must distinguish the hæmorrhage after wounds of vessels in their continuity from that due to the complete removal of a part of a limb. In the latter case there is no room for doubt that a firmly applied tourniquet is the only method of rapidly controlling the extensive hæmorrhage which is generally present." It follows, therefore, that ambulance pupils *must be taught* how to apply a tourniquet rapidly and efficiently. Although I believe similar cases to the one referred to are not so infrequent as Mr. Spencer appears to me to think, the frequency has nothing to do with the matter. First-aiders have saved many a life, and may they continue their noble work, notwithstanding the discouragement which they have received from Mr. Spencer and a few others.

I am, Sirs, yours faithfully,
Ongar, Jan. 28th, 1902. J. B. G. GIDLEY-MOORE.

# THE TREATMENT OF METRORRHAGIA.

*To the Editors of* THE LANCET.

SIRS,—In his recent paper on the Uterine Curette, read before the Liverpool Medical Institution, an abstract of which appeared in THE LANCET of Jan. 25th, p. 229, Dr. H. Briggs adopted a very pessimistic attitude towards curettage—a proceeding which is frequently disappointing in its results to all gynæcologists. He mentioned one case of a woman who consulted him for a purulent condition of the uterus whom he had advised to relinquish local in favour of general hygienic treatment. In another case, where metrorrhagia recurred after curettage, he removed the uterus, there being no evidence brought before us of the existence of malignant or other grave disease. The impression I received from his paper was that Dr. Briggs was feeling his way to hysterectomy in the treatment of endometritis, or rather of metrorrhagia. The profession will be interested to learn whether this impression is a correct one, and how far Dr. Briggs suggests we should go in radical treatment for such conditions. The responsibility of surgeons in such cases is a very grave one, and the limits of justifiable operative treatment are, in my opinion, soon reached.

I am, Sirs, yours faithfully,
Liverpool, Jan. 25th, 1902. GEORGE A. HAWKINS-AMBLER.

# DEFICIENCY OF THE BILE-SALTS THE PROBABLE PREDISPOSING FACTOR IN TUBERCULOSIS AND FATTY FOODS CONTRA-INDICATED IN ITS TREATMENT.

*To the Editors of* THE LANCET.

SIRS,—I have been for some years past of the opinion that the "bile-salts" played an important rôle with regard to tuberculosis, and now that the world is all agog with the subject of tuberculosis I wish to place my views and the results of my observations and deductions before the profession. It is well known that "tubercle bacilli" are difficult to grow on ordinary media, but by the addition of glycerine to the media a luxuriant growth is produced. I made a series of cultivations of tubercle bacilli in glycerine agar-agar and then endeavoured to cultivate them in glycerine agar-agar impregnated with the "bile-salts" (glycocholate and taurocholate of sodium). In many cases I failed to get any growth at all, and when I did succeed the growth was very feeble indeed. I repeated this experiment with several other media with the same result. Encouraged by these results I determined to try the effects of giving pig bile, "which most nearly resembles human bile," in large doses to a well-pronounced case of pulmonary tuberculosis; and bearing in mind the fact that "bile" in the intestines saponifies as well as emulsifies fats and oils and produces glycerine as a by-product, I prohibited the use of all fatty foods, including cod-liver oil, cream, &c., and kept the patient on a strictly but abundant nitrogenous diet with the idea of starving the "tubercle bacilli" of its congenial pabulum—i.e., "glycerine." The improvement was very marked, the cough improved, the evening temperature dropped, the night sweats discontinued, and a remarkable change occurred in the facial in sanatoriums more efficient means are adopted for the destruction of tubercle bacilli than in ordinary houses. The principles of careful disinfection are not readily taken up by the public and one of the many virtues of the sanatorium method of treatment is that it helps to educate people in this respect. I refrain in consideration of your space from going into further detail, but if your correspondent is still unconvinced I would refer him to the original papers on this subject and to Dr. Rufenacht Walters's and others' books on sanatoriums.

Mr. Marriott reiterates his statement that isolation fever hospitals breed secondary infection and post-scarlatinal diphtheria, and that therefore sanatoriums for consumption must be responsible for something of the same kind. He is convinced of this because "secondary infection and post-scarlatinal diphtheria never obtain in ordinary houses." Your correspondent's experience must have been a singularly fortunate one, for it is no uncommon thing in London to see children who have fallen victims to secondary infection or diphtheria after an attack of scarlet fever, although they have been treated in their own homes. I should like to say more concerning these isolation hospitals, but this question is somewhat beside the point. An *a priori* line of argument is seldom convincing, and it would be more satisfactory if Mr. Marriott brought forward instances of secondary infection which have occurred in sanatoriums for tuberculosis. If such cases have occurred he should have no difficulty in producing them, seeing that this form of treatment has been in existence for 40 years.

Your correspondent further asserts that the personal factor of a patient cannot receive the same attention in a sanatorium as at home. Is this in accordance with fact? At an efficient institution of this kind each patient is seen professionally at least three times a day, and also takes his meals under the immediate supervision of the physician. In addition to this, every detail of his life, such as the amount of exercise he may take, the literature he may read, and the like, receives the most anxious and painstaking consideration. It is this careful attention to an infinity of detail which is one of the most characteristic features of sanatorium treatment; it is more essential than the nature of the building, but I can see no reason why Mr. Marriott, who champions good sanitation, should object to the institution being made as healthy as possible. The necessary discipline of such treatment as the above cannot in the nature of things be carried out at home until the patient's disease has become quiescent and he has learnt the true value of its details. 40 years' experience has shown that when the attempt is made to treat a case from the first at home it not infrequently fails.

Dr. Walther, who prefers severe cases, brings about arrest of the disease in 30 per cent. (Knopf) of his patients, and these continue to do well after they have left the Nordrach Colonie He only fails to obtain considerable improvement in 5 per cent of his cases, and his world-wide reputation, to which your correspondent refers, is due to the enormous amount of attention he devotes to the personal factor of his patients. Other efficient sanatoriums give equally satisfactory results. Can Mr. Marriott show anything to equal these figures by home treatment in all stages of the disease?

No one will deny that good sanitation is the best weapon we have for the *prevention* of tuberculosis and is largely responsible for the diminution in the mortality from this disease in the last 60 years, a period which coincides, as Dr. J. E. Pollock has pointed out, with the time during which the Brompton Hospital has been in existence I cannot, however, agree with Mr Marriott that in treating those already afflicted with the disease we should deny them the form of treatment which on 40 odd years' experience has been shown, not, it is true, to cure every case, but to be the best with which we are acquainted. I am, Sirs, yours faithfully,

Brook-street, W, Jan. 29th, 1902. ARTHUR LATHAM.

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## IS SALT A PROBABLE CAUSE OF CANCER?

*To the Editors of* THE LANCET.

SIRS,—The letter of Mr. R. D'Oyly Noble in THE LANCET of Jan. 25th, p. 261, is founded upon an assertion which I think is incorrect. Having admitted that I have conclusively proved in my paper upon this subject, a short extract of which was published in THE LANCET of Dec. 7th, 1901, p. 1578, that in those sections of the country in which a very large amount of bacon and ham is consumed, as in the Malton and Pickering cancer field, the disease of cancer is most prevalent, he suggests that the cause is not an excessive amount of salt consumed—along with, I suppose, an unnecessary amount of animal food—but that it is owing to the bacon or ham being itself unclean owing to American pigs being habitually fed on the entrails and blood of slaughtered animals, many of which are infected by diseases of a cancerous nature. I think this is a gross libel upon the Americans; but even if it were true—which it cannot be, for they rear their own pigs—there would be no harm in letting pigs eat the entrails of slaughtered animals. It is not a nice idea, but hens are commonly given in this country chopped sheep's entrails. Nothing is found to make them lay eggs better and neither the eggs nor the hens are infected from the food. We manure our corn with the most offensive dung, but the wheat is quite pure. In growing celery the dung comes into close contact with the plants and they are not injured thereby. We ourselves habitually eat semi-putrid game, previously cooked I admit, but it cannot be called clean food for all that. I do not believe for a moment that the diseases of a cancerous nature spoken of are such—and, moreover, if the pigs eat the entrails, who eats the cancerous meat?

If I could persuade the Editors of THE LANCET to publish my paper in full some misconceptions about it would disappear, especially that I founded the theory in any way upon the comparative immunity of the Jews from cancer. I merely mentioned this as one of three points which first drew my attention to the subject, and after further investigation, although it has confirmed the opinion that Jewesses are almost exempt from cancer of the uterus and that Jews are less liable to cancer generally than we are, I now doubt whether this has any connexion with the ingestion of salt. Whether, however, this is so or not does not affect my argument in the least, as it was not founded upon it

What I complain of in the present ideas about the investigation of cancer is that so-called committees are suggested and money is asked for to make further researches when the materials are already at hand to come to a pretty definite conclusion Almost hundreds of facts are known about the disease, but these facts are not utilised by comparing one with another. A criminal is being looked for who is destroying our population in a most deadly and painful manner. Why not see what circumstance or object is common to all cases of cancer? This is precisely how a detective would set to work in a criminal investigation. If in a number of burglaries a certain man could be proved to be invariably close to the spot in every instance, although not actually seen to do the deed, I think almost any jury would convict him. My point is, that whenever cancer exists two at least of four factors must be present. One of these is salt in some excess, the other is a local irritant. Of the other two factors—viz., over-feeding and effeteness—one is usually present, but not necessarily. I think that a small amount of salt is necessary to health, but if taken in the large amount it usually is, along with a good deal of meat, it is dangerous as age advances, and highly dangerous if the life is an indolent one and passed much indoors. On the other hand, I think salt quite inoperative unless with the coöperation of some local irritant, such as the sharp edge of a stump in the mouth or an unglazed tobacco-pipe. There is one most remarkable instance of a local irritant mentioned in my full paper. The natives of Cashmere carry a small brazier of hot coals pressed against the skin of the abdomen to keep themselves warm in lieu of sufficient clothing in winter. This causes cancer of the skin. They take a large amount of salt, and salt, rice, peas, and wheat are the only things common to them and to us; everything else in food and general environment is different. I am, Sirs, yours faithfully,

Leeds, Jan. 24th, 1902. JAMES BRAITHWAITE.

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## SECOND ATTACKS OF SMALL-POX.

*To the Editors of* THE LANCET.

SIRS,—In support of your remarks in THE LANCET of Jan. 25th, p. 248, on this subject, I may say that recently one of my sanitary inspectors said that he did not think that he need be revaccinated as he had had small-pox and had been kept from work for three months in consequence. As his face was unscarred I questioned him as to symptoms, distribution of eruption, &c., and came to the conclusion that his supposed attack of small-pox had been one of chicken-pox. This opinion was to do the same in respect of swine fever. The law, however, is the law, and our correspondent, as far as he has tested it, has found it against him. We shall be pleased to hear what other public vaccinators may think of the position, as the law might be amended in response to a vigorous expression of opinion.—ED. L.

## ROYAL MEDICAL BENEVOLENT COLLEGE.

*To the Editors of* THE LANCET.

SIRS,—Under the provisions of the will of the late Mr. France the Council of the Royal Medical Benevolent College will proceed to elect at their meeting on April 2nd eight aged and necessitous medical practitioners to annuities of the value of £30. Particulars can be obtained from the secretary at the office of the College, 37, Soho-square, W.

I am, Sirs, yours faithfully,
C. HOLMAN, Treasurer.

37, Soho square, London, W., Feb. 3rd, 1902.

## THE EDINBURGH SCHEME FOR A PSYCHIATRIC CLINIQUE.

*To the Editors of* THE LANCET.

SIRS,—In your leading article on "The Edinburgh Scheme for a Psychiatric Clinique" in THE LANCET of Feb 1st, p. 318, you appear to bestow your unqualified blessing upon the London County Council scheme for the establishment of reception houses for the preliminary treatment of the insane. You apparently are unaware that each Poor-law district in London possesses one or more such reception houses in the shape of fully-equipped and up-to-date mental wards attached to the various infirmaries. The buildings belonging to the Lewisham Infirmary consist of a handsome separate block, accommodating 11 male and 11 female patients, and fitted with all modern appliances. The system which upon my recommendation has been carried out by the local magistrates and guardians of the poor is to detain all cases of alleged lunacy in the mental block for a variable period before deciding upon their transfer to an asylum. The most gratifying results have attended our treatment. Out of 1382 cases treated during the past seven years 742 have been discharged cured, 144 have died, 20 have been sent to imbecile establishments, and only 476 have been sent to asylums. The majority of the deaths were cases of senile dementia.

The objections to the London County Council scheme are many. The change will simply be from one authority to another, but it will involve the enormous expenditure associated with the building and staffing of at least four large institutions. I anticipate that the buildings alone would cost over £500,000. The expense of collecting the patients from the wide area feeding each reception house must be considered. There is also the hardship inflicted upon the relatives and friends of the patients by making them travel long distances for the purposes of visiting, &c.; but the strongest argument against the proposed change is the stigma of "lunacy" which will rest upon the reputation of every patient who enters a reception house. Under existing arrangements no such stigma is attached, the patient has simply "gone into the infirmary," a circumstance to which no disgrace is attached There is an adage which asserts "that because the kittens were born in the oven it did not make them loaves of bread," but it will be found that by whatever euphemistic title the reception houses may be called they will be lunatic asylums to the public, and it is only those whose work brings them into contact with lunacy who can appreciate the fearful stain left upon a bread-winner and his family by the circumstance that he has been "sent to an asylum." In conclusion, I have no hesitation in asserting that the "early" mental cases are treated efficiently and thoroughly in the London infirmaries and that any change would be for the worse and not for the better. If there be a demand for the utilisation of these unfortunate cases for clinical study, the medical staff of the infirmaries is thoroughly capable of giving that instruction. Your statement that "the expense and moral cruelty of sending to an asylum those early cases which only required a few days' care ...... led to the suggestion of receiving houses" is incorrect, as for many years past the London county asylums have been quite full and it is rare to obtain a vacancy until the lapse of a fortnight and often a month after application.

I am, Sirs, yours faithfully,
F. S. TOOGOOD, M.D. Lond.,
Medical Superintendent of the Lewisham Infirmary.

Lewisham, Feb. 1st, 1902.

*** It was with a full knowledge of the existence of insane wards in workhouses and also of the treatment of patients in them that we advocated the system of "reception houses." The limited experience of those in charge of the "reception house in the shape of an up-to-date mental ward" at the Lewisham Infirmary is confirmatory of the principle laid down. But before the workhouse wards, where the people of unsound mind are detained prior to being sent to asylums, can be considered as fully equipped and suitable for a psychiatric clinic a great deal would have to be done, as anyone who is fully cognisant of the present system ought to know. Our correspondent's views as to the manner in which the public will estimate the receiving houses (we proposed the term "hospitals") are not in accordance with the views of those who have had larger experience, and his assertion that "any change would be for the worse" is merely the record of an opinion which ought to receive a rude shock. Dr. Toogood concludes his letter by flatly contradicting us, and on completely irrelevant grounds. If he had been familiar with the work and reports of the medical superintendents of asylums he would not have done so, that is, if he has any regard for the accuracy of what he writes.—ED. L.

## THE DOSE AND LENGTH OF INCUBATION IN MEASLES AND VACCINATION.

*To the Editors of* THE LANCET.

SIRS,—The letter from Mr. Kingston Barton which appears in your issue of Feb. 1st, is so incoherent as to be difficult of understanding. A light, however, may be thrown on the latter half of it when we state that we declined absolutely to pay £5 that Mr. Kingston Barton demanded of us for want of success in vaccinations.

We are, Sirs, yours faithfully,
JENNER INSTITUTE FOR CALF LYMPH
(James Douglas, Manager).

Church-road, S.W., Feb. 4th, 1902.

## NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

*General Increase in the Plague Mortality.—Further Increase in the Famine.—The Rangoon General Hospital.—The New Director-General of the Indian Medical Service.*

THE plague figures for India have again risen. The total this week is 9566 deaths, as against 8005 for last week. They were distributed as follows: Bombay Presidency, 4307, as against 3814; Bombay city, 208, as against 168; Madras Presidency, 501, as against 418; Punjab, 2348, as against 2049; Bengal, 443, as against 316; Calcutta, 22, as against 28; North-West Provinces and Oudh, 665, as against 488; Mysore State, 791, as against 454; Hyderabad State, 49; Central India, 193; and Karachi city, 36. Poona city for some reason is left out, but I find from local reports that over 300 deaths occurred in it for the week ending Jan. 5th. Kashmir State had 193 deaths. It will be seen that the epidemic is now more widely distributed than ever and that in the majority of provinces it is increasing steadily. The recrudescence in Bombay city is unmistakeable and Poona city is in the throes of another severe outbreak There are also signs of development in Calcutta and the quarter of the city hitherto first affected is returning more cases. For the past year Karachi city records 3700 cases of plague, with 2984 deaths—a case-mortality of 80 per cent. For 1901 up to the end of November last the official returns for the whole of India give 307,000 seizures and 233,000 deaths, and up to Dec. 14th Bengal had 90,000 seizures and 73,000 deaths, as compared with figures of less than half these for the previous appearance of the patient; the peculiar transparent skin which one sees in phthisis was changed to a robust complexion. The bile-salts evidently play a very important part in the human economy, judging from the quantity manufactured daily and their absence in the excretions of the body. Physiologists tell us now that they play a subsidiary part in digestion. What, then, is their true function? My investigations satisfy me that they play an important part with regard to tuberculosis.

I am, Sirs, yours faithfully,
J. G. WILLIS,
Feb. 4th, 1902. Medical Officer of Health of Ilkeston.

## THE DANGERS OF A COMMON COLD.

*To the Editors of* THE LANCET.

SIRS,—I do not know if I am exceeding the bounds of your liberality in again venturing to write on the subject of colds. Rightly or wrongly, I consider it a question of supreme importance and I think you must admit that since I broached the question in THE LANCET of Nov. 9th, 1901, p. 1297, the correspondence has proved of much interest, and the points raised are not likely to be ignored by our profession. As to the general infectiveness of colds, the clinical evidence is only too apparent and any medical man can satisfy himself on this point if he will make careful and sufficient inquiries amongst his patients where colds have occurred. Personally, during the last three months I have kept a record of cases occurring in households where colds have been prevalent. So frequently have the majority of the family been affected more or less in the different households as to prove conclusively with what ease and rapidity the infection of colds is spread.

Amongst many instances I should like to mention the following. In a household of five adults, on Dec. 19th, 1901, the servant was taken ill—rhinitis, pharyngitis, slight bronchial catarrh, temperature never rising to 100° F. On the 22nd the lady of the house developed the same symptoms, temperature never rising above 99°. On the 23rd four visitors arrived at the house—viz., father, mother, and two children. On the 26th one of the children was taken ill with the same symptoms, temperature rising to 102°. The other child was taken ill on the 29th. On Jan. 2nd, 1902, the mother was taken ill, temperature not rising above 100°. On the 4th and 9th the head of the household and the second servant became infected. All the patients were practically convalescent in a week's time from the commencement of the illness. Similar examples occurred in a district some distance from the above. A mother and her elder daughter, a teacher in a school some miles from her home, came to see me. The mother was suffering from a subacute attack of bronchitis. She stated that her elder daughter had a cold; she caught it from her, and it brought on an attack of bronchitis, to which she was subject. Her younger daughter, who is the head-mistress at the same school, developed a cold on Dec. 30th, 1901. Here out of a household consisting of only four persons three suffered from cold. Upon further inquiry it appears that including the above two teachers seven are engaged at the same school, and without exception every one of them has suffered within a period of four weeks from colds. Only one was for a day or so prevented from her school duties, and none have found it necessary to consult a medical man. The symptoms generally complained of were slight nasal catarrh, headache, sore throat, hoarseness, slight cough, &c.

These cases must be considered either as febricula due to common cold or to a modified form of influenza. If this sequence of symptoms be looked upon as a common cold it must be considered as highly infectious and contagious. Regarding the question of influenza, I can only say from an experience of over 20 years in active general practice, firstly, they did not exhibit the symptoms of influenza, with the exception of its extraordinary infectiveness; and, secondly, that influenza was not prevalent in the district. Presuming that these cases, and others which in my opinion are clinically indistinguishable, and which go by the name of common colds, are influenza or a modification of it, it is evident that such an affection, which follows the trade routes and is only propagated by personal contact, cannot be too jealously isolated, and only carelessness would allow h a case to be in proximity to any person suffering from chronic disease of the respiratory tract In all probability and other domestic animals disseminate catarrhs and colds. In Gloucestershire and some other places popular feeling is such that if the domestic cat shows symptoms of a cold it is at once ostracised from the family circle. "Popular beliefs are not necessarily scientific fallacies." Injuries undoubtedly predispose the deposition of morbid products in the injured parts, as witness what is called a "collier's back" or say any fracture in rheumatic subjects. These cases become more prolonged, tedious, and painful owing to the presence of the secondary condition, rheumatism. Put as a proposition, it would read thus; Over-stimulation leads eventually to degeneration, and the form of degeneration depends upon the inherited and acquired characters of the individual. Further examples are shown in miner's nystagmus and trade palsies.

In a somewhat similar manner a vital or a chemical poison, such as is produced by colds in the system, is often the spark that lights up any latent mischief present. This is only a theory, but it is popularly accepted and requires to be proved or disproved. Its importance is self-evident. The essential thing to be inquired into is the bacteriology of colds. I am endeavouring to get this point worked out for myself, and it is in the hope that some of your readers, greater adepts in modern research than myself, may assist in this matter that I pen these lines.

I am, Sirs, yours faithfully,
Wigan, Jan. 21st, 1902. R. PROSSER WHITE.

## A POINT FOR PUBLIC VACCINATORS.

*To the Editors of* THE LANCET.

SIRS,—A short time back, on Jan. 2nd, lymph being urgently required, I sent a telegram to the National Vaccine Establishment and, knowing our applications for lymph by post were sent free to the same address, as O.H.M.S., I sent the telegram free as a test case. Two telegrams were sent in all. An application was made to me for payment which I refused, and I wrote a formal letter to the Post Office stating my reasons—viz., that my postal applications go free, as O.H.M.S., and that I did not see, therefore, why telegrams should not go in the same way. I inclose the application. When the objection was put forward by them that I was not an officer with a salary entirely voted for in Parliament, I pointed out that a policeman can report a case of swine fever by free telegram to the Local Government Board, as O.H.M.S., and that I thought that a public vaccinator, finding small-pox in two towns near his district, should be able to apply by free telegram in a similar way for lymph.

I consider the efforts of medical officers of health to stay small-pox, already scattered through many districts in England, ought to be helped as much as those of the policeman to prevent the spread of fever in a herd of swine. Though I am perfectly willing to pay the few pence for the telegrams I should like your opinion on the case, as the anomaly is so peculiar that the medical officer of health's applications must go by post as O.H.M.S., while the rural policeman can telegraph. I should like to hear how many public vaccinators received the same treatment that I have in their efforts to prevent a scourge from spreading. The Local Government Board agrees with the General Post Office in stopping its medical officers from obtaining supplies of lymph quickly by telegram at a time of necessity and apprehension in an infected district.

I am, Sirs, yours faithfully,
HENRY T. WHITLING, M.B., B.S. Durh.,
M.R.C.S. Eng., L.R.C.P. Lond.
Husband Bosworth, Rugby, Feb. 3rd, 1902.

[INCLOSURE.]

General Post Office, London, 1st February, 1902.

SIR,—With reference to your letter of the 8th ultimo, I am directed by the Postmaster General to inform you that the privilege of sending telegrams free of charge as on Government service is confined to officers of the Crown receiving salaries wholly provided for out of the annual Parliamentary votes.

The matter has been referred to the Local Government Board who state, in reply, that the position occupied by you does not entitle you to send telegrams free of charge.

In these circumstances I am to ask you to be so good as to affix stamps of the proper value to the inclosed forms, and to return them to this office.

I am, Sir, your obedient servant,
Dr. Whitling. C. G. HALL (for Secretary).

*** We agree with our correspondent that it is at least as important that a medical officer of health should be able to take, without expense to himself, immediate steps to arrest an epidemic of small-pox as that a policeman should be able

Committee in reference to the conscience clause of the Vaccination Act, 1898. A motion was proposed and seconded in the following terms:—

That it be recommended to the council that a petition be presented to Parliament praying for the repeal of Section 2 of the Vaccination Act, 1898, which exempts from penalty any parent or person who conscientiously believes that vaccination would be prejudicial to the child, on the ground that such exemption is a source of danger to the public health.

The motion was withdrawn on the understanding that Dr. Hope would submit to the next meeting of the committee his suggestions for the amendment of clauses of the Act. It is very satisfactory to note that in Liverpool revaccinations are very general and quite spontaneous.

Feb. 4th.

## WALES AND WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

### *Newport and Monmouthshire Hospital.*

THE directors of the Newport and Monmouthshire Hospital have nearly always succeeded in providing a sufficient income to meet their expenditure, and in their report for the year 1901 they state that although it was at first feared that there would be an adverse balance of £165 the committee of the workmen's fund forwarded a contribution of £175, although over £1000 had been subscribed from the same source. If the Cardiff workmen were as generous as their fellows in Newport have shown themselves to be the finances of the Cardiff Infirmary would at once be placed upon a satisfactory footing. Indeed, the workmen's contributions in Newport compare very favourably with those in much larger towns such as Birmingham or Manchester. Although all the wards in the Newport Hospital are furnished only 56 of the 84 beds are at present in use, but when a sufficient income is assured the unoccupied wards will be utilised. Since the beginning of August when the new building was opened the visiting of patients at their own houses has been discontinued. At the annual meeting of the subscribers to the hospital held on Jan. 31st Mr. O. I. B. Mush, senior honorary surgeon, suggested that a railway ambulance should be kept in readiness to be sent to any part of the county, and £50 were at once subscribed towards its cost.

### *Prevention of Tuberculosis.*

The executive committee of the South Wales and Monmouthshire Branch of the National Association for the Prevention of Consumption and other Forms of Tuberculosis has resolved to ask the local authorities within the area of the branch to adopt by-laws prohibiting, under a penalty, the practice of spitting upon the floors of public rooms and vehicles. The committee numbers among its members not only the town clerk of Cardiff but all the principal medical officers of health in the district; it is to be presumed therefore that such by-laws would not be *ultra vires*. A suggestion has been made that the convalescent home at Porthcawl, the only institution of the kind in South Wales, should be utilised all the year round for the treatment of cases of tuberculosis of the joints and spine.

### *Small-pox.*

Two cases of small-pox have been reported in Merthyr where there is excellent isolation accommodation, the district council possessing two hospitals in different parts of the town, and one of these with 34 beds is now being used exclusively for small-pox patients.—There are three cases of small-pox at Swansea, the patients being a man and two children.—A case has also occurred in the Hay Rural District on the borders of Brecknockshire. The patient in this instance was a young woman who had been visiting in London.—In the Herefordshire rural districts it has been decided to add chicken-pox to the scheduled list of notifiable diseases and to give public notice of the obligation resting upon householders to notify to the medical officer of health the existence of any case of infectious disease in their house.

### *Shepton Mallet District Hospital.*

The annual report of the Shepton Mallet District Hospital, which was established in 1869 and has accommodation for 20 patients, states that the expenditure during 1901 was £335 and that 110 out-patients and 112 in-patients were treated. The average stay in hospital of each in-patient was 19 days. It is evident therefore that the institution is worked economically.

### *Bristol Workhouses.*

Mr. R. H. Norgate, resident medical officer of the Stapleton Workhouse, reports that during 1901 there were treated in the infirmary or imbecile wards 664 patients, equal to 34 per cent. of the total number of persons admitted to the workhouse, and that there were 209 deaths. At the Eastville Workhouse, where Mr. I. C. Morgan is resident medical officer, there were 238 deaths during the year among the 740 patients admitted to the infirmary.

### *Cost of Asylum Patients.*

It has been found necessary recently to raise the charge made to boards of guardians for the care of pauper lunatics in the Herefordshire County Asylum to 12*s.* per head weekly. In 1896 the charge was 9*s.*, and the various boards of guardians in the county are very much exercised as to the cause of this increased cost. The Board of Guardians for Hereford, the largest union in the county, has had presented to it a statement giving the weekly cost of maintenance in 10 other asylums, from which it appears that at Worcester it is 7*s.* 7*d.* per head, at Abergavenny (Monmouthshire) 8*s.* 2*d.*, at Northampton 8*s.* 6*d.*, at Gloucester 8*s.* 8*d.*, at Oxford 8*s.* 9*d.*, at Somerset 9*s.* 4*d.*, at Salop 9*s.* 6*d.*, at Wiltshire 9*s.* 11*d.*, at Birmingham 10*s.*, and at Staffordshire 10*s.* 6*d.* In estimating the value of these figures for comparative purposes it must be borne in mind that only one asylum (Oxford) is of the same size as that at Hereford, where there is only accommodation for 600 patients, whereas in the asylums of Worcestershire, Monmouthshire, and Gloucestershire more than double this number of patients can be received. One cause of the increased cost at Hereford may possibly be put down to an outbreak of scarlet fever which recently occurred, involving the isolation of about a dozen attendants and several patients, and in connexion with which the asylum committee was not altogether free from blame in not having provided adequate isolation accommodation in spite of the repeated recommendations to do so by the medical superintendent (Mr. C. S. Morrison) and by the Commissioners in Lunacy.

### *Appointment of a Female House Surgeon.*

At the annual meeting of the subscribers of the Tiverton (Devon) Infirmary held on Jan. 29th the honorary secretary stated that Miss Elizabeth McIlney, M.B., Ch.B. Edin., had been appointed house surgeon. He added that in May, June, and October, 1900, and in January, 1901, the committee advertised for several weeks in the medical journals for a resident house surgeon at a salary of £80 per annum. In answer to the first advertisement no application was received, in answer to the second there was one—from a lady, in answer to the third there were three—all from ladies, and in answer to the fourth there were seven—four from gentlemen and three from ladies. The committee appointed each gentleman in turn and each either declined to take the appointment or agreed to do so and failed to carry out his agreement except the last, who arrived and was discharged on the following day. The committee having been without any house surgeon for some months eventually appointed a lady to the post.

### *Royal United Hospital, Bath.*

The annual meeting of the subscribers to this institution was held on Jan. 29th under the presidency of the Mayor of Bath. The medical report stated that 1239 in-patients had been admitted during 1901 as against 1384 in 1900. The out-patients numbered 7994, a decrease of 611 compared with the previous year. The financial statement showed that the total income amounted to £5670, including £1139 from workmen's contributions. Financially the year had been much better than its predecessors, but there still remained an adverse balance of £3374, although £1780 worth of stock had been sold out. The committee made an urgent appeal for more funds and added that unless the income was greatly augmented one of the wards would have to be closed.

Feb. 3rd.

## SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

### *The Morison Lectures.*

THE second Morison lecture of the present series was delivered by Dr. George A. Gibson on Jan. 22nd in the hall of the Royal College of Physicians of Edinburgh. The subject of the lecture was The Pathogeny and Pathology side, where the photograph was taken, are covered with houses. The six-inch ordnance map does not give the level of the precise spot where the destructor has been built, but close to it there is a level of 123 and another of 146 feet above the sea. Probably the destructor itself stands on ground about 135 feet above the sea level. Slightly to the north-east and not quite half a mile away there is a level on Windmill Hill put down at 300 feet, and somewhat nearer, but a little to the east, there is Daison Hill, which is also 300 feet high. Adding 150 feet for the height of the chimney to the level on which the destructor is built, the discharge of the fumes probably takes place at an altitude of 285 feet—that is, some 10 or 15 feet below the level of the hill plateaux behind, but to this the height of the trees may be added. To the north-west of the destructor the houses and villas near St. Mary's Church and the Roman Catholic church and convent are on altitudes set down in the ordnance map at 305 feet, 309 feet, and 300 feet above the sea level, and therefore they are all above the top of the destructor chimney. The villa districts to the south and south-west of the destructor, Shirburn-road, Thurlow-road, &c., are 200 feet above the sea level. To reach this district the wind must come over the hills shown in the illustration, by which it is deflected downwards, bringing the fumes straight upon the houses that are a little below the top of the chimney. The distance from the summit of the northerly to the southerly hills is considerably less than a mile and the destructor is built in the hollow about half way between the two ranges. It would be impossible to find a better site, if the object were to test the effects of destructor fumes when thrown direct upon inhabited dwellings. These fumes, I am informed, contain effluvia due to the presence of oils belonging to the paraffin group. These are probably produced by the breaking-up of animal and vegetable matter in the complicated series of action and reaction going on in the furnace. Impure paraffins were found in the flue of the destructor, and if imperfectly burnt they would occasion the smell described as that of a tallow candle. A dirty paraffin lamp burning oil of a very inferior quality would, technically speaking, have been a more correct description. The presence of carbonaceous matter in the dust would be due to the imperfect combustion of the oil. One analysis of the dust collected in the flue sets down the percentage of carbon at 12 80. The large quantities of silica, lime, iron, potash, &c., contained in this dust or grit would account for the irritation of the throat which has been the subject of so many complaints. It is to be hoped that the action of the baffling walls will reduce the prevalence of these symptoms. The placing of a destructor at the bottom of a basin, with houses built on the greater portion of the rim that surrounds the basin and the chimney barely reaching to the height of this rim, provides an excellent opportunity of testing whether the combustion is perfect and the fumes innocuous. So far it is safe to infer that this desirable result has not been attained As yet it is too soon to say whether the alterations recently made will prove that the destructor can be rendered absolutely perfect. In any case it is a risky experiment, but as it has been undertaken it is for those interested in the problem at issue not to miss such an unparalleled opportunity of studying under the most propitious circumstances this very important problem. The town of Torquay will have rendered great service in helping to decide the question, and those who have suffered during the course of these experiments will have at least the consolation of having contributed to solve a scientific problem in which all towns and large communities are deeply interested.

## LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

*The Royal Infirmary: Annual Meeting.*

AT the recent annual meeting of the friends of the Liverpool Royal Infirmary Sir William Banks announced that an important addition was in course of being made to the hospital. The new Royal Infirmary had now been in use for 11 years or more, and so soundly had it been constructed that it had not been found necessary to replace a brick or a beam. The committee at the time of building had been reproached with extravagance regarding the expensive manner in which the walls, floors, and ceilings of the wards had been constructed, inasmuch as they were impervious to all septic influences and beautiful to the eye. But in the end the policy of "thorough" had been justified. Nothing could exceed the healthiness of the building, while its cheerful interior made it a genuine pleasure to work in it. In one point only had it fallen behind. The whole structure and apparatus of surgical operating theatres had altered since the infirmary was built, and new apparatus for sterilising dressings and fluids had been introduced. The large theatre had been constructed on the best model of the day, some 11 years ago, but it had now become old-fashioned, even in that short space of time. A generous friend of the institution was now building, in place of that theatre, two new ones which would be equipped with the most recent improvements. These two theatres, with a small one now in use, would allow each surgeon a theatre for his own use—an advantage not possessed by many hospitals. The treasurer reported that the expenditure for the year was nearly £15,000, whilst the income was under £12,000. The hospital debt stood at £3612, or £780 more than in the previous year, and it would have been considerably larger but for the ex-lord mayor's century fund contribution. 353 more patients had received treatment than in 1900. One bed had been endowed in memory of the late Mr. James Harrison (a former member of the committee) by his family. There were now nine endowed beds in the hospital. Mr. Arthur Earle, the retiring president, announced his donation of 200 guineas to the charity. Two changes had taken place on the medical staff. Dr. T. R. Bradshaw had succeeded Dr. T. R. Glynn as honorary physician and Dr. R. J. M. Buchanan had become honorary assistant physician in Dr. Bradshaw's place.

*Unsatisfactory Sanitary Condition of the Infirmary for Children.*

The fiftieth annual report of the committee of the Liverpool Infirmary for Children deals with the unsatisfactory sanitary condition of the building. In spite of the care exercised by the medical staff and the prompt removal of any infectious case upon discovery, together with the temporary closing of some of the wards, still the hospital has not been free from outbreaks of scarlet fever and diphtheria during the year 1901. The general health of the staff also has been unsatisfactory. There has been much sickness among the nurses and serious cases of illness have occurred among the resident medical staff. The conclusions drawn from these regrettable occurrences by the committee and the medical staff were that nothing short of a new separate out-patient building and the entire rebuilding of the infirmary itself would enable them to carry on the work of the charity. They roughly estimated the cost of rebuilding at £50,000, and issued an appeal to the citizens for funds towards that object. The treasurer reports that £18,700 have already been promised in response to the appeal, which has enabled them to proceed with the erection of the new out-patient building opposite the infirmary in Mulberry-street. It is the unanimous opinion of all interested that the present site is the best possible fo[illegible] erection of a new hospital, being very central and abutting upon a large public recreation ground belonging to the corporation which can never be built upon, while in front there is a large open space. The site is high, with a good fall for drains, whilst the foundations are of sandstone. During the year there were 913 in-patients and 13,572 out-patients, involving 53,611 attendances.

*Small-pox in Liverpool.*

At the meeting of the Health Committee held on Jan. 23rd Dr. E. W. Hope, the medical officer of health, reported that there were 18 patients suffering from small-pox under treatment in the city hospitals. Most of them were cattlemen who had arrived from the United States. but they also included one person from London and another who had crossed Europe and had developed the disease after arrival in Liverpool. At the meeting of the Health Committee held on Jan. 30th Dr. Hope reported that eight cases had been notified during the week ending Jan. 25th, as against three cases in the previous week, and that 17 patients were under treatment in the city hospitals. No deaths had occurred. Three fresh cases were reported on Feb. 4th. The patients in these cases had been in contact with the batch of cattle-men who brought the disease into Liverpool a fortnight ago. As the new cases are traced to the original source the slight increase is not so alarming as if a fresh source of contamination had been discovered — A discussion took place at the last meeting of the Health

D.D. (Belfast), Professor Sinclair, M.D. (Belfast), and Mr. Edward Anning, M.A. (Dublin), have for the time no *locus standi* on the Senate, and there is now only one senator, the direct representative of the graduates (Dr. J. W. Browne). It is extremely unfortunate that this should have occurred at present, as on Saturday last (Feb. 1st) important matters relative to extern examiners came before the medical committee, of which Sir William Thomson and Professor Sinclair were members, and the further consideration of the subject is to be brought before the Senate on Feb. 7th.

### *Diphtheria at Howth and Baldoyle.*

At the last meeting of the North Dublin Rural District Council held on Jan. 29th the Local Government Board forwarded a report which they had received from Mr. D. Edgar Flinn, medical inspector, in reference to the continued prevalence of diphtheria in Howth and Baldoyle. It has been decided to close the schools in both of these districts and to adopt various other measures in order to insure the stamping out of the disease.

### *The Belfast Hospital for Sick Children.*

It was reported at the annual meeting of the Belfast Hospital for Sick Children, held on Jan. 31st, that during the year 1901 there were treated in the wards of the institution 684 children, an increase over the previous year of 111. Of these 404 were medical, 269 surgical, and 11 eye and ear cases. 28 deaths occurred—22 in the medical and six in the surgical ward. 272 operations were performed. In the out-patient department 5855 cases—3002 medical, 1153 surgical, 1071 eye and ear, and 629 dental—were treated. 187 children were received into the Convalescent Home. During the year Dr. R. Steen resigned his position as assistant physician, and Dr. R. M. Beatty was appointed in his place. A large class of senior students is as usual attending the hospital cliniques. The staff is most anxious, owing to the increase of intern patients—on many occasions children having had to be refused admission to the hospital, especially to the surgical ward, on account of every bed being filled—that the hospital should be enlarged by an addition being made to each of the wards, but the board of management has for the time being, owing to the state of the finances, thought it wiser to postpone the matter. The average expenditure per patient per day is 7½*d.* The total average cost per bed occupied is £44 10*s.*, which sum is inclusive of expenditure in the extern department. Greatly to the regret of the staff Dr. J. McCaw has been obliged, owing to pressure of work, to resign his position as secretary to the staff, a position which he has occupied to the entire satisfaction of his colleagues for the past 10 years, and Dr. R. R. L. Leathem has been appointed in his place.

### *Health of Belfast.*

From the report presented by the medical superintendent officer of health to the City Corporation of Belfast on Feb. 2nd at the monthly meeting it appears that Belfast is at present in a very healthy condition. Between Dec. 15th, 1901, and Jan. 18th, 1902, 242 cases of zymotic disease have been notified—viz., 69 cases of typhoid fever, 52 of simple continued fever, 41 of diphtheria, 38 of erysipelas, 21 of scarlet fever, 16 of membranous croup, and 5 of puerperal fever. In the five weeks ended Jan. 18th, 974 births were registered in Belfast and 688 deaths, making a natural increase of 286. There were 44 deaths from zymotic disease, 103 from phthisis, and 184 from diseases of the respiratory organs. The annual death-rate from all causes was 20·2, that for children under one year old 3·9, and that for those of 60 years and upwards 3·7 per 1000 of the population. The health of the city of Belfast shows a continued improvement, more especially in the number of cases of zymotic disease notified, as well as in the deaths therefrom, which have fallen from 2·5 for last month to 1·3 per 1000. The deaths from diphtheria and whooping-cough are fewer. So far no case of small-pox has yet appeared in Belfast, notwithstanding the very close and constant communication with various parts of England, where the disease is prevailing—London, Liverpool, &c.—as well as with Glasgow. The weather has of late been extremely cold, with a sharp, biting east wind.

Feb. 4th.

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THE DRAINAGE OF TRURO.—At a meeting of the Truro Corporation, held on Jan. 20th, it was decided to submit to the Local Government Board a scheme for the drainage of the city, and to apply for sanction to borrow £21,000 for the purpose.

## PARIS.

(FROM OUR OWN CORRESPONDENT.)

### *The Predisposition to Tuberculosis.*

M. Albert Robin and M. Binet have shown upon previous occasions that 92 per cent. of patients suffering from pulmonary tuberculosis exhibit a very marked increase in their production of carbonic acid, and they now claim to be able to utilise this fact as a means to an early diagnosis of tuberculosis, and, moreover, to be able to say when a person is predisposed to infection by the bacillus of Koch. They communicated the results of their researches to the Academy of Medicine at the meeting held on Jan. 21st as follows. Among the descendants of tuberculous persons M. Robin noted in 60 per cent. of cases an increased consumption of oxygen which revealed the personal predisposition of the patients to tuberculosis. Instead of 5·5, the figure which represents the normal coefficient of the consumption of oxygen, the figure rose to 6·5, or 8 or even 10. In young people who were run down owing to excesses, or in those who were in a state of profound depression from various disappointments the coefficient was 8. In alcoholic patients the figure ran up even to above 10. M. Robin and M. Binet thought that they might apply these facts to therapeutics, and with the idea of discovering therapeutic agents capable of modifying the soil in which the tubercle bacillus would grow (they considered it impossible to act on the bacillus itself) they experimented with some 40 agents commonly used in tuberculosis with a view to investigate their powers as regards the fixation of oxygen in the tissues. For the present they have selected four, the efficacy of which has been known for some time. These agents administered to a healthy man have a remarkable effect in diminishing his power of fixing oxygen in his tissues. In a word, they retard tissue change and make the body into the exactly opposite condition to that which is most favourable for the growth of the tuberculosis bacillus. The therapeutic agents are cod-liver oil, arsenite of potassium, cacodylate of sodium (these two must only be used in normal doses, otherwise they increase tissue change), and rest in the horizontal position. Cold air is good provided that the body be kept warm; a heated air is bad, especially if the body be at the same time chilled. Life at high altitudes has a variable action according to the personal peculiarities of the patient, and the respiratory exchange ought to be studied in a patient at various altitudes in order to find that at which he does best. The same variations hold good for a marine climate. In the course of his observations M. Robin has seen young people in a very feeble and critical state in whom the respiratory coefficient had reached 8, but where by the use of rest and of cacodylate of sodium it came down to the normal figure of 5·5. A respiratory coefficient of 5·5 shows a condition of body inimical to the growth of the tuberculosis bacillus.

### *Fracture of the Forearm from Starting a Motor-car*

At the meeting of the Academy of Sciences held on Jan. 13th M. Sorel reported some cases of fracture of the forearm caused by starting a motor-car differing from those previously reported, which were cases of indirect fracture of the lower end of the radius by rupture of the anterior carpal ligament. In the case reported by M. Sorel there was a direct fracture at the junction of the lower and middle third of the radius owing to the blow of the crank handle on the external anterior face of the forearm, while at the same time the hand was forcibly extended. Contemporaneously the styloid process of the ulna was torn off. There was thus a direct fracture of the radial diaphysis and an indirect fracture of the lower ulnar epiphysis. There was no obvious deformity of the forearm as the shaft of the ulna, which was intact, served as a splint to the radius.

### *Obituary.*

Dr. Ballay, Governor-General of French West Africa, has just died from diabetes, a disease from which he had been suffering for some time past. He was born in 1847 and commenced professional life as assistant surgeon in the navy. In 1875 he went with Brazza to the Congo. It was this district which he described in his thesis for the doctorate.[1] He was made Chevalier of the Legion of Honour in 1879 and Officier in 1888. He lived in the Gaboon, the Congo, and finally in French Guinea until 1900. He then of Sensory Affections of the Heart." Under this head the lecturer described the afferent and efferent nerve connexions of the heart and the conditions which bring about the conduction of painful impressions from the heart to the nerve-centres, concluding with a description of the areas of referred pain in connexion with cardiac disease. The third and last lecture of the series was delivered on Jan. 24th, the subject being "The Therapeutics of Sensory Disorders of the Heart." In this lecture Dr. Gibson discussed the various measures and remedial agents which had at different periods been brought forward for the relief of cardiac pain. He showed that treatment was applied in two directions—(1) the alleviation of the paroxysm and (2) the prevention of its recurrence, both being determined by the nature of the underlying pathological condition.

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[1] L'Ogooé, th. Paris, 1880, p. 43.

### *Edinburgh Royal Infirmary: Appointment of Pathologist.*

Owing to the appointment of Dr. D. A. Welsh as professor of pathology in Sydney, the post of superintendent pathologist to the Edinburgh Royal Infirmary fell vacant. The managers at their meeting on Feb. 3rd appointed Dr. Theodore Shennan, the senior assistant pathologist, to the vacant post. Dr. Shennan is a graduate of Edinburgh University and a Fellow of the Royal College of Surgeons of Edinburgh. He has been a teacher of pathology in the Edinburgh Extra-mural School for a number of years and at present holds that position in Surgeons' Hall. He formerly held the post of pathologist to Leith Hospital, and for a number of years he has acted as pathologist to the Royal Hospital for Sick Children. He is spoken of very favourably by those who have come most closely in contact with him in his work, and it is generally felt that the appointment ought to prove eminently satisfactory. Owing to the amount of time demanded of the superintendent pathologist in the discharge of his duties he resigns his post at the Children's Hospital and also his post as curator of the museum of the Royal College of Surgeons of Edinburgh. It is understood that the new superintendent pathologist will be allowed to do a limited amount of independent teaching in the extramural school.

### *Professor E. A. Schäfer on the Structure of the Liver.*

At a meeting of the Royal Society of Edinburgh held on Feb. 3rd Professor Schäfer of Edinburgh University read a paper on the Existence within the Liver-cells of Channels which can be Directly Injected from the Blood-vessels. He drew attention to papers written by Professor Browicz giving the results of observations on the liver-cells, in which he concluded that in addition to the presence of intracellular biliary excretory channels there were also special afferent nutritive channels in the liver-cells. Professor Schafer offered objective proof of this contention. He had found specimens in the Edinburgh University physiological laboratory of injected liver from the rabbit which clearly showed the intracellular nutritive canaliculi. On looking further into the matter he found specimens which had been left to the University by the late Professor Rutherford, some of which were apparently of this same rabbit's liver, while others purported to be from the liver of the cat. Some of these were labeled, "Shows injection within liver-cell," and one of them bore the date 1886. Professor Schäfer wrote to Professor E. W. W. Carlier of Birmingham, who at the date indicated was assistant to Professor Rutherford, to find out whether he could furnish any information with regard to the specimens. Professor Carlier wrote in reply that the specimens were injected by Simpson under his direction and used for class purposes, and that he had first noted the canals and had shown them to Professor Rutherford, who, however, would not allow him to publish a note of them. Whatever might have been Professor Rutherford's reason in so acting it was a matter for regret that the fact of the existence of intracellular canals in direct communication with blood-vessels should not have been made public. It was impossible to overlook the importance of the existence within the cells of any organ of vascular canals too narrow to admit blood corpuscles but doubtless capable of conveying the fluid portion of the blood directly to the cell protoplasm.

### *Small-pox in Glasgow.*

The number of patients in hospital in Glasgow is 48 During the last two days six new cases have been admitted and six patients have been discharged.

### *University College, Dundee.*

At a meeting of the Court of St. Andrews University on Feb. 2nd Principal J. Yule Mackay intimated that Sir W. Ogilvy Dalgleish had promised to contribute £5000 towards the completion of the conjoint medical school in Dundee, and the court unanimously resolved to express its appreciation of the great generosity which had prompted the donation and of the wisdom shown in the selection of the object to which it was to be applied. The plans for the new school have now been finally approved, and the work of building is to commence at an early date.—The following appointments to examinerships in the University of St. Andrews are announced:—Chemistry, Mr. H. Mackenzie, Jenner Institute of Medicine, London; physiology, Dr. William Snodgrass; pathology, Dr. T. Shennan.—Dr. W. Barrie Dow has been elected to represent the University at the Fourteenth International Congress of Medicine to be held at Madrid in April, 1903.

### *Aberdeen Sick Children's Hospital.*

One of the most interesting gifts presented to Miss Lumsden on the occasion of her retiring from the post of honorary superintendent of the Sick Children's Hospital is that from the past and present members of the medical staff. It consists of an antique bureau and on the desk is the inscription:—"Presented to Miss K. M. Lumsden, by past and present members of the medical staff of the Royal Aberdeen Hospital for Sick Children, on the occasion of her retiring from the post of honorary superintendent of the hospital after 16 years' service. 31st. Jan., 1901." The gift was accompanied by a signed letter of appreciation from all the members of the staff.

### *Aberdeen University Senatus.*

A meeting of the Senatus was held at King's College on Feb. 1st. It was intimated that the late Surgeon-General Robert Harvey, C.B., D.S.O., Director-General of the Indian Medical Service, who died at Simla in December, had bequeathed a legacy of £5000 to the University of Aberdeen, to be disposed of at the absolute discretion of the Senatus for the purposes of the University. The bequest, however, is not payable until the expiry of certain life interests.

Feb. 4th.

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## IRELAND.

(From our own Correspondents.)

### *National Association for the Prevention of Tuberculosis.*

At the last meeting of the Executive Committee of the Dublin Branch of the National Association for the Prevention of Consumption and other Forms of Tuberculosis, held at the Royal College of Physicians of Ireland, Sir John W. Moore being in the chair, the honorary secretary was directed to draw the attention of the Public Health Committee to the fact that the system of voluntary notification of tuberculosis at present in force in Dublin has been found to be practically inoperative; that, moreover, the early recognition of the disease can only with certainty be effected by a microscopical examination from which the poorer classes of patients are now practically debarred; and that the remedy which has worked so successfully in New York and which has been adopted in nearly every important town in England and Scotland, as well as on the continent of Europe, should be put in practice here—viz., the establishment of a municipal bacteriological laboratory, not necessarily at any very great expense, where a competent bacteriologist could make the microscopical diagnosis of the specimens of sputum, &c., sent in by the dispensary medical officers and other medical practitioners who work among the poor. The information as to the presence or absence of the specific germ could be sent to the medical man within 24 hours free of all cost to the patient. There was a long discussion and other suggestions were offered to the Public Health Commitee.

### *Royal University of Ireland.*

As a result of some extraordinary mistake, or oversight, five of the senators of the Royal University elected by convocation to represent the graduates have become disfranchised. They were last elected on Jan. 17th, 1899, and they should have been apprised of the fact that their re-election must take place on Jan. 17th. No notice, was, however, taken of the matter, no arrangements were made, and, as a result, Sir William Thomson, M.D. (Dublin), His Honour Judge Shaw, LL.D. (Dublin), Rev. Professor Leston, there. So riotous did they now become that many were put under arrest and the others were ordered to disperse under threats of still stronger measures. On the following day protests were made by the students to the Ministers of Education and of the Interior but met with no sympathy. In consequence the disturbances were renewed and continued daily, with the result that the University was closed and its entrances were guarded by the police, bodies of whom were also stationed at the Institute of Anatomy and Pathology and at the Institute of Hygiene. In accordance with a peremptory order from the Minister of Public Instruction the University was again opened on Jan. 28th. In his letter to the rector, Professor Cerruti, Signor Nasi points out that the University cannot be closed for such a cause except for the purpose of depriving the students of the benefit of the examinations, and directs that, should the disorders be repeated within the University, the most stringent measures will be taken not only to restore order but to discover and to punish the delinquents. He adds that in future it is his intention to close the particular course of lectures in which such disorders may occur. So far there has been no renewal of the disturbances since the re-opening of the University. These frequently recurring students' riots at Rome and elsewhere are a source of much trouble and perplexity to the authorities as well as a vexatious interruption to the work of the schools, but they are regarded with considerable amusement, if not sympathy, by the populace and are not looked upon as really serious.

### *The Fourth International Congress of Obstetrics and Gynæcology.*

The International Obstetrical and Gynæcological Society having decided to hold its fourth meeting in Italy, and having entrusted the work of organising it to the Italian Obstetrical and Gynæcological Society, the latter has selected Rome as the seat of the Congress, which has been fixed for Sept. 15th to 20th next. The office of honorary president has been accepted by Baccelli and that of president-general by Pasquali. Morisani and Mangiagalli will preside over the obstetrical and gynæcological sections respectively, Pestalozza acting as general secretary. The following are the themes which have been selected for discussion: (1) the medical indications for the induction of labour; (2) hysterectomy in the treatment of puerperal infection; (3) tuberculosis of the genitals; and (4) the surgical treatment of uterine cancer.

### *Society for Succouring the Asphyxiated.*

This society, which was founded in 1880, has for its object the supervision of the Tiber within the city walls for the purpose of saving persons in peril of drowning and providing means for succouring those who in any other circumstances may be in danger of asphyxia. It supplies boats with expert boatmen, gives instruction by lectures and drill to the gendarmes of the Commune in the methods of restoring animation in cases of asphyxia, and offers rewards for acts of bravery done in attempts to save the drowning. In 1901 the society was instrumental in saving 44 lives, in some cases under circumstances so difficult that rewards were bestowed on several boatmen for the bravery they had displayed.

Feb. 1st.

## CONSTANTINOPLE.

(FROM OUR OWN CORRESPONDENT.)

### *The late Dr. Spirido Mavrogeny Pasha.*

DR. SPIRIDO MAVROGENY PASHA, hakim bashi, or chief physician of the empire and chief physician to the Sultan, died in Constantinople on Jan. 22nd, at the age of 83 years. He belonged to one of the oldest families of Phanar, that suburb of Constantinople to which the Greek patriarchate was transferred after the Turkish conquest. He studied medicine at the University of Vienna, graduated there as M.D., and on his return to Constantinople was at once made physician to the Haidar Pasha Hospital, afterwards receiving an appointment as professor in the Imperial School of Medicine, a position which he held for 25 years. He was also very soon appointed physician to Hamid Effendi, at that time Prince Imperial, and now the reigning khalif or sultan. On the accession of this prince to the supreme power Dr. Mavrogeny still continued to be his medical attendant, and has therefore throughout the whole of his professional life been a court physician—a circumstance which prevented him from acquiring any considerable private practice. He had the rank of general, with a salary of about £T250 (£230 sterling). He was the general inspector of all the military hospitals, exercised control over all medical matters, and was the honorary president of the Imperial Medical Society of Constantinople. He possessed the full confidence of the Sultan and had the honour (which I do not think that any other medical man had) of being a *παρακοιμώμενος*—i.e., a man allowed to sleep in the vicinity of the Sultan's sleeping apartment. Dr. Mavrogeny was highly educated, being well versed in Greek and Latin literature and familiar with German, French, and English. He contributed both to general and medical literature. As an author he was well known under the pseudonym of "Hermit of Alem Dagh." Among his medical writings mention may be made of those on cholera, leprosy, and rabies. He also edited a medical magazine in Turkish and French, dealing principally with questions of public health. His personal reputation stood very high; he was greatly esteemed by all who knew him, the Sultan included, and most of the medical men in Constantinople were present at his funeral. The deceased possessed many Turkish and foreign Orders. He has left two sons, one of whom was the Ottoman Minister and Envoy Extraordinary at Washington a few years ago, and the other has been Ottoman Consul-General at Marseilles.

### *Plague.*

Cases of bubonic plague now and then make their appearance in Smyrna and Beirut, and the disease has also existed in Baghdad since last November. In the last-mentioned city it has been especially prevalent among the numerous Jewish population; the early cases being of a mild character and not terminating fatally were supposed to be malarial fever with enlargement of glands. An incident of the outbreak of plague in Constantinople was that differences of opinion arose between Professor Nicol and the municipal authorities. Although an expert bacteriologist, he was perhaps not of a very affable temper, and on finding that he was not a *persona grata* he handed in his resignation and went to Paris. Dr. Remlinger, who came to Constantinople as director of the Antirabic Institute, has been appointed director of the Bacteriological Institute in succession to Professor Nicol.

### *Public Health in Constantinople.*

Scarlet fever has been very prevalent here since last spring and according to the statistics published by the International Board of Health from 15 to 20 fatal cases are registered every week. There is no small-pox here at present. Very few sanitary improvements were carried out last year. Probably the most important was the draining of the Greek cemetery at Shishly, where, as indeed is the case throughout the whole of the peninsula on which Constantinople is built, the impermeability of the subsoil causes the rain water to be retained and greatly retards decomposition after interment.

Jan. 31st.

## NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

### *The Sixtieth Volume of the "New York Medical Record."*

THE *New York Medical Record* was founded in the year 1866, and the year just gone by witnessed the completion of its sixtieth volume. For the 35 years during which it has been in existence the paper has been under the charge of the editor who first launched it on the sea of journalism. There can be no doubt that the brisk rivalry between the various periodicals acts as an incentive to editors and publishers to produce publications which will excel, or at least successfully vie with, their contemporaries. It may be, perhaps, that the business aspect of the matter is too much considered, but the spirit of the times tends to commercialism even in medicine and it would be impossible to conduct a journal on purely altruistic principles. The *New York Medical Record* is an excellent type of a first-class American journal, and it worthily represents in other countries the best features of the school of journalism to which it belongs.

### *Manner of Action of the Nerves.*

Professor Loeb and Dr. Albert P. Mathews announced at the meeting of the American Physiological Society held in returned to France to rest there when the yellow fever broke out in Senegal and in the Soudan. The Government begged him to organise the necessary hygienic measures at St. Louis-du-Sénégal, and Dr. Ballay started at once. He died in West Africa esteemed by everybody. At the request of the Colonial Minister the Chamber of Deputies unanimously voted a sum of 15,000 francs for his funeral, and his obsequies were celebrated with great state.

Feb. 4th.

## SWITZERLAND.

(From our own Correspondent.)

### *The Operative Treatment of Tuberculosis of the Kidney.*

This formed the subject of an interesting lecture, accompanied by demonstrations on the part of Professor U. Krönlein, at a clinical meeting in Zürich on Jan. 29th. He referred to the first nephrectomy performed by Simon in 1869 in Heidelberg and to the great caution with which for nearly 15 years surgeons approached the region of renal surgery in general. His own experience of the last 20 years had been confined to 120 renal cases with 100 operations, including 50 nephrectomies; 42 of the patients who underwent the operation recovered and only eight succumbed. He gave the opinion of Professor Albert of Vienna, referred to in a manual on surgery in 1885, where the latter says: "I only mention nephrectomy in cases of renal tuberculosis in order to warn surgeons from performing such an operation, which in one case is said to have been successful." Professor Krönlein alluded to his own experiences, which showed a great prevalence of renal tuberculosis, as he had had 38 cases under his care—32 per cent. of all renal cases; 29 of these were operated upon. There were 24 nephrectomies performed, with two fatalities in very severe, acute, and desperate cases with high fever. 22 patients recovered, and in 17 cases a lapse of time of from seven months to ten years had passed since they were dismissed cured as regarded renal symptoms. This went to prove that tuberculosis first attacked only one kidney, and there was also sufficient evidence that the kidney was the primary organ affected among the different organs of the urinary tract (the genitals, the testes, the prostate, the bladder, and the urethra). Only in five cases out of the 38 referred to could no other tuberculous focus be detected clinically, though this did not exclude some hidden localisation of the tuberculous process; generally the lungs were affected. Yet the operation under strict indications was necessary and advisable in order to remove a dangerous tuberculous deposit from the body, even though in two of the nine cases not operated upon the patients ultimately recovered. The 38 cases were observed in patients between the ages of 11 and 50 years, with the following distribution as regarded age: 11 to 20 years, five cases; 21 to 30 years, 17 cases; 31 to 40 years, 11 cases; and 41 to 50 years, five cases. Of the patients 12 were males and 26 were females. The left kidney was diseased in 16 cases, the right kidney in 20 cases, and both kidneys were diseased in two cases.

### *Puerperal Eclampsia.*

At the same meeting Professor Th. Wyder, director of the Lying-in Hospital at Zürich, read a paper on Puerperal Eclampsia. He rejected the theory of infection and referred this alarming and dangerous disease to a partially uræmic, but often purely toxic, agency, the details of which remained still to be discovered. He laid stress on the desirability of examining the urine periodically in all cases of pregnancy, but more especially if symptoms such as headache, nausea, vomiting during the second half of pregnancy, involuntary movements, nervous excitability, loss of memory, &c., were present. This, he said, was of the utmost importance, as with due supervision and proper treatment the illness might be avoided or its dangers lessened. Prognostically much could not be said, as apparently slight cases might terminate fatally and very severe cases might recover. The mortality among mothers, which in pre-antiseptic days used to be 35 per cent., had been reduced to 20 per cent., and an investigation which Professor Wyder instituted, referring to 1100 cases, resulted in the same percentage. Stroganoff's statistics, with only six deaths in 113 cases, were worthy of record and consideration. Prophylactically the patient had to be put on a mild diet, ample excretion by the kidneys, skin, and bowels, had to be ensured, morphine was not to be used, but sometimes bromides might be employed. In actual eclampsia termination of the pregnancy at the earliest possible date was indicated, almost without regard for the infant's life which was in jeopardy owing to the severity of the toxic disease. Hospital supervision was most desirable. In cases of operative interference strictest asepsis must be ensured, hydrargyrum and carbolic solutions must be avoided for irrigation, and all heart toxins, such as chloroform, chloral, morphia, and veratrum, should be used in the smallest possible but still efficient doses. Protracted narcosis might do more harm than good. Stroganoff recommended small doses of morphia with enemata of chloral hydrate. Hot wet packs might prove very beneficial, whilst hot baths might be dangerous—and might induce cerebral hæmorrhage. In some cases venesection with consecutive rectal or hypodermic injections of saline solutions deserved attention, as did inhalation of pure oxygen.

Zurich, Jan. 31st.

## ROME.

(From our own Correspondent.)

### *Celebration of Professor Murri's Medical Jubilee.*

On Jan. 19th was celebrated at Bologna the professional jubilee of Professor Murri who for 26 years has taught clinical medicine in the university of that city. A large gathering of scientific men from all parts of Italy met to do him honour, many of the other universities, including Camerino, at which he graduated, sending special representatives to take part in the proceedings. These were opened by Professor Albertoni with an eulogistic speech in which Professor Murri's scientific work as well as his services as teacher and consultant, received very high and well-deserved praise. The distinguished Bolognese professor was then presented with his bust and a collection of his works in three handsome volumes. The latter contains many valuable contributions to medical literature, embracing an immense variety of subjects, contributions which were scattered through a great number of medical periodicals until thus brought together by his friends and admirers. Readers of The Lancet may remember two very able papers by Professor Murri which appeared in these columns some years ago. The first of these, "An Address on Experimental Craniotomy and Diagnosis of Cerebral Abscess,"[1] attracted considerable attention at the time. The other was upon the "Diagnosis of Tumour of the Cerebellum."[2]

### *Riots at the University of Rome.*

The return to his professorial duties at the Sapienza of the socialist deputy, Enrico Ferri, *libero docente* in Penal Law, who was lately expelled from the Chamber of Deputies for disobeying the ruling of the President, has given rise to some lively scenes amongst the University students. An unfortunate expression which escaped the irascible deputy during the recent debate on the state of Southern Italy had been greatly resented by the students hailing from that part of the kingdom and they determined to show their disapproval on the first opportunity. On the day of the opening lecture the municipal authorities, in anticipation of disorderly scenes, had posted a considerable force of police in the streets surrounding the University and had also kept a body of carbineers close at hand to be ready in case of any emergency. This did not prevent a large crowd from collecting, mostly composed of students, but to some extent also of working men, who were present to support the socialist students against those with monarchic sympathies. The appearance of Ferri on the scene was the signal for a general uproar and the two hostile sections from words speedily came to blows, using fists and sticks freely upon one another, but fortunately no more dangerous weapons. Surrounded by a cordon of police and a bodyguard of his sympathisers among the students Ferri with difficulty made his way to the lecture-room and there calmly proceeded with his lecture regardless of the tumult outside. The presence of the police in the precincts of the University was keenly resented by both sections of the students who claim a right of sanctuary within its walls and hold that the municipal authorities exercise no jurisdiction ooms were practically unventilated. He had asked hree times for certain necessary alterations in the sanitary arrangements, but without success. The general staff of attendants was sufficient in numbers, but not sufficiently rained. Working an asylum under the Public Service Board was not conducive to the best treatment of patients. Dr. McCreery, the inspector-general of asylums, corroborated his evidence and said that the principle of appointment by seniority adopted by the Public Service Board blocked the way of reform, and he had repeatedly reported that "the patients were not receiving the care and attention to which they were entitled." The asylum was overcrowded by 200 or 300 patients. The present arrangements were very unsatisfactory. The Board reported that the specific charges of neglect in the particular case for inquiry had not been substantiated, but that the relatives of the patient had grounds for preferring them, and in so doing had discharged a public duty, as they involved the larger question of the general management of the asylum, and it found the following to be conclusively proven:—

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[1] The Lancet, Jan. 5th (p. 9), 12th (p. 79), 26th (p. 206), and Feb. 2nd (p. 267), 1895.

[2] The Lancet, Jan. 30th, 1897, p. 291.

> Pay patients are not kept separate from other patients, either in wards or yards. Paying and non paying patients alike do not receive he accommodation or treatment that is necessary. There is practically o attempt made to separate curable from incurable patients. The ards generally are overcrowded and so few in number that proper lassification and separation of patients are impossible. This is pecially the case on the male side, where for some reason two yards re, and have long been, kept empty. The wards and dormitories enerally are also overcrowded and are used in many cases for urposes for which they were not constructed or intended. The ospital wards are utterly unsuited for hospital purposes. Ventilaion generally, especially in the lower wards, is bad, chiefly owing to tructural defects. The equipment and appliances for curative purposes re little better than rudimentary. In the hospital sense of the term, here is no nursing staff. A large proportion of the attendants have not een specially selected or efficiently trained. The present indoor system f training has broken down and the proportion of probationers is xcessive. Bruises and abrasions of patients are numerous and estraint is relied upon to an extent that has long been discarded in English asylums. All promotion throughout the asylum is by seniority nd is in no way dependent on proven merit. The medical staff is underpaid and insufficient for the work that it has to perform. Its *ersonnel* is constantly changing. The result is that, as the inspector as reported, the purely medical treatment cannot be deemed satisactory. There is immediate need that the management of the asylum hould be withdrawn from the control of the Public Service Board and laced, as has been done in America with beneficial results, under he control of trustees or commissioners. There is immediate eed that the medical superintendent should be rendered upreme in authority and responsibility in his individual asylum. There is immediate need of the establishment of a pay asylum entirely eparate from any present public asylum. There is immediate need f the appointment of a large number of trained nurses, of an increase n the medical staff, and of additional equipment and appliances for urative purposes. There is immediate need of the withdrawal of the sylum from the control of the public works department, so far as lterations, construction, and sanitation are concerned, and of its being placed under some specially qualified and competent officer. It s only fair to add that the errors and defects which have been so prominently made public during the present inquiry have already been rought repeatedly under the notice of the department by the nspector of asylums and the official visitors in their official reports.

### *Hospital Affairs.*

The directors of the Sydney Hospital have decided to nake a very important alteration in the present system of eceiving patients. The practice for many years past has een to exact a payment (of 5*s.*, 10*s.*, and 15*s.*, but not xceeding £1 1*s.*, per week) from patients. Those who leclared their inability to pay anything were sent to the oard of health where they received a "pauper order" which dmitted them to the hospital and ensured the repayment to he hospital by the Government of the approximate cost of heir maintenance and treatment. The directors now propose o abolish all charges for patients and to make the instituion "a public hospital for the free medical and surgical reatment of the sick and necessitous poor, with or without ecommendation." The directors estimate that about £1600 per annum will be lost from the income of the hospital by his step, but boxes will be placed in each ward for voluntary contributions from patients and their friends, and, in order to prevent abuse, a stricter system of interrogation as o the financial position of applicants will be instituted. The reasons for the change are that many of the contributing patients conceive that they are paying full value for the ervices rendered and are not in receipt of charity, and that he officers of the hospital are their paid servants. On the ther hand, the really necessitous are put to unnecessary inonvenience and humiliation in having to obtain a Government pauper order. At the last meeting of the board of directors it was also reported that the Morcliff site of the eye departnent would probably be in possession of the hospital for nother five years, and the board thanked the ophthalmic urgeons for the trouble which they had taken in securing a suitable site.—The financial position of the Melbourne Hospital has recently formed the subject of an exhaustive report prepared for the *Argus* newspaper. It was found that the different Australian hospitals adopted such different systems of keeping their accounts that it was difficult to compare them. The total cost of maintenance per bed occupied was £74 11*s.* 5*d.* at the Melbourne Hospital, or £10 4*s.* 3*d.* above the average of all the leading Australian hospitals, the extra cost being on the items of provisions, alcohol, surgery and dispensary, and domestic expenses. The increased cost is ascribed to the more serious nature of the cases treated—especially the large number of infectious cases, and particularly diphtheria. It is recommended that the expenditure on infectious cases shall be kept in a separate account and that the expenditure on out-patients shall also be in a separate account from that on in-patients. The report says that the present income of the Melbourne Hospital is inadequate to enable it to carry on its duties as at present; that additional financial support is requisite, both from the Government and the public; and that the Government grant should never have been reduced as it was some years ago.

### *The Coast Hospital, New South Wales.*

The select committee appointed to inquire into the circumstances of the removal from the service of the late assistant storekeeper at the Coast Hospital, Sydney, has presented a report to the Legislative Assembly. It finds that the late assistant storekeeper was an energetic and painstaking officer and that he acted rightly in refusing to relax his scrutiny over the receipt of stores; that the action of the President of the Central Board of Health showed a carelessness or credulity almost incredible; and "that the admissions of the medical superintendent that the diet-sheets specify when two classes of goods are contracted for the low-grade foods are to be supplied to the patients and the high-grade to the staff, is a further proof of the incapacity of the President of the Board of Health to administer his department."

### *Sydney Dental School and Hospital*

The new dental school and hospital in connexion with the Sydney University was formally opened by Mrs. See, wife of the Premier of New South Wales. Professor Anderson Stuart explained the steps that had led up to the establishment of the school and the need for it, but said that the university was not anxious to continue it.

### *The Right of a Medical Man to Practise as a Chemist.*

On Dec 13th, 1901, Mr. Andrew Honman, was charged with carrying on business as a chemist, though not a registered chemist. It appeared that Mr Honman was one of the executors of the will of the late Mr. Blackett, a chemist, and in the capacity of executor he carried on the business, having as a partner a man who was a duly qualified chemist and who really conducted the business. Mr. Honman acted solely in the interests of Mrs. Blackett and her family. A great deal of correspondence had passed between the Pharmacy Board and Mr. Honman, and finally when the board threatened proceedings Mr Honman told the board to proceed, as he relied on his right as a Licentiate of the Society of Apothecaries to practise pharmacy. The case was dismissed, with 10 guineas costs against the board.

### *Victorian Trained Nurses' Association.*

The report of the council of the Victorian Trained Nurses' Association read at its first annual meeting showed that it was already a success, having 260 members. The association had been recognised by the Nurses' Association in Sydney and by the Government of New South Wales, so that members of the association were eligible for hospital appointments in that State. The financial statement showed a credit balance of over £100.

### *Broken Hill Medical Institute.*

At a meeting of the Broken Hill Friendly Societies' Council it was stated that the medical institute was not a success and would have to be closed. Owing to the opposition of the local medical men the committee had difficulty in securing suitable medical officers. This is another victory for the profession in the "Battle of the Clubs."

### *Obituary.*

Mr. F. W. Elsner, F.R.C.S. Irel., was found dead in his bed at Moru, New South Wales, where he had practised for the last week of December, 1901, at Chicago, that they had made an important discovery concerning the nature and manner of action of the human nerves. Both Professor Loeb and Dr. Matthews are attached to Chicago University and have been conducting investigations on the matter during the past summer. Electrical changes in the atoms of the bodily tissue, according to these gentlemen, are responsible for all the active phenomena of life, and these phenomena are not, as hitherto believed, due to food furnishing the tissues and muscles of the body with heat energy. Instead of food furnishing the muscles with heat energy the Chicago investigators declare that it supplies electrical energy, which, after being converted into mechanical energy, is responsible for all the muscular contraction and organic processes of living organisms. The foregoing, of course, is a mere outline and not an adequate description of the new theory, which it must be admitted is as yet only in a tentative stage.

### *The Carnegie National Institution of the United States.*

Mr. Carnegie's offer of $10,000,000 (£2,000,000) to found a national institution in Washington would now appear to have been accepted, although the form of the gift is only indicated as "5 per cent. bonds." An official announcement was made on Jan. 9th that the Board of Trustees had been incorporated under the terms of the gift Mr. Carnegie's purpose in requesting the various trustees to become members of the board is stated to be as follows :—

> It is proposed to found in the city of Washington, in the spirit of Washington, an institution which, with the coöperation of institutions now or hereafter established there or elsewhere, shall, in the broadest and most liberal manner, encourage investigation, research, and discovery, encourage the application of knowledge to the improvement of mankind, provide such buildings, laboratories, books, and apparatus as may be needed, and afford instruction of an advanced character to students whenever and wherever found, inside or outside of schools, properly qualified to profit thereby.

One of the prominent aims of this institution is to be the promotion of original research and to ensure the prompt publication and distribution of the results of scientific investigation. The fact that Dr. John S. Billings of New York, the well-known bacteriologist, has been appointed one of the trustees would seem to be a guarantee that medical and scientific research will receive due attention.

### *Award of the Gross Prize of $1000.*

The Philadelphia Academy of Surgery, as trustee of the Samuel D. Gross prize of 1000 dollars for original research in surgery, has awarded this prize, after six years' interval, to Dr. Robert H. M. Dawbarn of New York city. The treatise which won the competition was entitled "The Treatment of Certain Malignant Growths by Excision of both External Carotids." Upon this topic Dr. Dawbarn has worked as opportunity served for seven years past. The essay when published will contain the histories, with pathologist's report in each instance confirming diagnosis of malignancy, and specifying its variety, of 40 carotid extirpations by the author himself, and as many additional by about a dozen other surgeons. At least two of these are members of the Philadelphia Academy of Surgery. By the terms of Dr. Gross's bequest the prize essay must be published in book form and a copy thereof must be deposited in the Samuel D. Gross Library of the Philadelphia Academy of Surgery. Dr. Dawbarn was born in 1860 and graduated in 1881 from the College of Physicians and Surgeons in Philadelphia He is now Professor of Surgery in the New York Polyclinic College and visiting surgeon at the City and Polyclinic Hospitals.

### *Tetanus after Vaccination.*

According to the official report of the Board of Health of Camden, New Jersey, concerning 11 cases of tetanus after vaccination in that city, the investigation established the fact that all the virus used was free from tetanus, as shown by the State bacteriologist. Tests were made on rats by physicians from Cooper Hospital, and in none of those instances did tetanus, which was then acute, occur until three or four weeks after vaccination. During the past three months in Philadelphia from 700,000 to 800,000 persons have been vaccinated with the same kind of virus as was used in Camden and not a case of tetanus has occurred. The cases of this disease found prevalent are ascribed to a long period of dry weather with high winds and to a lack of proper care of their vaccination wounds on the part of the patients.

### *Deportation of Consumptives.*

A case has occurred to test the constitutionality of the Treasury ruling that consumptives shall be prevented from landing in this country as immigrants. A man and his family arrived in New York on Nov. 9th and friends met them and guaranteed that they should not become public charges. The authorities, however, refused to allow the man to land as, upon examination by the Marine Hospital physicians, he was found to be suffering from pulmonary tuberculosis. He was ordered to be deported, but a lawyer obtained a writ of *habeas corpus*, and the man is now in the Long Island Cottage Hospital in Brooklyn. The Act of Congress on which he is detained was intended to exclude idiots, insane persons, paupers, criminals, and persons suffering from a loathsome or dangerous contagious disease.—The New York Academy of Medicine has had under consideration the ruling of the Secretary of the Treasury in regard to tuberculous immigrants and has taken ground in opposition as follows : "The Academy of Medicine deeply deplores the decision of the Secretary of the Treasury which is not based either on clinical experience or on scientific experiments; and considers the exclusion of non-pauper immigrants and consumptive aliens visiting our shores unwise, inhuman, and contrary to the spirit of American justice. While the Academy upholds the fact of the communicability of tuberculosis and urges all possible precautions against the spread of the disease from the sputum and other tuberculous secretions, or from the ingestion of tuberculous food substances, it is opposed to all measures by which additional hardship is imposed upon the consumptive individual, his family, or his physician."

Jan. 24th.

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## AUSTRALIA.

### (FROM OUR OWN CORRESPONDENT.)

### *The Plague.*

ANOTHER and fatal case of plague has occurred in Sydney. Rats have also increased in numbers and hundreds of them, killed in different parts of the metropolitan area, were found to be affected with plague. Both the Government and the municipal authorities have instituted a vigorous crusade against the rodents. The sewers have been flushed and fumigated and business premises have been disinfected. In the measures taken some delay occurred owing to divided authority ; some steps have to be taken by the Government and Board of Health, some by the municipal council, some by the Water and Sewerage Board, and some by the Harbour Trust. The Mayor of Sydney claims that he should be made responsible for concerting the necessary action, but surely the Board of Health ought to be the proper authority. In Brisbane another case of plague has occurred, and there and in all the States precautions against the spread of the disease, and especially by the destruction of rats, have been vigorously prosecuted

### *Infectious Diseases.*

New and stringent regulations regarding precautions against infectious diseases have been issued in New South Wales, especially as to the disinfection of houses, the sending of children to school, and the transport of patients.

### *Inquiry at Kew Asylum.*

Reference has frequently been made in these columns to the unsatisfactory condition of the hospitals for the insane in Victoria. A recent inquiry into a charge of alleged neglect of a paying patient at Kew Asylum has emphasised the urgent need for reform. The acting medical superintendent in his evidence before the Inquiry Board stated that he was practically in charge of 450 male and 415 female patients and a staff of 130 attendants, and had practically to attend personally to the whole of the male patients, having only a temporarily appointed junior medical officer to assist him. None of the nurses in the asylum were certificated and there had been no head nurse for 18 months. No nursing standard was required from the matron. Very little difference was made in the treatment of paying and non-paying patients, as the medical officers did not know whether they paid or not. Both classes when violent went to the same refractory ward. The superintendent said that he would like to alter many of the present arrangements, but to do so entailed alterations in the structure of the buildings. In one ward 23 patients slept and six had beds on the floor because there was no room for bedsteads. The single music was provided by Mr. Hahn, the well-known pianist, and by Mr. Harold Loch, violinist, and capital songs were given by Mr. Kendal Ward, Dr. Malcolm, Dr. Arthur W. Wilson, Dr. Watson, Mr. Baker, and Mr. Glenton-Kerr.

**Notification of Chicken-pox.**—At the meeting of the Radstock (Somerset) Urban Council held on Jan. 24th, at the suggestion of the medical officer of health it was decided to include chicken-pox in the list of notifiable diseases.

**Bequests to Hospitals.**—The late Mr. Henderson of Bodmin has bequeathed £1000 to the South Devon and East Cornwall Hospital, Plymouth.—By the will of Miss Joyce Jane Lunell of Chiculdale, Montpelier, Weston-super-Mare, £1000 are bequeathed to the Weston-super-Mare Hospital.

**Bristol Naturalists' Society.**—The annual meeting of this society was held on Jan. 23rd at University College, Bristol. After the business had been transacted Dr. A. B. Prowse, the re-elected president, read an interesting paper descriptive of Some Botanical Photo-micrographs of Common Objects. The meeting terminated with a hearty vote of thanks to Dr. Prowse for his services in the chair during the preceding year and also for his paper.

**Redruth Rural District.**—Dr. A. E. Permewan, the medical officer of health of Redruth (Cornwall) Rural District, in his annual report for 1901 states that 496 births (26·9 per 1000) and 331 deaths (18 per 1000) were registered. He makes a reference to an increase in the number of deaths from phthisis, several of them having occurred in miners who had returned from working boring machines in South Africa.

**Manchester Infirmary.**—At the meeting of the board of management of the Manchester Infirmary held on Jan. 27th the rebuilding of the infirmary on the present site was accepted as feasible, if some other than the pavilion plan were adopted. The committee of the board appointed to consider the matter had been instructed to obtain plans and estimates for a new hospital to be built on the present site. They are to be submitted to the board at an early date, and, if approved, a special meeting of the trustees is to be called to consider them. "They desired that a new hospital should be provided ...... upon the best principles and in every way worthy of Manchester, and in that desire they had, they were glad to say, the cordial sympathy of the medical staff." The committee further says that it cannot be done unless the trustees and the public generally subscribe largely. It remains to be seen whether this scheme will be warmly taken up or not. It is not beyond criticism.

**Banquet to Dr. W. T. Edwards of Cardiff.**—On Feb. 1st Dr. Edwards was entertained by his professional brethren in the town and district of Cardiff to a banquet in commemoration of the jubilee of his association with the medical staff of Cardiff Infirmary. The banquet was held in the Royal Hotel, Cardiff, under the chairmanship of Dr. W. Taylor, and there was a very large attendance. The Chairman, in proposing "Our Guest," said that Dr. Edwards was one of the original promoters of, and subscribers to, the University College of South Wales and Monmouthshire. In 1885, on the occasion of the visit of the British Medical Association, he was the president, and that Association was never better entertained anywhere than at Cardiff. They also, he added, considered their guest the founder of the Cardiff Medical School, of which he was a generous supporter. The toast was drunk with musical honours.

**The** annual dinner of the British Gynæcological Society took place on Wednesday evening, Jan. 29th, at the Café Monico, when there was a large gathering of Fellows and guests. The retiring President of the society, Dr. J. A. Mansell Moullin, presided, and among those present were Surgeon-General W. Taylor, C B., the Director-General of the Army Medical Department, Professor Clifford Allbutt, Mr. W. Watson Cheyne, C.B , Sir James Crichton-Browne, Sir T. J. Gallwey, K.C.M.G , C B , and Dr. Robert Barnes. Several ladies were present and the hearty reception of the toast of "The Ladies" showed the appreciation with which the Fellows acknowledged the innovation. The toast of "The British Gynæcological Society" was proposed by Sir J. Crichton-Browne in an amusing and witty speech and was responded to by the chairman The toast of "Our Honorary President" was proposed by Dr. H. Macnaughton-Jones and was responded to by Dr. Robert Barnes. Dr. W. H. Bourke kindly undertook the supervision of a successful musical programme.

**A Town Council Vaccinated.**—At the meeting of the Helston (Cornwall) Town Council held on Jan. 30th the mayor and all the members of the corporation decided that they would be revaccinated at once as an example to their townspeople, and that posters should be distributed about the town informing the public that they could be vaccinated or revaccinated free of charge.

**Compliment to a Medical Officer of Health.**—At the meeting of the Barnstaple Town Council held on Jan 27th it was unanimously decided to record the council's high appreciation of the admirable manner in which the late medical officer of health (Dr. Mark Jackson) had performed his duties and it was stated that through his insistency the Infectious Diseases Notification Act was adopted in Barnstaple.

**Revaccination at Swansea.**—At the meeting of the Swansea Board of Guardians held on Jan. 31st one of the public vaccinators reported that he could not cope with the large amount of persons who wished to be revaccinated at his residence. On Jan. 30th he revaccinated 170 people, and hundreds had to be turned away. The other public vaccinator reported in a similar sense. It was decided to open stations for revaccination, the hours being fixed to suit the working classes.

**South Devon and East Cornwall Hospital Clinical Laboratory**—The work in this laboratory from June, 1901, to January, 1902, included 155 examinations of clinical and post-mortem pathological specimens. Among these were examples of actinomycosis of the peritoneum, spleno-myelogenous leukæmia, forms of anæmia, the serum and sero-sedimentation diagnosis of enteric and undulant fevers, gonorrhœa, tuberculosis, diphtheria, blood counts, and hæmoglobin estimations. The histo-pathological work included specimens of some rarity—e.g., a duct cancer and a large-celled sarcoma with intra-cystic growths of the mamma, tuberculous pyosalpinx, lymphadenoma of the abdominal type, adenomyxoma of the parotid region, hydatid "membrane," an enormous diffuse pigmented "sarcoma" of the liver and varieties of sarcomata, epi- and endotheliomata, &c The number of histological, chemical, and bacteriological examinations made appears to testify to the utility of this department to the hospital.

**Presentations to Medical Practitioners.**—Mr. W. Black Jones, M.D., B.S. Lond., D.P.H., was on Jan. 17th presented with a framed engraving, "The Doctor," by the nursing class in connexion with the Beulah (Breconshire) Centre of the St. John Ambulance Association —On Dec. 26th, 1901, after dinner, on board the P. and O. steamer *Peninsular*, the chairman of the Sports Committee, on behalf of the passengers, presented the ship surgeon, Mr. A. W. D. Hunt, L.R.C.P. Lond., M R.C S Eng , with a silver paper-knife and bookmarker suitably inscribed, an ancient seal of Aryan design and Hindoo workmanship, and a silver matchbox, as a mark of respect and esteem.—On Jan. 18th, at Gunnislake, Cornwall, after the distribution of medallions and certificates to the successful candidates of the Gunnislake branch of the St. John Ambulance Association, the members of the class presented Mr Albert Bowhay, L.R.C.P. Lond., M.R.C.S. Eng., D.P.H. Cantab , with a silver cigarette case as a mark of appreciation of his services as honorary lecturer.

**The Royal Institution.**—The Friday evening discourse at the Royal Institution on Jan. 31st was delivered by Professor A. Crum Brown, professor of chemistry in Edinburgh University, the title of his address being the Ions of Electrolysis He commenced with a reference to the polarisation of electrodes, a phenomenon which was for a long time unexplained but was at last shown by Schönbein to be due to the electrodes becoming covered with a thin film of the products of electrolysis. He then gave an outline of the gradual development of the theory of ionisation which originated with Faraday and was extended by Clausius, Hittorf, Kohlrausch, van't Hoff, Arrhenius, Principal Lodge, and others. According to the theory of ionisation, an electrolyte dissolved in water is dissociated into ions—a metallic chloride, for instance, being the last seven years. An inquest was held and the medical evidence was to the effect that the cause of death was heat apoplexy.—Mr. W. H. Tibbits, the oldest medical practitioner in the Western District of New South Wales, died at Dubbo recently. He had resided in that town since 1857, was connected with many of its public institutions, and was the oldest magistrate in the district.—Mr. T. L. Holthouse, who had practised in Ballarat, Victoria, for 40 years died on Dec. 9th, 1901. He was 82 years of age and was most highly esteemed. For 31 years he was medical officer to the Ballarat Benevolent Asylum.—Dr. Joseph Stapleton, of Wallsend, New South Wales, was found dead in the bush on Dec. 12th, 1901. He left home on horseback to go on a professional round and is supposed to have had an apoplectic attack. He was a native of Ireland, was 45 years old, and was unmarried. He was very charitable and popular, though somewhat eccentric.

Jan. 1st.

## Obituary.

### HENRY LANKESTER, M.R.C.S. ENG., L.S.A.

THE death took place on Jan. 30th, at his residence, Salisbury-road, Leicester, of Mr. Henry Lankester. The deceased gentleman, who was born in 1825, was a native of Poole, and went to Leicester in 1854. Subsequently he became a partner with the late Dr. Macaulay, and on that gentleman's death he started practice on his own account. For a considerable period he was surgeon to the Midland Railway Company for the Leicester and Rutland District, and he was held in the highest esteem by his professional brethren. In 1879 he became a member of the Leicester Town Council and in 1890 he was elected mayor of the borough, being in the same year raised to the aldermanic bench. In 1892 he was made a justice of the peace, and although on the extension of the borough boundaries he retired from the town council he nevertheless continued to take a deep and practical interest in local public affairs. He was President of the Leicestershire Band of Hope Union, a contributor to numerous agencies which had for their object the general well-being of the community, and, as a total abstainer, an ardent supporter of the temperance cause. Lately he had been in failing health and some few weeks ago he had a seizure, since when his recovery had been despaired of. The deceased married, in 1861, Miss Squire of Royston, Cambridge, by whom he had seven children—six sons and a daughter. The eldest son is physician to the Church Missionary Society. The funeral took place at the Leicester Cemetery on Feb. 3rd, amid many manifestations of the high esteem in which the deceased gentleman was held. The Mayor of Leicester and many members of the town council and other public bodies attended.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Axel Key, one of the most eminent of Swedish medical men. He was born in 1832 and after studying in Lund qualified in 1852. Later he went to Germany and worked under Max Schultze in Bonn and Virchow in Berlin. After his return to Sweden he was appointed to the chair of Pathological Anatomy in the Caroline Institute, Stockholm, and was the first editor of the well-known *Nordiskt Medicinskt Arkiv*. He published in conjunction with Dr. Retzius researches on the Structure of the Nervous System. He also worked at the pathology of the heart and was much interested in school hygiene. He retired from active work about five years ago.—Professor Luigi Chiminelli of the University of Rome.—Dr. Hugo Pernice, formerly Professor of Gynæcology in the University of Greifswald, a post which he held from 1858 to 1899. He was a native of Halle and studied medicine there, in Prague, and in Greifswald.—Dr. Destrée, Director of the Second Medical Clinic in Brussels, at the age of 43 years.—Dr. F. J. Soupart, formerly Professor of Clinical Surgery in the University of Ghent and Belgian Senator. His age was 91 years.—Dr. Bosdorff, Vice-President of the Berlin and Brandenburg Medical Society, at the age of 68 years.—Dr. Eduard Cramer, Extraordinary Professor of Hygiene in the University of Heidelberg. He was in his thirty-ninth year and was the son of Dr. Heinrich Cramer, Professor of Psychiatry in Marburg.—Dr. Louis Kagelmann of Hanover, at the age of 74 years. He was an active politician of the Social Democrat school.

## Medical News.

UNIVERSITY OF CAMBRIDGE.—At the congregation on Jan. 30th the following medical and surgical degrees were conferred:—

*M.B.*—A. H. Grey and A. C. Hudson, Trinity; R. G. Abercrombie, Caius; A. B. Dunne, Queen's; and A. P. Bowdler, Sidney.

*B.C.*—A. C. Hudson, A. B. Dunne, and A. P. Bowdler.

Dr. W. E. Dixon was admitted to the degree of M.A. *honoris causa*.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin*: Dr. Moritz Elsner, of the Infectious Diseases Institute, has been granted the title of Professor. Dr. Oskar Spitta has been recognised as *privat-docent* of Hygiene.—*Bonn*: Dr. M. zur Nedden has been recognised as *privat-docent* of Ophthalmology.—*Florence*: Dr. Gaetano Pieraccini has been recognised as *privat-docent* of Medical Pathology.—*Moscow*: Dr. Levshin is retiring from the chair of Clinical Surgery. His successor will be Dr. Zhakonoff, Professor of Operative Surgery. Dr. Krinkoff has been promoted to an Ordinary Professorship of Ophthalmology. Dr. Speranski has been recognised as *privat-docent* of Dermatology.—*Munich*: Dr. Martin Hahn, *privat-docent* of Hygiene, and Dr. Adolf Schmitt, *privat-docent* of Surgery, have been promoted to Extraordinary Professorships.—*Pisa*: Dr. Pinzani has been promoted to the Professorship of Clinical Midwifery.—*San Francisco*: Dr. L. Newmark has been appointed Professor of Neurology.—*Valencia*: Dr. J. Bartrina y Capella has been appointed Professor of Topographical Anatomy.—*Vienna*: Owing to the approaching retirement of Dr. Krafft-Ebing from the chair of Psychiatry several changes and promotions will take place. His successor will be Professo Wagner von Jauregg, Director of the First Psychiatric Clinic in Vienna. Dr. Anton will be brought to Vienna from Graz, Dr. Mayer, Professor at Innsbruck, supplying his chair, while Dr. von Sölder, now first assistant to Professor Krafft-Ebing, will migrate to Innsbruck to take charge of the psychiatric clinic there. Dr. Karl Kreibich has been recognised as *privat-docent* of Dermatology. A new bacteriological laboratory with an installation of the most modern description is to be erected in Professor Gruber's University Hygienic Institute. Dr. R. Kretz, *privat-docent* of Pathological Anatomy, has been promoted to an extraordinary professorship.

DEATH AFTER AN ILLEGAL OPERATION.—On Jan. 31st, at the Deptford Congregational Hall, an inquest was held on the body of a woman, aged 29 years, who died from blood-poisoning supposed to be due to an attempt by another woman to procure abortion. In the course of the evidence it was stated that the alleged abortionist had advised her victim not to call in a medical man, as it would get her (the abortionist) into trouble. If, however, she were compelled to call in medical assistance she was to say that her injuries had been caused by fighting with another woman. The coroner's jury returned a verdict of "Wilful murder" against the woman who performed the illegal operation.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY.—The President and Council of this society gave an enjoyable smoking concert and conversazione at the Great Northern Central Hospital recently. The out-patient hall, the use of which had been granted by the hospita committee, had been decorated with flags and flowers, an made an excellent reception-room. There was a larg attendance, amongst those present being Mr. N. Brand Baker, Mr. Fraser Black, J.P., Mr. Watson Surr, J.I Dr. Basil G Morison, Dr. G. de B. Watson, Dr. A. Wh field, Mr. Peyton T. B. Beale, Dr. Samuel E. Dore, Mr. Macready, Dr. Atkinson, Councillor Dr. W. A. Malcolm, Dr. Glover, Dr. J. Crabb, Mr. T. A. Cambridge, Mr. Mower White, Dr. Robinson, Dr. L. Freyberger, Dr. G. F. Blacker, Mr. T. H. Purvis, and Dr. Walsham. During the evening

the Medical Act are governed by the terms of that Act and the decisions thereunder, and the Secretary of State for the Home Department has no authority to interpret them As regards the last part of the question the subject of the sale of poisons is now being considered by a committee whose recommendations must be awaited before any decision as to the legislation suggested can be arrived at

### *The Spread of Small pox by Tramps*

Mr **PLATT-HIGGINS** asked the President of the Local Government Board whether he would state what steps the Local Government Board was taking to prevent the spread of small pox by tramps —Mr **GRANT LAWSON** Parliamentary Secretary to the Board, replied My right hon friend recently issued circular letters to boards of guardians in which he called attention to the risk of small pox being spread by means of casual paupers and pointed out the steps which should be taken by the guardians and their officers with a view of diminishing as far as possible the danger from this source

Mr **PLATT HIGGINS** asked if any consideration of expense such as extra remuneration to medical officers would be allowed to stand in the way —Mr **GRANT LAWSON** replied No it would not be allowed to stand in the way The board has not restricted expenditure in the combating of small pox in any direction

### *The Tuberculosis Commission*

Mr **CHANNING** asked the President of the Local Government Board whether he could state when the commission appointed to report on Professor Koch's theory that bovine and human tuberculosis were distinct diseases and incommunicable was expected to report —Mr **GRANT LAWSON** replied I am not in a position to state when the commission will be able to report but it is not likely that they can do so for a considerable time I am informed that very extensive experiments will have to be carried out by the commission and that for this purpose laboratories and other buildings have been erected on the farms where this part of the work is to be done It is, I understand impossible to say how long these experiments will take but arrangements have been made for the commission to occupy the farms for three years

### TUESDAY FEB 4TH

### *The Royal Army Medical Corps*

Sir **JOHN BATTY TUKE** asked the Secretary of State for War if an early opportunity could be given for debating the warrant for the reconstruction of the Royal Army Medical Corps which he had promised to present to the House —Mr **BRODRICK** replied: I am afraid that I am not yet in a position to say when it is probable that the vote for the Medical Establishment of the Army will be brought forward

Mr **BLACK** asked the Secretary of State for War whether with the view of encouraging graduates from the Scottish universities to enter the Army Medical Service he would appoint a professor from one of the Scottish universities upon the Army Medical Advisory Board as had been done in the case of the English and Irish universities —Mr **BRODRICK** replied: In selecting the members of the Board every care was taken to make it as representative as was consonant with the requirements of the Royal Army Medical Corps which necessitated the personal attention of members of the Advisory Board to the interests of the service Dr Galloway a distinguished Scotch graduate resident in London lecturer at Charing cross Hospital, and formerly an examiner in the faculty of medicine at Aberdeen University, was selected to represent the interests of Scotland I would however point out to the hon member that in addition to Dr Galloway three of the military medical members are graduates of Scotch medical schools and Scotland is therefore exceptionally represented on the Board —Mr **BLACK** Have any of these gentlemen any present connexion with a Scotch university?—Mr **BRODRICK** It will be impossible to make any alteration in the composition of the Board and I have not the least doubt that the interests of Scotland will be properly cared for

### *The Small pox Epidemic*

Mr **COGHILL** asked the President of the Local Government Board whether he could state the total number of cases of small pox in the metropolis since the present outbreak and whether it was the intention of the Government this session to bring in a Revaccination Bill in fulfilment of the pledge given by them in the session of 1898 —Mr **GRANT LAWSON** replied According to the Registrar General's weekly returns 2656 cases of small pox were notified in the metropolis between June 1st 1901 and Jan 25th 1902 With regard to the second part of the question I cannot hold out any expectation that the Government will introduce a Revaccination Bill during the present session I am not aware that any pledge was given in 1898 as to the introduction of such a Bill though the Government promised to consider the matter —Mr **COGHILL** Is not the cause of the present outbreak the invention of the "conscientious objector"—Mr **GRANT LAWSON** No, I think not

Sir **JOHN TUKE** asked the President of the Local Government Board if he would consider the expediency of adopting in connexion with the present outbreak of small pox in London the methods for procuring more general revaccination which were resorted to successfully in Glasgow in the year 1901 involving a house-to-house visitation of the community divided into manageable areas and the employment of all medical men willing to assist in the matter —Mr **GRANT LAWSON** replied: It would be impossible to adopt the Glasgow plan throughout the whole of London at one and the same time but my right hon friend has under consideration how far it might be practicable to adopt some such methods in particular areas

## BOOKS, ETC , RECEIVED

**BAILLIÈRE, TINDALL, AND COX** 8 Henrietta-street, Strand, W C
- The Roentgen Rays in Medical Work By David Walsh M.D Edin Part I Apparatus and Methods rewritten by Lewis Jones M D Cantab F R C P Part II Medical and Surgical Third edition Price 12s 6d net.
- Hernia: Its Etiology Symptoms and Treatment. By W McAdam Eccles M S Lond, F R C S Eng Second edition Price 7s 6d net.

**CHURCHILL, J & A , 7,** Great Marlborough street, W
- Transactions of the Otological Society of the United Kingdom Vol ii Second session, 1900-1901, with list of officers members, &c Edited by Arthur H Cheatle, F R C S, and William Milligan M D Price 10s net
- The Journal of Mental Science January, 1902 Price 5s

**CROSBY LOCKWOOD AND SON**, 7 Stationers Hall court, Ludgate-hill E C
- Water and its Purification By Samuel Rideal D Sc Lond Second edition, revised and extended Price 9s net

**GRIFFIN, CHARLES AND COMPANY, LIMITED** Exeter street Strand, W C
- A Surgical Handbook for the use of Students Practitioners, House Surgeons and Dressers By Francis M Caird M.B, F R C S Edin and Charles W Cathcart, M B, F R C S Eng & Edin Eleventh edition Price 8s 6d
- Outlines of Practical Physiology: being a Manual for the Physiological Laboratory including Chemical and Experimental Physiology with reference to Practical Medicine By William Stirling M D Sc D Fourth edition, revised and enlarged Price 15s net
- Sanitary Engineering A Practical Manual of Town Drainage and Sewage and Refuse Disposal By Francis Wood, A M Inst C E, F G S Price 8s 6d net

**JOHN BALE, SONS, AND DANIELSSON, Limited**, 83-89 Great Titchfield street W
- The Climate and Mineral Waters of Caledon South Africa. By G W B Daniell M R C S Eng, L R C P Lond Price not stated
- The Croonian Lectures on the Chemical Side of Nervous Activity Delivered before the Royal College of Physicians of London in June 1901 By W D Halliburton M D, F R S Price 5s net

**KIMPTON HENRY** 13 Furnival street, Holborn, E C
- Progressive Medicine Edited by Hobart Amory Hare, M D, assisted by H R M Landis M D Volume iv December 1901

**LEHMANN, J F**, München
- Lehmann's Medizinische Handatlanten —
  - Band XXVI Atlas und Grundriss der Histologie und Mikroskopischen Anatomie des Menschen Von Privat dozent Dr J. Sobotta in Würzburg Preis gebunden Mk 20
  - Band XXVII Atlas und Grundriss der Psychiatrie Von Wilhelm Weygandt Dr Phil et Med Privat dozent der Psychiatrie an der Universität Würzburg Preis gebunden Mk 16
  - Band XXVIII Atlas und Grundriss der Gynäkologischen Operationslehre Von Dr Oskar Schaeffer Privat-dozent an der Universität Heidelberg Preis gebunden Mk 12

**LIPPINCOTT J B COMPANY** Philadelphia
- An Experimental and Clinical Research into Certain Problems relating to Surgical Operations By George W Crile, A.M, M D, Ph D Price 1[illegible]s 6d

**MURRAY JOHN** Albemarle street, W
- The Harveian Oration Delivered before the Royal College of Physicians of London on Oct 18th, 1901, by Norman Moore, M D Price 2s 6d net
- The Journal of the Royal Agricultural Society of England Volume lxii Free to members Price to non members 12s

**NEW SYDENHAM SOCIETY** (Agent and Depot for the Publications, H K Lewis London)
- Selected Essays and Monographs, chiefly from English Sources Vol 173

**RENSHAW HENRY** 356 Strand W C
- A Manual for Assistants Examination Apothecaries' Hall By Mabel I Stanley Qualified Dispenser, Apothecaries Hall Price not stated

**SMITH, ELDER AND CO** 15 Waterloo place, S W
- Lectures on Chemical Pathology in its Relation to Practical Medicine Delivered at the University and Bellevue Medical School New York City By C A Herter M.D Price 7s 6d

**SOCIÉTÉ D'ÉDITIONS SCIENTIFIQUES** 4 Rue Antoine Dubois Paris
- Traitement des Maladies Contagieuses de l'Appareil Génerateur By Dr [illegible] Secrétaire Général de la Société de Médecine de Paris Price 4 francs
- Essai de Séméiologie Urinaire By Camille Vieillard Pharmacien Chimiste Lauréat du Concours Brassac Preface by Albert Robin de l'Académie de Médecine Price 6 francs

**WILSON EFFINGHAM** 11 Royal Exchange, E C
- Food and Drugs A Manual for Solicitors Public Analysts, Inspectors Traders, and Others Second edition revised and enlarged Price [illegible]s 6d net

**WITHERBY AND CO** 326 High Holborn W C
- Lean's Royal Navy List No 97 January 1902 Founded and edited by Lieutenant Colonel Francis Lean Royal Marine Light Infantry (retired) Price 7s 6d

## Appointments.

*Successful applicants for Vacancies Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to* THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number*

**ALLARDICE WILLIAM C** M D C M Glasg has been appointed Assistant Surgeon to the North Staffordshire Infirmary and Eye Hospital.

dissociated into a metal (anion) and chlorine (kation). When an electric current passes the anions and kations are assumed to travel in opposite directions towards the kathode and anode respectively. To illustrate this migration of the ions Professor Crum Brown made an experiment in which solutions contained in a narrow U-tube were shown on the screen. A crimson column of potassium permanganate was interposed between colourless columns of (1) potassium nitrate solution and (2) potassium nitrate solution made dense with urea (a non-electrolyte). When an electric current was passed the crimson column moved slowly. Several other experiments were also shown.

# Parliamentary Intelligence.

## NOTES ON CURRENT TOPICS.

### *Mr. Broadhurst's Vaccination Bill.*

THE Vaccination Bill introduced by Mr. Henry Broadhurst is a very simple measure. In one short enacting clause it proposes to abolish compulsory vaccination.

### *Vaccination Bill in the House of Lords.*

Lord Newton has introduced a Bill in the House of Lords to repeal the conscientious objectors clause in the Vaccination Act of 1898.

## HOUSE OF COMMONS.

### THURSDAY, JAN. 30TH.

#### *Tuberculosis in the Postal Service.*

Sir WALTER FOSTER asked the Secretary to the Treasury, as representing the Postmaster-General, whether the Postmaster-General had had his attention drawn to the report of the Association of British Postal Medical Officers on the prevalence of tubercle among postal employés and to the summary of preventive measures drawn up; and whether the Postmaster-General was prepared to adopt the measures therein set forth for the more effective prevention of tuberculosis among the staff of the Post Office.—Mr. AUSTEN CHAMBERLAIN replied: The Postmaster-General received the report referred to in due course. Some of the preventive measures suggested in it were already in operation and others that have been found practicable have been adopted. Statistics supplied by the Registrar-General show that the rate of mortality from phthisis and cognate diseases between the ages of 15 and 65 years is much greater in the country at large than amongst the established employés of the Post Office; and there is no reason to think that persons in the Post Office Service are more subject to these diseases than others.

#### *Vaccination Statistics.*

Mr. CORRIE GRANT asked the President of the Local Government Board whether he was aware that the Metropolitan Asylums Board had repeatedly declined to supply information as to the names and addresses, ages, and conditions as to vaccination of all small-pox patients treated in their hospitals, although they were required to give this information by Section 8 of the Vaccination Act, 1898, and whether children born in these hospitals and duly vaccinated and afterwards dying from small-pox were included in the statistical tables of the Metropolitan Asylums Board among unvaccinated cases.—Mr. LONG replied: The section mentioned by the hon. Member does not apply in the case of a small pox hospital maintained by the managers of the Metropolitan Asylums district, as the managers are not a sanitary authority within the meaning of the section. I am, however, informed by the managers that a register similar to that described in the section is, in fact, kept at the hospital ships, but that only two persons have made application to inspect it The reply of the managers to these applications, which, it appeared, were made on behalf of the National Anti-Vaccination League, was to the effect that arrangements would be made for the register being produced, assuming that the person wishing to inspect was prepared to comply with the regulations of the managers and to satisfy the medical officer before entering the ships that he was adequately protected against contracting small-pox. With regard to the last part of the question, it is the practice of the managers to classify as unvaccinated any person who was already infected with small-pox before vaccination was performed. I understand that no birth took place in the small-pox hospitals of the managers last year and that this year there have been only three births.

#### *The London Water Bill.*

Mr. LONG introduced at this sitting of the House the Bill of the Government for the establishment of a Water Board for the supply of water within London and certain adjoining districts and for the transference to this board of the undertakings of the metropolitan water companies. He explained that the Government had decided to take the sanitary authorities of "Water London" and to make it their duty to select representatives who would form the proposed Water Board. The sanitary authorities selected were the metropolitan boroughs and the City of London, the urban sanitary districts of the outside areas, the London County Council, and the county councils of the adjoining metropolitan counties. There were 28 metropolitan boroughs. Six of these—Islington, Kensington, Lambeth, St. Pancras, Stepney, and Westminster—would have two members on the body and the others one member each, the London County Council would have 10 members, the Common Council of the City of London would have two members, the Council of the Borough of West Ham two, the councils of East Ham, Leyton, and Walthamstow one each, the county councils of Kent, Middlesex, Surrey, and Hertfordshire one each, and the Conservancies of the Thames and the Lee one each. The outside urban districts would be grouped and each group would be represented by one member on the proposed board. There would be a total membership of 67, with in addition the chairman and deputy-chairman, who could be elected from outside the body and paid. These figures gave to London, as represented by the metropolitan boroughs, the City of London, and the London County Council, a majority of two-thirds of the representation on the new board. It would be the duty of the board to purchase the undertakings of the metropolitan water companies within an appointed time by agreement or, failing agreement, by arbitration. It was proposed to establish a special court of arbitration, consisting of Sir Edward Fry, late a Lord Justice of Appeal; Sir Hugh Owen, late permanent secretary to the Local Government Board; and Sir John Wolfe Barry, the well-known engineer. While the arbitration clause was an open one, giving full powers to the arbitrators, the Government had adopted the recommendation of the Royal Commission and had decided that in this case the usual addition of 10 per cent. for compulsory purchase should not be allowed. The Water Board would represent, control, and administer the whole area which was now governed by the eight metropolitan water companies and would issue stock bearing interest at 3 per cent. per annum.—In the debate which followed Mr. Long's introductory statement several members took exception to the limited representation given to the London County Council.

#### *Licensing Bill.*

A Bill was introduced by Mr. RITCHIE to amend the law relating to the sale of intoxicating liquors and to provide for the registration of clubs. Like the Bill of last session it endeavours to strike at habitual drunkenness. It gives husbands and wives protection against drunken spouses, provides for the committal of habitual drunkards to inebriate homes, and contains clauses which propose to make it an offence to supply drink to habitual drunkards. It also increases the powers of justices with regard to structural alterations in public-houses. With regard to clubs the Bill provides that they must all be registered and in certain circumstances be subjected to police supervision.

### FRIDAY, JAN. 31ST.

#### *The Charge for Vaccination Exemption Certificates.*

Mr. HARWOOD asked the Home Secretary whether there was any fixed charge for vaccination exemption certificates; whether he was aware that there was a variety in the scale of charges even in neighbouring towns; and whether he would endeavour to secure that these charges should nowhere be excessive.—Mr. RITCHIE replied: The charge for such a certificate varies in different districts in the same way as other fees chargeable by justices' clerks, though not to the same extent as some of these fees. I am doing my best to secure uniformity in respect of this fee as well as others, but my authority in this matter is contingent on a draft table of fees being submitted by the local authority.

### MONDAY, FEB. 3RD.

#### *The Case of Dr. R. Rendall of Great Yarmouth.*

Dr. MACNAMARA asked the Secretary of State for the Home Department whether his attention had been directed to the case of Dr. R. Rendall of Great Yarmouth, who on Nov. 28th, 1901, was summoned before the General Medical Council and deemed by that body to be guilty of infamous conduct in a professional respect on the ground that he held an appointment as medical officer for the Liverpool Victoria Legal Friendly Society, which canvassed for members, and which society had been established 60 years, was duly registered under the Friendly Societies Act, and comprised a membership of two and a half millions; and whether he would take the opinion of the law officers of the Crown with the view of ascertaining whether the General Medical Council had power under the Medical Acts to declare a properly qualified medical man holding such an appointment guilty of infamous conduct, and thus be able to erase his name from the Medical Register.—Mr. JESSE COLLINGS said: My right hon. friend desires me to say that he does not wish to enter into the details of the particular case referred to, as he understands that it is still, in a sense, *sub judice*; but he is advised that the powers of the General Medical Council as to deciding what is and what is not "infamous conduct in a professional respect" within the meaning of the Medical Act are clearly laid down by that Act and the decisions thereunder; and he sees no necessity for consulting the law officers of the Crown in the matter.

#### *The Sale of Scheduled Poisons.*

Mr. CALDWELL asked the Secretary of State for the Home Department whether he was aware that, under the law relating to the sale of scheduled poisons, an unqualified assistant of a medical man or of a registered chemist was prohibited from selling poisons, under penalty of a fine, but that no penalty was attached to the employer for any offence committed by such unqualified assistant; whether he was aware that in the case of registered medical practitioners the General Council of Medical Education and Registration of the United Kingdom had given notice that it would treat as infamous conduct in a professional respect, and have the names erased from the Medical Register, under the twenty-ninth section of the Medical Act, 1868, of any medical practitioners who might leave an unqualified assistant in charge of their medical hall or open shops, whilst no penalty was attached to the registered chemist who employed an unqualified assistant should that assistant sell scheduled poisons; whether it was within the power of the General Medical Council to declare the employment of an unqualified assistant to be infamous conduct of a professional respect under the Medical Acts; and, if so, whether he would introduce legislation which would equally punish a registered chemist who might similarly employ an unqualified assistant, seeing that the danger to the public is equally the same whether the unqualified assistant be that of a medical practitioner or of a registered chemist.—Mr. JESSE COLLINGS replied: My right hon. friend understands that under the Pharmacy Acts, 1868 and 1869, any person who, not being a chemist or a qualified medical practitioner, sells poison is liable to prosecution, but that there is no provision in those Acts for making the employer responsible for the acts of his apprentice or assistant except in the case of a breach of the regulations to be observed in the sale of poisons. As my right hon. friend has said in answer to another question, the powers of the General Medical Council as to deciding what is or what is not "infamous conduct in a professional respect" under

# Notes, Short Comments, and Answers to Correspondents.

## ANTISEPSIS IN HAIRDRESSING

LONDON, as in so many things is rather behind the times in matters of cleanliness as regards hairdressing In shaving possibly the chance of infection is not so great for although there is common use of the brush and soap to say nothing of the razor, yet hot water and soap are very fair bactericides in themselves But the common use of brushes and combs is not at all unlikely to be a fruitful source of infection People are wiser now than they were some 30 years ago when we knew a lady who on her children returning from school where they had had scarlet fever expressed her intention of taking them to a hairdresser so that their heads might have a good brushing Children's heads are always scurfy after scarlet fever and these machine brushes are so much better than an ordinary hair-brush said this artless person But apart from scarlet fever there are plenty of diseases likely to be spread by the use of common brushes and combs In Paris stringent rules are laid down for the sterilising of hairdressers implements In London however, it has been left to voluntary effort to establish a place where antisepsis is attended to The Antiseptic Hair Dressing Association has opened a shop at 51, Jermyn street S W where all the razors are fitted with detachable metal handles so that both blade and handle can be sterilised The combs are metal and so are the backs of the brushes Only hand brushes are used and for shaving each customer is given a separate dose of soap powder, taken straight from a little capsule The brush is sterilised after each using and the operators wear waterproofed sterilisable overalls The head rests on the chairs are pneumatic indiarubber pads which can easily be detached and washed All the basins are made with pedal taps We think that the idea is a very good one and deserves to succeed

## THE RELATION OF THE CHURCH TO SANITARY REFORM

THE vicar of the Church of St Michael and All Angels, Blackheath Park has sent us a copy of his *Parish Notes* for February We are glad to see that he refers to our recent article upon the Relation of the Church to Sanitary Reform and urges in the strongest manner the utility of vaccination The vicar quotes the figures recently published by the Metropolitan Asylums Board and adds 'We hope that no further argument is needed to induce everyone who reads and digests these figures to be revaccinated at once Argument is useless in dealing with pronounced anti vaccinationists Dr Johnson when a lady asked him why he had given a certain definition in his dictionary replied Ignorance madam sheer ignorance But the average anti vaccinationist is too ignorant to know that he does not know We hope that the clergy will continue to try to enlighten their flocks upon the subject of small pox and its preventive

## HOW DISEASE IS SPREAD

THE difficulties with which the sanitary authorities have to contend in their efforts to stamp out disease are enormous In a leading article in THE LANCET of Jan 25th (p 239) we referred to several cases in which persons suffering from infectious diseases had carried infection from place to place and we print below a further list of cases to which we have had our attention called during the month of January It should be remembered that in all probability the number of cases which receive the light of publicity bears but a small proportion to those which escape notice

At Warminster petty sessions on Jan 2nd a man was fined £1 and 8s costs for entering an inn whilst knowing himself to be suffering from small pox

At the East Kerrier District Council meeting held at Falmouth on Jan 4th the medical officer of health referring to scarlet fever which lingered about certain parts of his district, said that he had a strong suspicion that many cases were being concealed

The medical officer of the Llandilo-Talybont division of Llangyfelach Rural District Council told the following story at the meeting of the council on Jan 7th Four cases of typhoid fever were he said reported from the Fforestfach district, and these were due in the first place to infection imported from elsewhere A child died from typhoid fever in the Rhondda and the body was brought to Cockett for interment The funeral party, including the mother of the child visited two houses in the same street, one the house of the grandmother and the other the house of an aunt of the deceased child Exactly a fortnight later the mother of the deceased child died in the Rhondda from typhoid fever One case occurred in each of the two houses visited by the funeral party and the remaining two cases occurred in two houses which received milk from the grandmother of the deceased child, the milk being carried to these houses by one of the patients from the two houses already mentioned who was ailing for a considerable time before she kept her bed and before a medical man was called in A case of wilful exposure by a person *suffering* from scarlet fever was also reported A servant girl in Swansea was taken ill and although informed by the medical attendant of the necessity of avoiding exposure she proceeded to her home in Waunarlwydd

The following disgraceful case was disclosed at Barrow, Lancashire, on Jan 17th when a man was charged with neglecting his eight children whose ages ranged between three and 15 years The inspector for the National Society for the Prevention of Cruelty to Children said that the case had been under observation for over 12 months The children were found to be in a filthy condition and practically starving The house only contained five rooms yet there were no less than 23 persons living in it The man could earn at the steel works £5 a week, but he was always drinking and would not work The medical officer of health said that the house was in a deplorable condition The house came under his observation six months ago and it was there that the small pox epidemic broke out The family were all unvaccinated and owing to the outbreak of small pox in the house the disease spread to no less than 30 people in the town It might just as easily have spread to 30 000 Through these people it was carried to Staffordshire and Blackburn The authorities put new furniture and bedding into the house but these were soon in as filthy a condition as those destroyed The prisoner said that one of his elder girls aged 19 years went to Birmingham and that was how the disease was carried All this neglect he said, had occurred since his wife died He was sent to prison for four months

A married woman of West Town Dewsbury, was fined 20s and costs on Jan 21st for exposing a child suffering from scarlet fever, though warned of the infectious character of the disease

## THE CASE OF THE LATE MR R B ANDERSON

*To the Editors of* THE LANCET

SIRS —I shall be obliged if you will insert the following list of those who have been kind enough to respond to my appeal on behalf of the family of the late Mr R B Anderson As will have been seen from the announcement by the honorary secretary of the fund subscriptions will be received up to the end of February, so that there is still time for those who have been *thinking* of subscribing to do so The total sum received is still well under £200 a sum quite inadequate for the needs of the family While not wishing to make invidious comparisons I cannot resist pointing to the very different result of the Smyth appeal In that most deserving case money has simply poured in while here, in a case which ought to appeal specially and unmistakeably to the feelings of the profession and which could not be expected to get much help from the general public, repeated solicitations have only resulted in the beggarly sum before mentioned I should like to bring to the notice of the members of medical unions and ethical societies the example set by the Gateshead Medical Association At its annual dinner as the result of an appeal made by me the sum of £22 was raised without difficulty Could not this be done by other societies supposed to be interested specially in medical politics?

I am, Sirs, yours faithfully,

ALFRED COX

Gateshead, Jan 25th 1902

| | £ | s | d |
|---|---|---|---|
| Dr R S Peart (North Shields) | 2 | 2 | 0 |
| Dr S Woodcock (Manchester) | 1 | 1 | 0 |
| Mr C H W Parkinson (Wimborne) | 1 | 0 | 0 |
| Mr J Thomarson | 0 | 7 | 6 |
| Dr C J Allan (Lasswade) | 0 | 3 | 0 |
| Per the *General Practitioner*— | | | |
| Dr L W Adams (Sheffield) | 0 | 5 | 0 |
| L R C P Sheffield (second donation) | 0 | 2 | 6 |
| Mr S T L Smith (Birmingham) | 0 | 2 | 6 |
| Collected at the Dinner of the Gateshead Medical Association— | | | |
| Mr J Rutherford Morison (Newcastle-on Tyne) | 10 | 0 | 0 |
| Dr D Drummond (Newcastle on Tyne) | 2 | 0 | 0 |
| Dr J H Hunter (South Shields) | 1 | 1 | 0 |
| Dr E W Diver (Shotley Bridge) | 1 | 1 | 0 |
| Mr A S Jaques (Gateshead) | 1 | 1 | 0 |
| Dr W J Durant (Gateshead) | 1 | 1 | 0 |
| Mr J W Mackay (Pelaw) | 0 | 11 | 0 |
| Professor T Oliver (Newcastle-on Tyne) | 0 | 10 | 0 |
| Dr H J Gilbert (Gateshead) | 0 | 10 | 0 |
| Mr J Todd (Gateshead) | 0 | 10 | 0 |
| Mr A A Abraham (Gateshead) | 0 | 10 | 6 |
| Mr W H Davis (Low Fell) | 0 | 10 | 0 |
| Dr R Anderson (Gateshead) | 0 | 10 | 0 |
| Mr C G B Knapp (Gateshead) | 0 | 10 | 0 |
| Dr A Cox (Gateshead) (second donation) | 0 | 9 | 0 |
| Dr W Smith (Gateshead) (second donation) | 0 | 5 | 0 |
| Mr A Dougall (Dunston on Tyne) | 0 | 5 | 0 |
| Dr A Green (Gateshead) | 0 | 5 | 0 |
| Mr S V Robinson (Gateshead) | 0 | 5 | 0 |
| Mr W Galloway (Low Fell) | 0 | 5 | 0 |
| Dr J R Williams (Penmaenmawr) | 1 | 1 | 0 |
| Dr H Smith (Durham) | 1 | 1 | 0 |
| Mr S Basham (Newcastle on Tyne) | 0 | 10 | 6 |
| "A Doctor's Wife" (Brighton) | 0 | 10 | 0 |
| Mr I S Goodly (Llandudno) | 0 | 5 | 0 |

## THE DIAGNOSIS OF SMALL-POX

ON Feb 4th Dr John Colin Matheson of Gerrard street Soho —not of 11 Soho-square as stated in the Medical Directory,—appeared to an adjourned summons which charged him with neglecting to send a certificate to the medical officer of health that a patient under his care was suffering from small pox Dr Matheson elected to give evidence and said that on Dec 20th he was called to see a man named Thackery whom he found had a rash He was unable to form a definite opinion as to the nature of the disease and on the 21st the rash had extended all over the body The rash was

**CANE, HOWARD**, M.D., L.R.C.P. Lond., M.R.C.S., has been appointed by the London County Council Medical Officer to the Staff at the Crossness Outfall Works, vice Mr. J. Elliot.

**DIXON, W. J.**, M.B., M.S. Madras, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Assistant Medical Officer to the Concentration Camp, Standerton, Transvaal.

**DONALD, W.**, M.D. Aberd., has been appointed Certifying Surgeon under the Factory Acts for the Banff District.

**FIRTH, J. LACY**, M.D., M.S. Lond., F.R.C.S. Eng., has been appointed Surgeon to the Bristol General Hospital, vice C. F. Pickering, F.R.C.S., resigned.

**GARBETT, P. G.**, M.B., B.S. Durh., has been appointed Certifying Surgeon under the Factory Acts for the Earl Shilton District of the County of Leicester.

**HAMILTON, J. STIRLING**, B.A. Cantab., has been appointed House Physician to St. Bartholomew's Hospital.

**HARPER, J. R.**, M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer of Health for the Borough of Barnstaple.

**HULBURT, H. L. P.**, M.A. Cantab., has been appointed House Physician to St. Bartholomew's Hospital.

**KERR, JAMES**, M.D. Cantab., has been appointed Medical Officer to the School Board for London.

**KYLE, HENRY GREVILLE**, B.A., M.B., B.Ch. Oxon., has been appointed Honorary Assistant Surgeon to the Bristol General Hospital, vice J. L. Firth, appointed Honorary Surgeon.

**LITTLE, A. J.**, L.R.C.P. Irel., L.S.A., has been appointed Medical Officer of the Uxbridge Union.

**MACKENZIE, DONALD**, M.B., C.M. Aberd., has been appointed Certifying Surgeon under the Factory Acts for the Ullapool District of the County of Ross and Cromarty.

**MATURIN, H.**, M.R.C.S., L.S.A., has been appointed Medical Officer of Health for the Hartley Wintney Rural District, Hampshire.

**MEADE-KING, R. LIDDON**, M.D., B.S. Durh., L.R.C.P., M.R.C.S., has been appointed Honorary Obstetric Physician to the Taunton District Nursing Association.

**NICHOLSON, BALFOUR STEWART**, M.B., M.S. Glasg., has been appointed Medical Officer of the Parish of Clackmannan.

**PICKERING, CHARLES FREDERICK**, .R.C.S. Eng., L.R.C.P. Lond., has been appointed Honorary Consulting Surgeon to the Bristol General Hospital.

**PINKER, H. G.**, M.R.C.S., L.R.C.P., has been appointed Intern Midwifery Assistant at St. Bartholomew's Hospital.

**SAYER, THOMAS**, M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer to the Leeds Sanatorium for Consumptives at Gateforth.

**SHENNAN, THEODORE**, M.D. Edin., F.R.C.S. Edin., has been appointed Superintendent Pathologist to the Edinburgh Royal Infirmary.

**SHRUBSALL, F. C.**, M.A., M.B., B.C. Cantab., has been appointed Extern Midwifery Assistant at St. Bartholomew's Hospital.

**SUNDERLAND, SEPTIMUS P.**, M.D. Brux., has been appointed Physician-in-chief to the Ancient Royal Maternity Charity, vice Dr. Fancourt Barnes, retired.

**THOMAS, A. E.**, M.B. Lond., has been appointed House Physician to St. Bartholomew's Hospital.

**URWICK, R. H.**, M.A., M.B., B.C. Cantab., has been appointed House Physician to St. Bartholomew's Hospital.

**WARING, H. J.**, M.S., B.Sc., F.R.C.S., has been elected Assistant Surgeon to St. Bartholomew's Hospital.

**WEIR, H. H.**, B.A. Cantab., has been appointed House Physician to St. Bartholomew's Hospital.

**WORTHINGTON, R. T.**, M.R.C.S., L.R.C.P., has been appointed Extern Midwifery Assistant at St. Bartholomew's Hospital.

**YOUNG, ROBERT ARTHUR**, M.D., B.Sc. Lond., has been appointed Assistant Physician to the Middlesex Hospital.

## Vacancies.

*For further information regarding each vacancy reference should be made to the advertisement (see Index).*

**ANCOATS HOSPITAL**, Manchester.—Resident House Surgeon. Salary £100 per annum, with board, &c.

**BOLTON INFIRMARY AND DISPENSARY.**—Junior House Surgeon. Salary £80 per annum, with apartments, board, and attendance.

**BRADFORD EYE AND EAR HOSPITAL.**—Honorary Surgeon.

**BRIDGWATER INFIRMARY.**—House Surgeon. Salary £80 a year, with board and residence.

**BRISTOL ROYAL INFIRMARY.**—Casualty Officer for six months. Salary at rate of £50 per annum, with board, lodging, and washing.

**BURY INFIRMARY.**—Junior House Surgeon. Salary £90, with residence and attendance.

**CAITHNESS COUNTY COUNCIL.**—Medical Officer of Health. Salary £250 and £50 for travelling and other expenses.

**CLOGHER UNION.**—Medical Officer of Workhouse. Salary £100 per annum.

**DISTRICT INFIRMARY**, Ashton-under-Lyne.—House Surgeon. Salary £120 a year and board and lodging.

**DURHAM COUNTY ASYLUM.**—Junior Assistant Medical Officer. Salary £140, rising to £160, with board, laundry, and attendance.

**DURHAM COUNTY HOSPITAL.**—House Surgeon. Salary £100 a year, and board and lodging.

**EASINGTON UNION AND RURAL DISTRICT COUNCIL**, Castle Eden, Durham.—Medical Officer, &c. Salary £150 per annum.

**FISHERTON ASYLUM.**—Assistant Medical Officer, single. Salary to commence at £150 per annum, with board, lodging, and washing.

**GENERAL HOSPITAL**, Wolverhampton.—Assistant House Physician, also Assistant House Surgeon, both for six months, with honorarium at rate of £75 per annum, and board, lodging, and washing.

**HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL.**—House-Surgeon, unmarried. Salary £75 per annum, with residence, board, and washing.

**INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.**—Two House Surgeons (Senior and Junior). Salaries: Senior, £100; Junior, £75; each with residence, board, and washing.

**KENT AND CANTERBURY HOSPITAL.**—House Surgeon, unmarried. Salary £100 a year, with board and lodging.

**MIDDLESEX HOSPITAL, W.**—Medical Registrar.

**MOUNT VERNON HOSPITAL FOR CONSUMPTION**, Hampstead and Northwood.—Junior Resident Medical Officer for six months. Honorarium at rate of £60 per annum.

**NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL**, Hartshill, Stoke-upon-Trent.—Assistant House Surgeon for six months. Board, apartments, and washing, and at least £25 as honorarium.

**PRESTON ROYAL INFIRMARY.**—Assistant House Surgeon. Salary £60 per annum, with board, lodging, washing, &c.

**ROYAL HOSPITAL FOR DISEASES OF THE CHEST**, City-road, E.C.—House Physician for six months. Salary at rate of £60 per annum, with apartments, board, and washing.

**ROYAL INFIRMARY OF EDINBURGH.**—Assistant Pathologist. Honorarium £50 guineas per annum.

**ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST**, Ventnor.—Assistant Resident Medical Officer, unmarried. Salary £100 per annum, with board and lodging.

**STOCKPORT INFIRMARY.**—House Surgeon. Salary £100 per annum, with residence, board, and laundry.

**SUFFOLK COUNTY ASYLUM.**—Second Assistant Medical Officer. Salary £130 per annum, rising to £150, with board, lodging, laundry, and attendance.

**SUSSEX COUNTY HOSPITAL.**—House Physician. Salary £80 per annum, with board, washing, and residence in the hospital.

**WARNEFORD HOSPITAL**, Leamington.—House Surgeon. Salary £100 per annum, with board, washing, and apartments.

**WESTMINSTER HOSPITAL**, opposite Westminster Abbey.—Assistant Surgeon.

The Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies as Certifying Surgeon, under the Factory Acts, at Ovenden in the West Riding of the county of York; at Brixworth, in the county of Northampton; at Beckington, in the county of Somerset; and at Epworth, in the county of Lincoln.

## Births, Marriages, and Deaths.

### BIRTHS.

**BENNETT.**—On the 30th ult., at 22, Broad-street, Birmingham, the wi of W. Edward Bennett, F.R.C.S. Eng., of a daughter.

**BOWES.**—On Jan. 18th, at Rishton, Lancs., the wife of Jos. E. Bowes, M.B., C.M., of a daughter.

**FINLEY.**—On Jan. 25th, at West Malvern, the wife of Harry Finley, M.D. Lond., of a son.

### MARRIAGE.

**COPLEY—FOWLER.**—On Jan. 8th, 1902, at St. James's Church, Stamford-hill, by the Rev. Thomas Goodwin, Stanley Copley, M.R.C.S., of Stamford-hill, Durban, S. Africa, to Kate Gwendoline Fowler, daughter of Edwin Fowler, J.P., of Hill-grove, Pontypool, England.

### DEATHS.

**COLLINSON.**—On Dec. 22nd, at Sydenham-road, after a long and painful illness, Hyacinth, the dearly loved wife of Thomas A. Collinson, M.R.C.S., L.R.C.P. Lond., L.S.A., and A.K.C. Lond., and daughter of the late Colonel Duncombe-Perceval, R.E., of Acton.

**COPPIN.**—On the 31st January, 1902, at 181, High-street, Plumstead, Morney Coppin, M.R.C.S., in his 90th year.

**LANKESTER.**—On Jan. 30th, at Salisbury-road, Leicester, Henry Lankester, M.R.C.S., L.S.A., J.P., aged 76.

**LATTER.**—On Jan. 29th, in London, of heart failure, Cecil Latter, M.D. Camb., of Earl's-avenue, Folkestone.

**MARTINDALE.**—On the 2nd inst., suddenly, at 19, Devonshire-street, Portland-place, W., William Martindale, F.C.S., F.L.S., Past President of the Pharmaceutical Society, aged 61. Friends will please accept this, the only intimation.

**RATTRAY.**—On the 30th Jan., at Hampstead, Eliza Anne, beloved wife of Alexander Rattray, M.D. (late of Bournemouth).

**STOWERS.**—On Feb. 3rd, at Clapham-road, S.W., Nowell Stowers, M.R.C.S., in his 87th year.

*N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

BRITISH ELECTRO-THERAPEUTIC SOCIETY (11, Chandos-street, Cavendish-square, W.).—8.30 P.M. Dr. S. Sloan (Glasgow) will show his Faradimeter.—Dr. G. Herschell will give a demonstration on Modern Induction Coils.—Dr. L. Jones: Present day Electro Therapeutics.

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND (St. George's Hospital Medical School).—4 P.M. Papers and Demonstrations by Dr. J. Griffiths, Prof. F. O. Parsons, Mr F. Jaffrey, and Mr. J. S. Goodall.

SATURDAY (15th).—BRITISH ORTHOPÆDIC SOCIETY (City Orthopædic Hospital, Hatton garden, E.C.).—4.30 P.M. Cases will be shown. Discussion on Fracture Deformities (opened by Mr. J. J. Clarke).

## LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (10th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Mr. C. P. White: The General Pathology of Tumours. (Erasmus Wilson Lecture.)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.).—4 P.M. Dr. A. Whitfield: Clinique. (Skin.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr Saunders: Therapeutics.

TUESDAY (11th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. C. T. Williams: Clinique. (Medical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr Robinson: Uterine Hæmorrhage.

ROYAL INSTITUTION OF GREAT BRITAIN.—3 P.M. Dr. A. Macfadyen: The Cell, its means of Offence and Defence. Immunity.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Sir W. Gowers: Degenerative Diseases of the Nervous System.

WEDNESDAY (12th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Mr C. P. White: The General Pathology of Tumours. (Erasmus Wilson Lecture.)

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Discussion on the Prevention of Small pox in the Metropolis (opened by Mr. W. Blyth).

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.).—4 P.M. Mr. J. Cantlie: Clinique. (Surgical.)

POST GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. McAdam Eccles: Lantern Demonstrations on Hernia.

THURSDAY (13th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.).—4 P.M. Clinique. (Surgical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Davis: Medical Anatomy and Physical Diagnosis.

CHARING-CROSS HOSPITAL.—4 P.M. Dr. A. Routh: Gynæcological Demonstration. (Post-Graduate Course.)

HE HOSPITAL FOR SICK CHILDREN (Gt. Ormond street, W.C.).—4 P.M. Mr. Collier: Demonstration of Selected Cases.

DAY (14th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—P.M. Mr. C. P. White: The General Pathology of Tumours. rasmus Wilson Lecture.)

CAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, C.).—4 P.M. Dr. H. Tilley: Clinique. (Throat.)

GRADUATE COLLEGE (West London Hospital, Hammersmith-l, W.).—5 P.M. Mr. Abraham: Skin Cases.

L INSTITUTION OF GREAT BRITAIN.—9 P.M. Major P. A. Mahon: Magic Squares and other Problems on a Chess Board.

DAY (15th).—ROYAL INSTITUTION OF GREAT BRITAIN.—3 P.M. Right Hon. Lord Rayleigh: Some Electrical Developments.

## EDITORIAL NOTICES.

most important that communications relating to the l business of THE LANCET should be addressed *ively* "TO THE EDITORS," and not in any case to any man who may be supposed to be connected with the rial staff. It is urgently necessary that attention be to this notice.

*specially requested that early intelligence of local events ving a medical interest, or which it is desirable to bring der the notice of the profession, may be sent direct to this Office.*

*Lectures, original articles, and reports should be written on one side of the paper only,* AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

*Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.*

*We cannot prescribe or recommend practitioners.*

*Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."*

*Letters relating to the publication, sale, and advertising departments of* THE LANCET *should be addressed "To the Manager."*

*We cannot undertake to return MSS. not used.*

## MANAGER'S NOTICES.

### THE INDEX TO THE LANCET.

THE Index to Vol. II. of 1901, which was completed with the issue of Dec. 28th, and the Title-page to the Volume, were given in THE LANCET of Jan 4th.

### VOLUMES AND CASES.

VOLUMES for the second half of the year 1901 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

### TO SUBSCRIBERS.

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## METEOROLOGICAL READINGS.

*(Taken daily at 8.30 a.m. by Steward's Instruments.)*

THE LANCET Office, Feb. 6th, 1902.

| Date. | Barometer reduced to Sea Level and 32° F | Direction of Wind. | Rain-fall. | Solar Radia in Vacuo | Maximum Temp Shade | Min Temp | Wet Bulb | Dry Bulb | Remarks at 8.30 A.M. |
|---|---|---|---|---|---|---|---|---|---|
| Jan. 31 | 30·06 | E | 0·61 | 47 | 40 | 31 | 36 | 37 | Overcast |
| Feb. 1 | 30·60 | E | ... | 63 | 38 | 33 | 33 | 34 | Fine |
| " 2 | 30·21 | E | . | 65 | 35 | 32 | 33 | 33 | Snowing |
| " 3 | 30·03 | N E | 0·01 | 38 | 37 | 32 | 34 | 35 | Raining |
| " 4 | 30·09 | E | 0·19 | 42 | 38 | 33 | 36 | 37 | Overcast |
| " 5 | 30·01 | S E | . | 40 | 37 | 34 | 34 | 36 | Overcast |
| " 6 | 29·55 | N E | ... | 45 | 39 | 34 | 34 | 36 | Overcast |

**During the week marked copies of the following newspapers have been received:**—*Wynberg Times, Reading Mercury and Oxford Gazette, Western Morning News, Echo, Glasgow Evening News, Surrey Herald, Manchester Guardian, Morning Leader, Star, Leeds Herald, Manchester Dispatch, Daily Graphic, Evening Standard, South Wales Daily News, Standard, State, Freeman's Journal, Birmingham Post, South Wales Echo, Birmingham Mail, Hartlepool Mail, City Press, Tunbridge Wells Advertiser, Church Family Newspaper, Army and Navy Gazette, Clinical Journal, Nursing Record, Sanitary Record, The Rock, Nordiskt Medicinskt Arkiv, Revista Ibero-Americana de Ciencias Médicas, Wolverhampton and Coventry News, Middlesboro' Daily Gazette, &c.*

accompanied by subcutaneous hæmorrhages. He did not see Thackery again until the morning of the 23rd, when he suggested a consultation. The family, however, could not afford this, so he recommended Thackery's removal to the hospital. Thackery, however, died the same evening at home in witness's presence. The disease was diagnosed as hæmorrhagic small-pox. Witness denied that he ever told Miss Cookman that he had attended a case of small-pox or that he put his arm round her neck. Miss Cookman contracted small-pox. He allowed, in cross-examination, that he had given a certificate to Thackery that he was suffering from influenza. This was for a benefit society. Dr. J. W. Washbourn gave evidence on behalf of Dr. Matheson. He said that hæmorrhagic small-pox was difficult to diagnose. The symptoms presented by Thackery as described by Dr. Matheson were perfectly consistent with those of purpura hæmorrhagica. Mr. Fenwick said that the charge would be dismissed. There was no doubt that Thackery had died from small-pox, but there was a doubt as to whether Dr. Matheson knew that Thackery was suffering from small-pox. Dr. Washbourn remarked that in the present day the ordinary run of practitioners had very little chance of studying small-pox. He thought that the authorities of the small-pox hospitals ought to give opportunities to the general practitioner of studying that disease. With this remark we quite agree, and we also think that Dr. Matheson should have seen the patient on Dec. 22nd. All diseases accompanied by hæmorrhagic rashes are very serious, and surely it would have been possible to get a consultation at a reduced fee.

## VACCINATION FEES.

THE following report of proceedings at a recent meeting of the Hungerford Board of Guardians is taken from the *Newbury News*:—

> "*Vaccination.*—Statistics for the cost of vaccination for the last year were placed before the board. In 1898 the cost was £52 1*s.* 4*d.*; in 1899, £112 12*s.* 5*d.*; in 1900, £132 14*s.* 5*d.*; in 1901, £148 11*s.* 2*d.* The board considered the increase a very serious item and decided to support a petition on the proposition of Messrs. Brown and Clewett from the Edington Guardians to the Local Government Board, asking that the medical officers' fees might be reduced, as they did not consider it was the intention of Parliament that the Act should work out to such advantage to the medical officers."

The correspondent who sends us the cutting informs us that the scale for fees is as follows: for vaccination at the surgery, 2*s.* 6*d.*; for vaccination at a patient's house within one mile, 5*s.*; above one mile, 7*s.* 6*d.* He points out that by the new rules laid down by the Local Government Board the vaccinator has to attend every case until well. We have no information as to whether the fees mentioned were settled by the board of guardians in consultation with the medical men, or whether the decision on account of the two bodies interested was left in the hands of the Local Government Board; but, judging by the terms of the proposition of the Edington Guardians which was adopted, we suppose that the fees were fixed by the Local Government Board. We cannot see that the fees are excessive. A vaccinated patient wants looking after for a week at least and very often for 10 days or even longer. A small-pox epidemic is infinitely more expensive and if the guardians throw difficulties in the way of vaccination they may very probably find that the rates will be doubled or even trebled.

## A CURE FOR WARTS.

*To the Editors of* THE LANCET.

SIRS,—Would some of your readers kindly recommend a cure for warts (on the hands)? My patient—a lady—has been applying glacial acetic acid for months—I might say years—with absolutely no benefit. Indeed, in spite of this treatment some have actually increased in size, while fresh ones from time to time have made their appearance on the scene. All told, the number of these excrescences is over 15. Anticipating some comforting suggestions,

I am, Sirs, yours faithfully,
Feb. 3rd, 1902. AT MY WIT'S END.

## MEDICAL PRACTITIONERS AND THE SALE OF POISONS.

*To the Editors of* THE LANCET.

SIRS,—Your annotation in THE LANCET of Jan. 4th, p. 44, entitled, "Medical Practitioners and the Sale of Poisons," in reply to "Vulneratus," leads me to ask you a question as to my position (probably that of hundreds of others). For 20 odd years I have been in general practice and have dispensed my own medicine, either personally or through an assistant (not always qualified). Of course, numbers of such bottles of medicine have contained scheduled poisons. But I have never used a label containing my name and address, as I always have thought, and continue to think, that the addition of the name and address to the direction for taking the medicine savours of advertisement. With hundreds of others I use the ordinary surgeons' slip label, as it is called, but if the General Medical Council insists upon my advertising my name and address I must bow to its decision and do so. The further question of keeping a book falls in with the usual custom of keeping a copy of the prescription for future reference and not necessarily for registering the sale of a poison. As a matter of fact, I resent the idea of "selling medicine" altogether. I do not charge my patients for medicine: I charge them for treatment.

I am, Sirs, yours faithfully,
P. B. W.

*C. S. R.*—1 As the directors are paying the bill they would naturally expect to be able to choose the operator. If the workmen had made it a condition of their acquiescence in vaccination that they should be vaccinated by the surgeon to the works sick club the directors would probably have agreed. 2. We do not see from our correspondent's letter that the medical man in question knew anything of the works sick club, although he might have assumed that, in connexion with a business of such magnitude, such an institution was in existence. 3. We cannot guess what the "Royal College of Physicians" might think, but certainly the London College could find precedent for disapproval.

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# Medical Diary for the ensuing Week.

## OPERATIONS.

### METROPOLITAN HOSPITALS.

**MONDAY (10th).**—London (2 P.M.), St. Bartholomew's (1.30 P.M.) St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.) West London (2.30 P.M.), London Throat (2 P.M.).

**TUESDAY (11th).**—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St.
Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), West
minster (2 P.M.), West London (2.30 P.M.), University Colleg
(2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark'
(2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throa
(2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. an
2.30 P.M.), Throat, Golden-square (9.30 A.M.).

**WEDNESDAY (12th).**—St. Bartholomew's (1.30 P.M.), University Colleg
(2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cros
(3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's Colleg
(2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.)
National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samar
(9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Nort
Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P
London Throat (2 P.M.), Cancer (2 P.M.), Throat, Golden-s
(9.30 A.M.).

**THURSDAY (13th).**—St. Bartholomew's (1.30 P.M.), St. Tho
(3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M
George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Mi
(1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), No
London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central
logical, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat
St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.
Golden-square (9.30 A.M.).

**FRIDAY (14th).**—London (2 P.M.), St. Bartholomew's (1.30
Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.),
cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.),
(2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2
Northern Central (2.30 P.M.). West London (2.30 P.M.
Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and
Throat, Golden-square, (9.30 A.M.), City Orthopædic (2.30

**SATURDAY (15th).**—Royal Free (9 A.M. and 2 P.M.), Lond
Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), Universit
(9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St
(10 P.M.), London Throat (2 P.M.), Throat, Golden-square (9.

At the Royal Eye Hospital (2 P.M.), the Royal London Oph
(10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.),
Central London Ophthalmic Hospitals operations are performed

## SOCIETIES.

**MONDAY (10th).**—MEDICAL SOCIETY OF LONDON (11, Chandos
Cavendish-square, W.).—8.30 P.M. Clinical Evening. Mr. E. Owe
Case of Traumatic Rupture of the Prostatic Urethra in a Boy
Dr. W. Ewart: (1) Case of Senile Anæmia associated with Gou
Rheumatoid Arthritis; (2) Case of Chronic Nephritis treated
Drainage and Feeding.—Mr. C. B. Keetley: Case illustrating th
use of Thiersch's Grafts in Excision of the Hip.—Mr. E. M. Littl
Two Cases of Late Rickets.—Dr. W. E. Wynter: Three Cases
Chronic Œdema.—Mr. T. H. Kellock: Case of Actinomycosis of th
Tongue after Treatment by Cauterisation and Iodide of Potassiu
Dr. B. Potter: Case of Nodding Spasm.

**TUESDAY (11th).**—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (2
Hanover-square, W.).—Mr. C. Heath: Two Cases of Ligature of th
Left Carotid for Aneurysm of the Arch of the Aorta, with th
post-mortem specimens of four cases.

**WEDNESDAY (12th).**—DERMATOLOGICAL SOCIETY OF LONDON (1
Chandos-street, Cavendish-square, W.).—5.15 P.M. Demonstratio
of Cases of Interest.

**THURSDAY (13th).**—BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanove
square, W.).—8 P.M. Specimens will be shown by Dr. F. W
Ramsay, Mr. R. O'Callaghan, and Dr. H. Macnaughton-Jone
Dr. H. Croom (incoming President): Inaugural Address.

**FRIDAY (14th).**—CLINICAL SOCIETY OF LONDON (20, Hanover-square
W.).—8.30 P.M. Papers:—Mr. G. Barling: Seventy-four Cases o
Appendicitis with Localised Suppuration, with special reference t
the treatment of the appendix in such cases.—Mr. F. C. Wallis
The Treatment of Intra-peritoneal Abscess of the Appendix, illustrated by cases.

INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH (9
Adelphi-terrace, W.C.)—Dr. W. A. Evans (Bradford): The Factory
and Workshop Act, 1901.

# The Erasmus Wilson Lectures

ON

# THE GENERAL PATHOLOGY OF TUMOURS.

*Delivered before the Royal College of Surgeons of England on Feb. 10th, 12th, and 14th, 1902,*

By CHARLES POWELL WHITE, M.A.,
M.D Cantab., F.R.C.S. Eng.,
DEMONSTRATOR OF PATHOLOGY, THE YORKSHIRE COLLEGE, LEEDS.

## LECTURE I.

*Delivered on Feb. 10th.*

Mr. President and Gentlemen,—My first duty is to thank you for the honour that you have done me in appointing me to deliver this course of lectures and to express the hope that they will prove of interest to you.

In undertaking pathological research there are three methods that we can adopt: we can either consider the diseases of some particular region of the body, or we can consider separate branches of pathology, such as histology, bacteriology, pathological chemistry, or experimental pathology, or we can consider the different pathological processes which give rise to the phenomena of disease, collecting the necessary facts from different regions and by different means of research. The adoption of the first two methods without correlating the results by the third tends to produce a certain narrowness of mind which is not to the best interest of pathology. For instance, the bacteriologist tends to look upon the microbe as the be all and end all of disease, while the pathological chemist attempts to find the necessary factor in the many chemical products of metabolism. Those, also, who confine their attention to a particular region of the body tend to form ideas of pathology which are adapted to that region only. Now diseases are characterised by certain pathological processes, and these processes are essentially the same, whatever the organ or tissue involved. If we wish, then, to investigate any pathological process we must call to our aid all regions of the body and all methods of research. My own observations have been almost entirely histological. It is sometimes alleged that histology has said its last word in pathology, but this is by no means true. There still remains an immense field for research, more especially in the study of serial sections and in the minute cytological studies which have been up to the present time left mainly to the biologists.

The subject of these lectures—the general pathology of tumours—is one of surpassing interest both from the scientific and from the practical point of view; it is a subject which, in its broader aspects, has received little attention of late years, most recent work having been confined to the study of the malignant growths alone.

In the old days of humoral pathology tumours, like other conditions, were ascribed to the action of one of the so-called vicious humours; later, the blood, and then the lymph, was supposed to play the all-important part; then came the assumption of an hypothetical fluid ("blastema") from which tumours were supposed to separate out by a process akin to crystallisation. After Virchow had shown that every cell was derived from a pre-existing cell, the chief share in tumour causation was given to chronic irritation in spite of the fact that irritation might be prolonged for an indefinite time without giving rise to the development of a tumour Cohnheim and others attempted to find the common factor in the embryonic rudiment from which all tumours were supposed to originate, but they were obliged to exclude certain cases of undoubted tumour formation. Lastly, of late years, we have seen pathologists endeavouring to find a parasitic origin for sarcoma and carcinoma, although it is impossible, on this supposition, to explain the occurrence of congenital sarcomata. It is evident, then, that the common factor in the pathology of tumour formation has not yet been found, and it is with the idea of attempting to discover this common factor that I have been studying the pathology of tumour formation for the last four or five years. Early in my research it became evident that I could not limit myself to tumours alone, for they form part of a larger group of pathological conditions all of which have to be considered together. In these lectures, therefore, I propose to indicate the direction in which this common factor is to be looked for, and to do this I shall consider in order the classification, life-history, and causation of tumours.

### Classification.

Two methods have been adopted for the classification of tumours for pathological purposes; one based on embryology, the other on the histological structure. Now a classification based on embryology is unsatisfactory because an arbitrary period of development is chosen as the starting point—namely, that period in which the embryo consists of three layers, and yet, in spite of this threefold basis, tumours are divided into two primary classes only. It is also unscientific because, since a large portion, at least, of the epithelium of the genito-urinary tract is derived from the mesoblast, it is possible for any kind of epithelial tumour to arise from any one of the three layers. We should, therefore, have epithelial tumours occurring in both of the primary classes and, in consequence, from an examination of any particular tumour, it would be impossible to decide in which class it should be placed. Those who have adopted this method have never carried it out completely; they have assumed that, contrary to the generally accepted views of embryologists, epithelium does not arise from the mesoblast, and they include in the mesoblastic group such tumours as the neuromata and gliomata, which are epiblastic in origin. We can, therefore, conclude that an embryological system of classification is of no use at all. A classification based on histology is not open to these objections; the basis—namely, the histological structure—being a well-defined one, we can, by an examination of any particular tumour, readily determine to which class it belongs.

Having decided, then, that the classification is to be founded on a histological basis, we have next to consider the method by which the different classes can be best formed. The method of which I shall make use is substantially the same as that which I published about three years ago.[1] The ultimate morphological elements of which the organism is composed are the *cells*. It is unfortunate that we have no satisfactory terminology to express the various kinds of cells, but have to make use of such cumbersome expressions as "connective tissue cells," &c. I would suggest that, following the precedent set by the terms "leucocyte," "phagocyte," &c., we should make use of the termination *cyte* to express the meaning *cell*, so that we should have the terms "fibrocyte," "chondrocyte," &c. Epithelial cells might be called "epicytes" and a general term for the connective tissue cells would be found in the term "desmocyte." We should thus have a uniform system of cellular terminology. The cells immediately resulting from the cleavage of the ovum are *indifferent cells*—that is, the individual cells have no characteristics which distinguish them from each other, and in the course of development similar cells may give rise to very different structures. As development proceeds the cells become differentiated into two great classes: (1) cells which in the course of proliferation remain in contact with each other, covering surfaces and lining tubes—namely, epithelial (including endothelial) cells; and (2) cells which in the course of multiplication become separated by intercellular substance or by connective tissue, such as the connective tissue cells, muscle cells, and nerve cells. These last might be collectively named "mesocytes." Now in order that the cells may fulfil their proper functions they are arranged in a definite and orderly manner. These arrangements of cells are called "*tissues*" and are of two kinds: (1) special tissues which have special functions to perform, and (2) connective tissues which act as supports to the special tissues. Again, in order that the tissues may properly perform their functions they are arranged among themselves so as to form *organs*. The organs are, in their turn, so arranged as to form the organism.

Starting from this threefold basis we arrive at a simple and satisfactory classification of tumours. Firstly, taking them in the reverse order, we have a class of organ tumours or organomata. In these tumours we can recognise distinct organs or parts of organs which, however, are not arranged so as to form a body or part of a body. The best known example of this class is the dermoid cyst, in which can be recognised skin, teeth, bones, &c., which are arranged

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[1] Journal of Pathology and Bacteriology, vol. vi.

## Communications, Letters, &c., have been received from—

**A.**—Monsieur J. Astier, Asnières; Messrs. Armour and Co., Lond.; Messrs. P. P. Arnold and Sons, Lond.; Mr. J. Barcroft Anderson, East London; Aix-les-Bains Comité de Publicité; Monsieur F. Alcan, Paris.

**B.**—Mr. S. F. Butcher, Bury; Mr. T. F. Barham, Bridgwater; Mr. G. V. Benson, Lewes; Messrs. Boulton and Paul, Norwich; Messrs. J. H. Booty and Son, Lond.; Messrs. Bayliss, Thomas, and Co., Coventry; Bristol Royal Infirmary, Secretary of; Bolton Infirmary, Secretary of; Dr. D. Bower, Bedford; Borough of Douglas, Isle of Man, Clerk of; Bridgwater Infirmary, Hon. Secretary of; Mr. D. Turner-Belding, East Dereham; Messrs. Batabyal and Co., Calcutta; Sir Lauder Brunton, Lond.; Dr. J. O. Brookhouse, Nottingham; *British Medical Journal*, Editor of; British Gynæcological Society, Lond., Hon. Secretary of.

**C.**—Dr. Alfred Cox, Gateshead; Messrs. Cassell and Co., Lond.; Mr. M. F. Carter, Newnham; Clerical and Medical Bank, Bristol; Mr. A. M. Connell, Sheffield; Mr. W. W. S. Corry, Scarborough; Professor Henry Corby, Cork; Clogher Union, Clerk of.

**D.**—Miss Rosetta Davis, Lond.; Messrs. H. Dawson and Co., Lond.; Mr. E. Darke, Lond.; Messrs. Dulau and Co., Lond.; Mr. H. G. Doggett, Bristol; District Infirmary, Ashton-under-Lyne, Hon. Secretary of; Messrs. Down Bros., Lond.; Paul E. Derrick Advertising Agency, Lond.; *Dundee Advertiser*; Durham County Hospital, Secretary of; Messrs. W. Dawson and Son, Lond.

**E.**—Mr. C. E. Elmhirst, York; Dr. T. W. Eden, Lond.

**F.**—Mr. F. B. Foottit, Newark; Mr. W. D. B. Freeland, Chichester; Mr. A. Farr, Lond.; Mr. W. C. Finch, Salisbury.

**G.**—Dr. H. W. Gardner, Shrewsbury; Mr. H. Green, Howden; Mr. H. F. Galpin, Oxford; Mr. B. B. Gough, East Harptree; Dr. P. Rhys Griffith, Cardiff; Great Northern Central Hospital, Lond.; Dr. E. A. Gates, Lond.

**H.**—Mr. W. P. Hughes, Worcester; Mr. T. H. Holdich, Sleaford, Dr. J. Housley, Retford; Sir Richard N. Howard, Weymouth; Mr. L. Holden, Lancaster, Dr. J. Wilson Hamill, Manchester; Mr. T. Hoskin, Lond.; Dr. J. F. Hodgson, Halifax. Dr. C. A. B. Horsford, Devonport; Mr. F. C. Hitchins, St. Austell.

**I.**—Ingham Infirmary, South Shields, Secretary of; Institute of Chemistry of Great Britain and Ireland.

**J.**—Mr. H. R. Jackson, Hull; Dr. J. Holmes Joy, Tamworth; Messrs. Jobson and Marshall, Dudley; Dr. Robert Jones, Woodford Bridge.

**K.**—Dr. J. A. Knight, Eatonton, Georgia, U.S.A.; King Edward's Hospital Fund for London, Hon. Secretaries of; Messrs. R. A. Knight and Co., Lond.

**L.**—Dr. J. Lee, Clacton-on-Sea; Rev. F. Long, Weaverhall; Dr. D. B. Lees, Lond.

**M.**—Dr. S. G. Moore, Huddersfield; Messrs. J. Maythorn and Son, Biggleswade; Marston's Carriage Works, Birmingham; Messrs. P. Mackenzie and Co., Liverpool; Mrs. E. A. M. Marsden, Lightcliffe; Mr. E. Merck, Lond.; Mr. S. W. Morgan, Stafford; Mr. F. N. Molesworth, Rochdale; Medical Graduates' College and Polyclinic, Lond.; Secretary of; Messrs. Mather and Crowther, Lond.; Messrs. Morton and Co., Manchester; Messrs. Macdonald Bros., Lond.; Manchester and Salford Sanitary Association, Secretary of; Dr. H. Macnaughton-Jones, Lond.

**N.**—Messrs. Nicolay and Co., Lond.; Messrs. W. R. Nicholas and Co., Lond.; Mr. H. Needes, Lond.; Mr. J. C. Needes, Lond.

**O.**—Dr. D. R. O'Sullivan-Beare, Lond.; Dr. Josiah Oldfield, Lond.

**P.**—Mr. F. H. Potts, Broseley; Mr. J. A. Pearce, Devonport; Mr. Y. J. Pentland, Edinburgh; Preston Royal Infirmary, Secretary of; Mr. J. H. Peet, Farnborough; P. G. E.; Messrs. Peacock and Hadley, Lond.

**R.**—Messrs. Reynell and Son, Lond.; Mr. W. Richardson, Guisborough; R. F. H.

**S.**—Mr. S. B. Smith, Salisbury; Messrs. Spiers and Pond, Lond.; Messrs. W. B. Saunders and Co., Lond.; Mr. C. Scott, Gloucester; Mr. P. B. Stoney, Millom; Mr. F. A. P. Sylvester, Trowbridge; Mr. A. B. Smith, Wolverhampton; Messrs. Silva and Cosens, Lond.; St. John Ambulance Association, Lond., Secretary of; Messrs. Sykes, Josephine, and Co., Lond.; Messrs. S. Smith and Son, Lond.; Messrs. E. Shaw and Co., Manchester; Dr. S. Stephenson, Lond.; Mr. C. N. Saldanha, Lond.; Dr. R. Sisley, Saunton, Braunton; St. Thomas's Hospital Medical School, Lond., Dean of; Messrs. Street and Co., Lond.; Messrs. Smith, Elder, and Co., Lond.; Messrs. Sharp and Foster, Manchester; Stockport Infirmary, Secretary of; Scholastic, Clerical, &c., Association, Lond.

**T.**—Mr. J. Tibbits, Warwick; Mr. H. E. Symes Thompson, Lond.; Mr. G. C. Thomas, Lond.

**V.**—Virol, Ltd., Lond.

**W.**—Mr. J. Williams, Bradford; Dr. E. West-Symes, Halifax; Dr. T. Jason Wood, Bradford; Mr. Oliver Williams, Lond.; Messrs. Wilson and Mackinnon, Melbourne; West Bromwich District Hospital; Warneford Hospital, Leamington, Secretary of; Mr. S. Wand, Leicester; Messrs. Willing, Lond.; Messrs. Way and Co., Lond.

**Y.**—Mr. H. C. Yates, Macclesfield.

## Letters, each with enclosure, are also acknowledged from—

**A.**—Messrs. Ayrton and Saunders, Liverpool; A. B. B.; Messrs. Allen and Hanburys, Lond.; Dr. F. R. B. Atkinson, Radcliffe; A. G.; A. H. B.; A. T. H.

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blood-vessels and connective tissue, every tumour would have a compound name. Compound names should be restricted to (1) tumours compounded of two or more species of the same genus, and (2) tumours compounded of the species of corresponding genera of the histiomata and cytomata. Thus we can speak of myxlipoma, osteochondroma, fibrosarcoma, &c., and we can also use the term "adenopapilloma." In other cases, if it is necessary to qualify the species it should be accomplished by using a qualifying adjective We should thus speak of a fibrous adenoma or a vascular fibroma, &c.

With regard to the term "cancer" I would enter a plea for restoring to it the old meaning, as signifying any kind of malignant growth. As a synonym for carcinoma the term "cancer" is redundant and useless, whereas it would be of great use as synonymous with the more cumbrous term "malignant disease."

## CLASSIFICATION OF TUMOURS.

### *A. Organomata or Organ Tumours.*

Teratoma (dermoid cyst).

### *B. Histiomata or Tissue Tumours.*

(*a*) *Connective tissue tumours* (*desmomata*).—Fibrous tissue, fibroma; fat, lipoma; mucous tissue, myxoma; notochordal tissue, chordoma (of Ribbert); cartilage, chondroma; bone, osteoma; and neuroglia, glioma.

(*b*) *Lymphoid tissue tumours* (*lymphomata*).—Lymphadenoid tissue, lymphadenoma (lymphoma); and bone marrow, myeloma.

(*c*) *Muscle tumours* (*myomata*).—Smooth muscle, leiomyoma; and striated muscle, rhabdomyoma.

(*d*) *Nerve-tissue tumours* (*neuromata*).—Medullated nerve-tissue, myelinic neuroma; and non-medullated nerve-tissue, amyelinic neuroma.

(*e*) *Epithelial tissue tumours* (*epitheliomata*).—Squamous epithelium, squamous adenoma and squamous papilloma; columnar epithelium, columnar adenoma and columnar papilloma; spheroidal epithelium, spheroidal adenoma; and endothelium, angeioma and endothelial papilloma.

### *C. Cytomata of Cell Tumours.*

(*a*) *Tumours of indifferent cells* (*blastomata*).

(*b*) *Tumours of connective tissue cells, also of lymphoid tissue cells and muscle cells* (*sarcomata*).—(1) Pure sarcomata: round cells, round-celled sarcoma; spindle cells, spindle-celled sarcoma; and giant cells, giant-celled sarcoma. (2) Compound sarcomata: fibrous tissue cells, fibro-sarcoma; cartilage cells, chondro-sarcoma, &c.

(*c*) *Tumours of epithelial cells* (*carcinomata*).—Squamous cells, squamous carcinoma; columnar cells, columnar carcinoma; spheroidal cells, spheroidal carcinoma; and endothelial cells, endothelial carcinoma.

From this scheme of classification we arrive at the definition of a tumour: a tumour is a mass of cells, tissues, or organs, resembling those normally present in the body, but arranged atypically, which grows at the expense of the body without at the same time subserving any useful purpose therein. It will be seen that the distinguishing peculiarity of tumours is that they are atypical, not in the structure, but in the arrangement of their component parts.

Having thus classified tumours by analytical methods let us now apply the opposite method of synthesis—that is, let us consider what other pathological processes are allied to tumour formation. Firstly, there are certain cases of progressive hypertrophy of organs which resemble tumours in many respects Examples are to be found in the prostate, the breast, the spleen, the thyroid gland (goitre), the bones (leontiasis ossea), and possibly also in the lymphatic glands (Hodgkin's disease). In the next place there are certain cases where the whole of one tissue, usually the connective tissue, of an organ undergoes progressive hypertrophy. This is met with in the progressive fibrosis of nerves, in the prostate, where either the epithelium or the stroma may undergo a progressive increase, and possibly also in some cases of cirrhosis of the liver. Again, there are cases of progressive hyperergia or progressive increase of functional activity, such as is found in the kidneys (in diabetes insipidus), in the leucocyte-forming organs (in leucocythæmia), perhaps also in the thyroid gland (in Graves's disease). It is also found in many nervous and mental diseases and in diseases of metabolism. Lastly, there are cases of progressive metaplasia as, for example, in myositis ossificans. All these processes resemble tumour formation in the progressive character of their course and in the fact that they cannot be ascribed to definite extrinsic causal agents and, with tumour formation, they may collectively be called the "progressive processes."

Bearing in mind the foregoing scheme of classification, we can draw the following conclusions. 1. Every kind of tissue in the body has its representative tissue tumour. 2. Every kind of cell, with the exception of nerve-cells, has its representative cell tumour. Cell tumours of nerve-cells have not been described, but muscle cells are represented by myosarcoma, cartilage cells by chondro-sarcoma, and the different kinds of epithelial cells by the different kinds of carcinoma, &c. 3 Tumour formation is not an isolated process, but must be considered in its relation with other closely allied processes.

## RUDIMENT OF ORIGIN.

I propose now to consider the life-history of tumours and shall commence by discussing the rudiments from which they arise.

Cohnheim[5] endeavoured to find the essential factor in tumour formation in the rudiments from which tumours take origin. According to him all tumours originate in rudiments composed of embryonic cells, separated in the early stages of development, which retain their embryonic characters for an indefinite period of time. It will be unnecessary for me to discuss this theory fully because no one, I imagine, at the present day believes that such a rudiment is a necessary antecedent to tumour formation. It will suffice to point out that this theory will not explain the occurrence of a tumour in a scar or chronic ulcer. Cohnheim himself recognised this difficulty and attempted to evade it by saying that these growths were not tumours in the proper sense of the word. Senn[6] endeavoured to surmount this difficulty by supposing that the rudiment of embryonic cells might be derived by proliferation from adult tissues. These rudiments of Cohnheim, with the exception of moles, have never been described and some of those which have been adduced in support of this theory do not fulfil the conditions laid down by Cohnheim.

Although tumours do not in all cases arise from embryonic rudiments there can be no doubt that they do so in some cases. It is well known that tumours may arise in moles which may be regarded as examples of these rudiments, and the theory would seem to be especially applicable to those tumours which I have called blastomata. In many cases, especially in papillomata and carcinomata, the tumour may be seen to rise directly in the normal tissues at the seat of origin. Some observers state that when this is the case they do not arise from the fully formed cells of the tissue but from the proliferative or mother cells. Undoubtedly tumours are more common in those tissues which exhibit the greatest proliferative capacity, or, in other words, in those tissues which display the greatest capacity for regeneration such as epithelium and connective tissue, but I see no difficulty in supposing that the adult cells, provided that they have not undergone any degenerative change, may undergo proliferation and thus give rise to a tumour. Cells which are in active division naturally assume a more elementary or, as it is called, embryonic condition, but to say, as some do, that before they can proliferate they must undergo a reversion to a more embryonic state is, in many cases at least, I think, to put the cart before the horse.

Tumours may also take origin in the tissues of a pre-existing tumour or in inflammatory products. Thus a carcinoma may arise in an adenoma, a sarcoma in a myoma or in the granulation tissue of a scar or ulcer.

Since the different forms of connective tissue are mutually convertible by the process known as metaplasia, it is not always necessary to presuppose a rudiment consisting of the same kind of tissue as that of which the tumour is composed. For example, since cartilage can arise in fibrous tissue, as is seen in drill bones, it is not necessary to suppose a cartilaginous rudiment to explain the origin of a chondroma. The size of the rudiment, or area of origin, of a tumour is variable; in some cases it may involve the whole of an organ, while in others it may be very minute and it may conceivably consist of a single cell. With regard to the rudiment, then, we can draw the following conclusions. 1. The rudiment may consist (*a*) of a sequestrated collection of embryonic cells, such as described by Cohnheim; (*b*) of the tissues normally present at the point of origin; and (*c*) of tissues of new formation, either of inflammatory origin or indiscriminately. Secondly, we have a class of tissue tumours or histiomata in which we can recognise distinct tissues which, however, are not arranged among themselves so as to form organs. A fibroma, for example, is a mass of fibrous tissue which is not arranged so as to form a tendon or fascia. Each of the tissues of the body has its representative tumour in this class. Lastly, we have a class of tumours which can be called cell tumours or cytomata, in which we can recognise the cells which, however, are not arranged, at any rate in their growing portions, so as to form tissues. In this class we have carcinomata derived from epithelial and endothelial cells and sarcomata from connective tissue (and muscle) cells. We also have certain tumours which do not fall under the heading either of "sarcoma" or of "carcinoma"; they have been called by various names such as "adenosarcoma," "sarcoma carcinomatodes," &c., and they have sometimes been called "teratomata," thus confusing them with such tumours as dermoid cysts, &c. As I propose to form a new genus for these tumours, I must justify myself by giving a description of their histological characters. These tumours are most frequently met with in the genito-urinary tract, especially in the kidney where they are usually congenital, they are also found in the parotid region and in the liver and I have seen a case in the roof of the naso-pharynx. As met with in the kidney these tumours are seen to be composed mainly of round cells resembling those of a round-celled sarcoma; these cells may be called the primary cells of the tumour. Imbedded in this sarcoma-like tissue are a number of epithelial tubes which may be simple in form or irregular and branched. In some places these tubes may form cysts which may contain intra-cystic growths. In other places may be found spindle cells and striated muscle fibres; fat and mucous tissue may also be present. On more minute examination the epithelial tubes are seen not to be sharply marked off from the sarcoma-like tissue, but the cells of the tubes pass imperceptibly into the surrounding cells. If serial sections are made the tubes are found not to be connected together but to lie completely isolated among the primary cells. The other tissues present also shade off gradually into the surrounding cells. The tubes can be seen to arise by a circular grouping of the primary cells. At first this group has in its centre a mass of homogeneous material apparently derived from the cell bodies; later this material disappears, leaving a central lumen in the group of cells which have now taken on epithelial characters. In some cases the tubes are occupied by a mass of flattened epithelial cells resembling squamous cells. Some of the tubes undergo further changes by the ingrowing of the wall on one side so as to make the lumen assume a crescentic shape on section. When this is the case the epithelium on the outer concave border of the crescent becomes flattened so as to resemble endothelium, the epithelium covering the ingrowth retaining its cubical form. The whole resembles exactly an embryonic Malpighian body with its capsule of Bowman and glomerular tuft before the capillaries have entered it. The explanation of these appearances is to be found as follows. The primary cells of the tumour are to be regarded as indifferent cells derived from the intermediate cell-mass of the embryo; these cells, as they proliferate, undergo differentiation, some forming epithelium, others muscular fibres and other structures which may be present. In fact, just as sarcoma is a tumour of connective tissue cells and carcinoma of epithelial cells, so these tumours are tumours of indifferent cells; and just as in sarcoma some of the cells may form definite connective tissue of different kinds, and as in carcinoma some may form epithelial tubes, so in these tumours some of the cells may undergo differentiation and form epithelium and the other kinds of tissue that are met with. Similar appearances are seen in some parotid tumours. In these growths the primary cells are often irregular in shape and have numerous protoplasmic bridges connecting the adjacent cells with each other, resembling the prickle cells of squamous epithelium. If different parts of the tumour are examined it is found that, on the one hand, the cells become separated and the protoplasmic bridges lengthened by the interposition of a homogeneous intercellular substance, thus forming typical mucous tissue or cartilage; while, on the other hand, by a closer apposition of the cells they come in contact and form epithelial tubes which at first contain, as in the kidney tumour, a homogeneous substance which subsequently disappears. These tubes are, as in the former case, isolated among the primary cells of the tumour. Other observers have held the same views as regards these kidney tumours. Mr. F. T. Paul in 1886[2] was of the opinion that they grow out of a developmental abnormality while the tissues of the embryo are still in an imperfect state of differentiation; and Mr. Keith W. Monsarrat[3] states that they are traceable to a perversion of the cellular elements from which, under normal development, the Malpighian bodies and convoluted tubules should arise. Mr. Monsarrat is of the opinion that the sarcoma-like cells arise by proliferation from the epithelial tubes, but he does not give any reason why the cells should be derived from the tubes rather than the tubes from the cells as I have stated above. The fact that the tubes lie isolated in the midst of the sarcoma-like cells points to the view that they are of secondary formation. From these facts it is evident that these tumours are neither sarcomata nor carcinomata, and we are therefore justified in allotting them a distinct place in our classification. I propose for these tumours of indifferent cells the name of "blastomata," which name was, I think, first proposed by Dr. Herbert Snow in a somewhat similar sense.[4]

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[5] Lectures on General Pathology.

[6] Pathology and Surgical Treatment of Tumours 1895.

It would appear to be impossible to distinguish between undifferentiated cells and some forms of connective tissue cells. In fact, it is possible that the round cells of a round-celled sarcoma in reality correspond to these undifferentiated cells and that this growth is, therefore, a pure blastoma, but it is not worth while, on this account, to alter the name of this growth, since it would not serve any useful purpose and would only lead to confusion. The criterion, therefore, between a blastoma and a sarcoma is the fact that in the former some of the cells become differentiated into epithelial cells.

Although the characteristic of the cytomata is the fact that the cells are not arranged so as to form tissues, yet, in many cases, this is only true of their growing portions. In the older parts of the growth fully-formed tissues may be present. In columnar-celled carcinoma, for instance, we find well-formed epithelial tubes, and in sarcoma it is not uncommon to find fully-formed fibrous tissue, cartilage, or bone, and we have seen that in the blastomata differentiation and the formation of distinct tissues occur. The formed tissues are, however, of secondary development and not primary as in the histiomata.

In drawing up a tabular classification of tumours it must be remembered that the species and genera are not so well defined as in a classification in biology, hybrid tumours being frequently met with. If the different kinds of connective tissue tumours are regarded as species the different kinds of epithelial tumours must also be so regarded, so that if fibroma and chondroma are species, carcinoma, sarcoma, and myoma are genera. Under the term "teratoma" I should include only those tumours in which distinct organs, or parts of organs, without any regular arrangement, can be recognised. The term should not be used of a growth merely because it contains a variety of tissues, nor should it be applied to supernumerary limbs and other malformations. The tissue tumours are named by appending the suffix *oma* to a root which expresses the tissue which constitutes the essential part of the growth. Following this rule, the generic name for epithelial histiomata should be "epithelioma." This term has, however, unfortunately been applied to the corresponding cell tumours in which place it is redundant and wholly unnecessary. In consequence we have no generic or specific term for these growths, "adenoma" and "papilloma" being names given to varieties of the species of the genus epithelioma. I should include under the term "adenoma" any tumour which has as its characteristic feature tubes or spaces lined with epithelium whether or not it arises in connexion with a gland. Adenomata sometimes take origin from a surface epithelium as in the skin, in which case they are formed of tubes lined with squamous epithelium, and in the bladder when the tubes are lined with transitional epithelium. The fact that a tumour is composed of epithelial tubes does not necessarily imply that it arises from tubular structures. The term "neuroma" should be confined to those tumours which contain nerve-cells as well as nerve-fibres.

As regards compound terms in the nomenclature of tumours, I am of the opinion that they should be used according to some definite rule. The mere presence of different tissues in the same tumour is no ground for giving it a compound name, otherwise, since all tumours contain of diffuse sarcoma of the liver. Growth is both central and peripheral, and there is often a secondary formation of definite tissues such as fibrous tissue or cartilage. I have already considered the growth of the blastomata.

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[2] Transactions of the Pathological Society of London, 1886.
[3] Thompson Yates Laboratory Reports, vol. iii., Part 2.
[4] Transactions of the Pathological Society of London, 1896.

### TERMINATION.

Tumours in most cases continue to increase in size without attaining to any final termination. In some cases a limit is reached owing to a change in structure such as ossification or calcification. In other cases, again, a tumour after growing for a time may become stationary. In rare cases a tumour may decrease in size and ultimately disappear, and this without undergoing ulceration or necrosis. Sir William H. Bennett, in a clinical lecture at St. George's Hospital about three years ago,[9] gave examples occurring in his practice which show the possibility of malignant growths completely disappearing without any special treatment. In four cases verified microscopically as sarcoma the patients regained perfect health, the tumours disappearing completely. One of these was an abdominal spindle-celled sarcoma, two were melanotic sarcomata with disseminated growths, and the other was a sarcoma of the testis. In two cases of carcinoma in which the primary growth was removed and in which recurrence took place the recurrent growths subsequently became smaller and eventually almost completely disappeared. In one of these cases the primary growth was in the testis and in the other it was in the breast, and both were verified microscopically. Another case of carcinoma of the breast (not verified) was known to have remained stationary for 15 years. Another was a case of malignant disease of the pylorus with obstruction; this was not verified, but at the operation for gastro-jejunostomy numerous secondary growths in the omentum and under the liver were seen and handled. In this case the patient recovered completely and was well five years after the operation, no growths being then discoverable. He also mentions a case of apparently malignant disease of the cervical glands too extensive for operation in which the patient recovered. Besides these remarkable cases—and they were only examples of many more which had come under the observation of Sir William Bennett—there have been recorded lately many cases of carcinoma of the breast which have improved after the operation of oöphorectomy in combination with thyroid feeding and other cases which have improved without special treatment. It is, therefore, a mistake to say that a tumour always continues to grow without limit; it may, under certain conditions which are imperfectly understood, become stationary or even diminish in size or disappear completely.

### PHYSIOLOGICAL CHARACTERS.

We have next to consider whether the cells and tissues of which a tumour is composed are capable of behaving physiologically like the cells and tissues of normal organs, or, in other words, are the cells and tissues of a tumour capable of performing any function? In considering this question we have to remember the fact that the cells of a tumour are in a state of more or less rapid proliferation and we should not, therefore, expect to find them very active in the performance of any function. Moreover, owing to the atypical arrangement which is characteristic of a tumour, there is no mechanism by which the performance of a function can be initiated, and, for the same reason, any function that may be performed is incapable of being utilised. The muscle-cells of a myoma, for instance, are probably capable of contraction, but, owing to the want of nervous connexion and the atypical arrangement, this power of contraction is not manifested and, if it did take place, it would serve no useful purpose. In spite of this there are several facts which show that the cells of a tumour are capable of functionating. The sebaceous glands of a dermoid secrete sebum, the cells of an adenoma or carcinoma of the intestine secrete mucin, adenomata of the thyroid contain colloid, and adenomata of the breast sometimes contain a milky fluid. Also the cells of a squamous-celled carcinoma undergo keratinisation, those of a carcinoma of the stomach form pepsin and rennin, and those of a carcinoma of the pancreas contain all the ferments proper to the pancreas, and this is true, at any rate in the case of the pancreas, of secondary, as well as of primary, growths (Waring).[10]

Perhaps the most remarkable physiological characteristic of tumour-cells is the property which they possess of storing enormous quantities of glycogen. In this respect, according to Brault,[11] they far exceed all the normal cells of the body and they can only be compared with the rapidly proliferating cells of the embryo. Those tumours which grow the most rapidly contain the greatest amount of glycogen, and from the study of the amount contained in a tumour the rate of growth can be judged. The cells of carcinomata and sarcomata are loaded with glycogen, while the surrounding tissues show a complete absence of it. The presence of this glycogen raises some interesting points for our consideration. Firstly, what is the meaning of this great store of carbohydrate material? Carbohydrate material is the great source of energy in the living organism; it is to the body what the fuel is to the steam engine. In the case of the embryo and in tumour formation energy is manifested by the multiplication of cells, and in order to supply this energy the cells store up carbohydrate in the form of glycogen. Secondly, what is the origin of the glycogen? Presumably it is formed in the same way as under normal conditions from the circulating glucose; if, however, the supply be deficient, it can be derived from the proteids of the body as in the severer forms of diabetes. Lastly, what becomes of the glycogen? Although there is such an enormous store of glycogen, yet, as far as I know, malignant disease is seldom or never accompanied by glycosuria. The glycogen is used up in the multiplication of cells because the central parts of a carcinoma, where proliferation has ceased, are completely free from it. It is probably directly oxidised and eliminated as carbon dioxide and water. This question of the presence of glycogen in tumours is well worth further study, especially by those who take a special interest in metabolic processes.

### PATHOLOGICAL CHANGES.

The pathological changes to which tumours are subject need not detain us since they are the same to which any normal tissue is liable. Tumours are liable to the various retrogressive processes, especially to mucoid and fatty changes and calcification, to necrosis, to inflammation and repair, and to the formation of new tumours.

### CLINICAL CHARACTERS.

It will be noticed that in the classification which I have given the histiomata and cytomata correspond respectively to the simple and malignant tumours of a clinical classification. Most authors state that tumours, usually simple, may occasionally take on malignant characters, and this is especially supposed to be the case with chondromata. This idea is based chiefly on a case reported by Paget of a chondroma of the testis which gave rise to metastatic growths in the lungs and elsewhere. This case, however, was re-investigated by Kanthack and Pigg,[12] who found that it was not a pure chondroma, but that it contained carcinomatous elements, and in the same way it will, I think, be found that whenever a tumour that is apparently a tissue tumour displays malignant properties it is in reality a cell tumour.

In my opinion the difference between simple and malignant tumours is to be found in the manner in which they grow. The growing area of a cell tumour consists of cells, either separate or in small groups, not forming any definite tissue, any formed tissues that may be present in the tumour being of secondary formation. The tissues in a tissue tumour, on the other hand, are of primary formation. For example, the growing area of a columnar-celled carcinoma consists of columnar cells in rows or groups which only secondarily give rise to epithelial tubes, whereas in an adenoma the growing area consists of epithelial tubes similar to those in the older parts of the tumour. Similarly in a chondro-sarcoma the growing area consists of collections of cells which only secondarily form cartilage, while in a chondroma the cartilage grows in the same way as under normal conditions.

The mode of growth in cell tumours readily explains how it is that these tumours penetrate the surrounding structures instead of merely displacing them and how the cells find their way into the lymphatics and blood-vessels and so come to be distributed to distant organs.

The wasting and cachexia by which malignant tumours are often accompanied may probably be explained by the drain of nutritive material, especially carbohydrate, caused by the rapidly growing tumour.

The clinical features of malignant disease are very imperfectly dealt with in most books. The ordinary text-books of the result of previous tumour growth. 2. It is not always necessary to presuppose a rudiment consisting of the same kind of tissue as that of which the tumour is composed. It is evident, therefore, that the common factor in tumour formation is not to be found in the rudiment from which the tumour originates.

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[9] THE LANCET, Jan. 7th, 1899, p. 3.
[10] Journal of Anatomy and Physiology, vol. xxviii.
[11] Manuel d'Histologie Pathologique, Cornil and Ranvier, 1901.
[12] Journal of Pathology and Bacteriology, vol. v.

### GROWTH.

Having considered the rudiment from which the tumour springs we have next to direct our attention to the growth of the tumour from the rudiment. I shall postpone the consideration of the processes of cell division for the present. Tumours grow mainly, if not entirely, by centrifugal growth—that is, by proliferation of their own cells. Coats and others have supposed that, in the case of carcinoma, increase takes place by centripetal growth, that is, by the epithelium in the neighbourhood of the advancing tumour taking a share in the growth, but the evidence in favour of this view is not convincing Personally, I believe that the growth is centrifugal in all cases but that it is possible for the area of origin to extend by continuity. In some cases also it is possible that a malignant tumour may arise in multiple foci which subsequently fuse together. I agree with Ribbert that the examination of the growing margin of a tumour gives no information as to the structures from which it originated. Centrifugal growth may be either central or peripheral. If the growth is central the tumour will be definitely encapsuled; if peripheral growth occurs the capsule will be more or less indistinct and the tumour will be infiltrating. In order to consider the origin and mode of growth in more detail, it will be necessary to treat of the different classes separately.

*Organomata* —Many views have been held at different times as to the origin of the teratomata. Seeing that they occur most commonly in the ovary it is not unnatural to suppose that they originate in the germ-cells, either by the irregular development of a fertilised ovum or by a kind of parthenogenesis. This idea is unsatisfactory since, although the most complicated dermoids undoubtedly occur most frequently in the ovary, yet they are sometimes found in other parts of the body where germ-cells cannot be concerned. Nor is it sufficient to suppose that they arise in an abnormal inclusion of epiblast since the structures met with in these tumours are developed as much from the mesoblast as from the epiblast These tumours must be considered as errors of development just as other tumours may be regarded as errors of growth, and the increase in size is accompanied by a process of development, a fact which distinguishes them from other tumours. For instance, the bones met with in dermoids are not merely irregular masses of osseous tissue such as are found in other growths, but are definite bones with a distinct periosteum although, the development taking place without reference to the needs of the organism, the bones thus formed do not, as a rule, bear any resemblance to any individual bones. The difference between teratomata and malformations consists in the fact that in the latter the organs are found to be arranged in a more or less typical manner such as occurs, for instance, in a limb, a condition which we do not find in a teratoma As to the rudiment from which these tumours arise we do not know whether it consists of the structures usually present at the point of origin or of structures which have been included and are, in reality, derived from a distance

*Histiomata* —The growth of the tissue tumours takes place in exactly the same way as the growth of the normal tissues The tissues of the tumour during growth always preserve their proper characters; thus, the epithelium in an adenoma never loses its character as a tissue, it always forms a continuous membrane formed of cells in contact with each other lining tubes and spaces Tissue tumours grow, for the most part, by central growth Some fibromata, however, grow in part by peripheral growth and can therefore surround gland tubules, &c, so that they come to be imbedded in the tumour. The same is the case with some other tumours such as lipomata. The mode of growth in osteomata does not seem to have been determined; many growths called osteomata are in reality ossifying chondromata. The true osteoma such as is met with in the skull sometimes involves both tables and, from its macroscopic appearances, would seem to increase by centrifugal growth, that is, by proliferation of the osteocytes themselves This mode of growth would be in conformity with the growth of other tumours, but I have not had an opportunity of verifying it.

With regard to the epithelial histiomata the question arises: What part does the connective tissue play in the growth? Many authors regard the stroma as playing an equal part with the epithelium. I, however, look upon it as altogether secondary in importance to the epithelium. As epithelium is an avascular tissue it is entirely dependent on the surrounding connective tissue for its nutrition. If, therefore, the epithelium proliferate, there must be a concomitant proliferation of the neighbouring connective tissue. Epithelial histiomata arise by a proliferation of epithelium which gives rise to an increase of surface area. This increase can only be provided for by the occurrence of one of two events: either the proliferating area projects above the surrounding surface or it becomes invaginated into the subjacent tissue; in the former case the resulting tumour is a papilloma, in the latter it is an adenoma. In a papilloma the projecting area will necessarily carry with it a central core of fibrous tissue derived from the subjacent connective tissue of the part. Just as a papilloma may arise where there are normally no papillæ, so an adenoma may originate from a surface epithelium where there are no glands. I have seen a tumour of the bladder in which the epithelium, instead of projecting so as to form a papilloma as is usually the case, was invaginated into the subjacent tissue in the form of tubes lined with transitional epithelium without there being any penetration of the epithelial cells into the surrounding tissues, such as is the case in carcinoma; the growth was, moreover, clinically benign in character. Structurally the tumour corresponded exactly with an ordinary adenomatous polypus of the rectum. Similar growths have been described in the skin by Bland-Sutton[7] and others. In this position, as in the bladder and rectum, they form pedunculated tumours formed of tubes lined with epithelium. In all probability such tumours have occasionally been described as carcinomata, but they can be distinguished by the fact that there is no tendency for the individual epithelial cells to penetrate into the surrounding tissues. Epithelial histiomata often present a combination of papilloma and adenoma, especially in the bladder and rectum.

With a view to studying the origin and growth of these epithelial tumours I have applied the method of serial sections. By this method the errors of interpretation which arise from the examination of a single section are entirely eliminated and we can obtain a mental picture of the complete structure of the tumour. Unfortunately it is difficult to obtain tumours of sufficiently small size for this method to be applicable. From the examination of an adenoma of the rectum by this method I came to the conclusion[8] that it arose, not from the crypts of Lieberkühn but from the surface epithelium, the tubes of which it was composed being new formed by invagination from the surface A similar examination of the lobules of a large lobulated adenoma of the breast revealed the fact that al the epithelial tubes in the lobule were branches of a sing tube which entered the lobule from the main tumour. It is probable, therefore, that all the tubes in an adenoma of the breast are in direct continuity with each other, and that therefore they arise from a single epithelial rudiment.

*Cytomata* —The growth of the cell tumours differs from that of the tissue tumours in that the growing portions consist of cells more or less loosely held together but forming definite tissues. These cells readily penetrate the interstices of the surrounding tissues. Any tissues which may be present in cytomata are of not primary, formation.

Carcinomata arise from epithelium or endothelium. area of origin may be localised or may involve the whole an organ as in the rare cases of diffuse carcinosis met in the breast and kidney. The stroma is derived from the surrounding tissues and represents the reaction of the tissues against the invading epithelial cells. The growth in nomata is almost entirely peripheral, and takes place individual cells or small group of cells penetrating into the surrounding connective tissue spaces. This can be detected even in columnar-celled carcinomata, at the growing edge of which can be seen rows and groups of columnar invading the surrounding tissues, the tubes being formations The growth therefore differs entirely that of an adenoma in which the growth takes primarily in the form of tubes.

Sarcomata arise in any form of connective tissue and area of origin may be limited or may involve the whole the connective tissue of an organ, as is seen in the rare of diffuse sarcoma of the liver. Growth is both central and peripheral, and there is often a secondary formation of definite tissues such as fibrous tissue or cartilage. I have already considered the growth of the blastomata.

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[7] Transactions of the Pathological Society of London,

[8] Journal of Pathology and Bacteriology, vol. vii,

### TERMINATION.

Tumours in most cases continue to increase in size without attaining to any final termination. In some cases a limit is reached owing to a change in structure such as ossification or calcification. In other cases, again, a tumour after growing for a time may become stationary. In rare cases a tumour may decrease in size and ultimately disappear, and this without undergoing ulceration or necrosis. Sir William H. Bennett, in a clinical lecture at St. George's Hospital about three years ago,[9] gave examples occurring in his practice which show the possibility of malignant growths completely disappearing without any special treatment. In four cases verified microscopically as sarcoma the patients regained perfect health, the tumours disappearing completely. One of these was an abdominal spindle-celled sarcoma, two were melanotic sarcomata with disseminated growths, and the other was a sarcoma of the testis. In two cases of carcinoma in which the primary growth was removed and in which recurrence took place the recurrent growths subsequently became smaller and eventually almost completely disappeared. In one of these cases the primary growth was in the testis and in the other it was in the breast, and both were verified microscopically. Another case of carcinoma of the breast (not verified) was known to have remained stationary for 15 years. Another was a case of malignant disease of the pylorus with obstruction; this was not verified, but at the operation for gastrojejunostomy numerous secondary growths in the omentum and under the liver were seen and handled. In this case the patient recovered completely and was well five years after the operation, no growths being then discoverable. He also mentions a case of apparently malignant disease of the cervical glands too extensive for operation in which the patient recovered. Besides these remarkable cases—and they were only examples of many more which had come under the observation of Sir William Bennett—there have been recorded lately many cases of carcinoma of the breast which have improved after the operation of oöphorectomy in combination with thyroid feeding and other cases which have improved without special treatment. It is, therefore, a mistake to say that a tumour always continues to grow without limit; it may, under certain conditions which are imperfectly understood, become stationary or even diminish in size or disappear completely.

### PHYSIOLOGICAL CHARACTERS.

We have next to consider whether the cells and tissues of which a tumour is composed are capable of behaving physiologically like the cells and tissues of normal organs, or, in other words, are the cells and tissues of a tumour capable of performing any function? In considering this question we have to remember the fact that the cells of a tumour are in a state of more or less rapid proliferation and we should not, therefore, expect to find them very active in the performance of any function. Moreover, owing to the atypical arrangement which is characteristic of a tumour, there is no mechanism by which the performance of a function can be initiated, and, for the same reason, any function that may be performed is incapable of being utilised. The muscle-cells of a myoma, for instance, are probably capable of contraction, but, owing to the want of nervous connexion and the atypical arrangement, this power of contraction is not manifested and, if it did take place, it would serve no useful purpose. In spite of this there are several facts which show that the cells of a tumour are capable of functionating. The sebaceous glands of a dermoid secrete sebum, the cells of an adenoma or carcinoma of the intestine secrete mucin, adenomata of the thyroid contain colloid, and adenomata of the breast sometimes contain a milky fluid. Also the cells of a squamous-celled carcinoma undergo keratinisation, those of a carcinoma of the stomach form pepsin and rennin, and those of a carcinoma of the pancreas contain all the ferments proper to the pancreas, and this is true, at any rate in the case of the pancreas, of secondary, as well as of primary, growths (Waring).[10]

Perhaps the most remarkable physiological characteristic of tumour-cells is the property which they possess of storing enormous quantities of glycogen. In this respect, according to Brault,[11] they far exceed all the normal cells of the body and they can only be compared with the rapidly proliferating cells of the embryo. Those tumours which grow the most rapidly contain the greatest amount of glycogen, and from the study of the amount contained in a tumour the rate of growth can be judged. The cells of carcinomata and sarcomata are loaded with glycogen, while the surrounding tissues show a complete absence of it. The presence of this glycogen raises some interesting points for our consideration. Firstly, what is the meaning of this great store of carbohydrate material? Carbohydrate material is the great source of energy in the living organism; it is to the body what the fuel is to the steam engine. In the case of the embryo and in tumour formation energy is manifested by the multiplication of cells, and in order to supply this energy the cells store up carbohydrate in the form of glycogen. Secondly, what is the origin of the glycogen? Presumably it is formed in the same way as under normal conditions from the circulating glucose; if, however, the supply be deficient, it can be derived from the proteids of the body as in the severer forms of diabetes. Lastly, what becomes of the glycogen? Although there is such an enormous store of glycogen, yet, as far as I know, malignant disease is seldom or never accompanied by glycosuria. The glycogen is used up in the multiplication of cells because the central parts of a carcinoma, where proliferation has ceased, are completely free from it. It is probably directly oxidised and eliminated as carbon dioxide and water. This question of the presence of glycogen in tumours is well worth further study, especially by those who take a special interest in metabolic processes.

### PATHOLOGICAL CHANGES.

The pathological changes to which tumours are subject need not detain us since they are the same to which any normal tissue is liable. Tumours are liable to the various retrogressive processes, especially to mucoid and fatty changes and calcification, to necrosis, to inflammation and repair, and to the formation of new tumours.

### CLINICAL CHARACTERS.

It will be noticed that in the classification which I have given the histiomata and cytomata correspond respectively to the simple and malignant tumours of a clinical classification. Most authors state that tumours, usually simple, may occasionally take on malignant characters, and this is especially supposed to be the case with chondromata. This idea is based chiefly on a case reported by Paget of a chondroma of the testis which gave rise to metastatic growths in the lungs and elsewhere. This case, however, was re-investigated by Kanthack and Pigg,[12] who found that it was not a pure chondroma, but that it contained carcinomatous elements, and in the same way it will, I think, be found that whenever a tumour that is apparently a tissue tumour displays malignant properties it is in reality a cell tumour.

In my opinion the difference between simple and malignant tumours is to be found in the manner in which they grow. The growing area of a cell tumour consists of cells, either separate or in small groups, not forming any definite tissue, any formed tissues that may be present in the tumour being of secondary formation. The tissues in a tissue tumour, on the other hand, are of primary formation. For example, the growing area of a columnar-celled carcinoma consists of columnar cells in rows or groups which only secondarily give rise to epithelial tubes, whereas in an adenoma the growing area consists of epithelial tubes similar to those in the older parts of the tumour. Similarly in a chondro-sarcoma the growing area consists of collections of cells which only secondarily form cartilage, while in a chondroma the cartilage grows in the same way as under normal conditions.

The mode of growth in cell tumours readily explains how it is that these tumours penetrate the surrounding structures instead of merely displacing them and how the cells find their way into the lymphatics and blood-vessels and so come to be distributed to distant organs.

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*Organomata.*—Many views have been held at different times as to the origin of the teratomata. Seeing that they occur most commonly in the ovary it is not unnatural to suppose that they originate in the germ-cells, either by the irregular development of a fertilised ovum or by a kind of parthenogenesis. This idea is unsatisfactory since, although the most complicated dermoids undoubtedly occur most frequently in the ovary, yet they are sometimes found in other parts of the body where germ-cells cannot be concerned. Nor is it sufficient to suppose that they arise in an abnormal inclusion of epiblast since the structures met with in these tumours are developed as much from the mesoblast as from the epiblast. These tumours must be considered as errors of development just as other tumours may be regarded as errors of growth, and the increase in size is accompanied by a process of development, a fact which distinguishes them from other tumours. For instance, the bones met with in dermoids are not merely irregular masses of osseous tissue such as are found in other growths, but are definite bones with a distinct periosteum although, the development taking place without reference to the needs of the organism, the bones thus formed do not, as a rule, bear any resemblance to any individual bones. The difference between teratomata and malformations consists in the fact that in the latter the organs are found to be arranged in a more or less typical manner such as occurs, for instance, in a limb, a condition which we do not find in a teratoma. As to the rudiment from which these tumours arise we do not know whether it consists of the structures usually present at the point of origin or of structures which have been included and are, in reality, derived from a distance.

*Histiomata.*—The growth of the tissue tumours takes place in exactly the same way as the growth of the normal tissues. The tissues of the tumour during growth always preserve their proper characters; thus, the epithelium in an adenoma never loses its character as a tissue, it always forms a continuous membrane formed of cells in contact with each other lining tubes and spaces. Tissue tumours grow, for the most part, by central growth. Some fibromata, however, grow in part by peripheral growth and can therefore surround gland tubules, &c., so that they come to be imbedded in the tumour. The same is the case with some other tumours such as lipomata. The mode of growth in osteomata does not seem to have been determined; many growths called osteomata are in reality ossifying chondromata. The true osteoma such as is met with in the skull sometimes involves both tables and, from its macroscopic appearances, would seem to increase by centrifugal growth, that is, by proliferation of the osteocytes themselves. This mode of growth would be in conformity with the growth of other tumours, but I have not had an opportunity of verifying it.

With regard to the epithelial histiomata the question arises: What part does the connective tissue play in the growth? Many authors regard the stroma as playing an equal part with the epithelium. I, however, look upon it as altogether secondary in importance to the epithelium. As epithelium is an avascular tissue it is entirely dependent on the surrounding connective tissue for its nutrition. If, therefore, the epithelium proliferate, there must be a concomitant proliferation of the neighbouring connective tissue. Epithelial histiomata arise by a proliferation of epithelium which gives rise to an increase of surface area. This increase can only be provided for by the occurrence of one of two events: either the proliferating area projects above the surrounding surface or it becomes invaginated into the subjacent tissue; in the former case the resulting tumour is a papilloma, in the latter it is an adenoma. In a papilloma the projecting area will necessarily carry with it a central core of fibrous tissue derived from the subjacent connective tissue of the part. Just as a papilloma may arise where there are normally no papillæ, so an adenoma may originate from a surface epithelium where there are no glands. I have seen a tumour of the bladder in which the epithelium, instead of projecting so as to form a papilloma as is usually the case, was invaginated into the subjacent tissue in the form of tubes lined with transitional epithelium without there being any penetration of the epithelial cells into the surrounding tissues, such as is the case in carcinoma; the growth was, moreover, clinically benign in character. Structurally the tumour corresponded exactly with an ordinary adenomatous polypus of the rectum. Similar growths have been described in the skin by Bland-Sutton[7] and others. In this position, as in the bladder and rectum, they form pedunculated tumours formed of tubes lined with epithelium. In all probability such tumours have occasionally been described as carcinomata, but they can be distinguished by the fact that there is no tendency for the individual epithelial cells to penetrate into the surrounding tissues. Epithelial histiomata often present a combination of papilloma and adenoma, especially in the bladder and rectum.

With a view to studying the origin and growth of these epithelial tumours I have applied the method of serial sections. By this method the errors of interpretation which arise from the examination of a single section are entirely eliminated and we can obtain a mental picture of the complete structure of the tumour. Unfortunately it is difficult to obtain tumours of sufficiently small size for this method to be applicable. From the examination of an adenoma of the rectum by this method I came to the conclusion[8] that it arose, not from the crypts of Lieberkühn but from the surface epithelium, the tubes of which it was composed being new formed by invagination from the surface. A similar examination of the lobules of a large lobulated adenoma of the breast revealed the fact that all the epithelial tubes in the lobule were branches of a single tube which entered the lobule from the main tumour. It is probable, therefore, that all the tubes in an adenoma of the breast are in direct continuity with each other, and that therefore they arise from a single epithelial rudiment.

*Cytomata.*—The growth of the cell tumours differs from that of the tissue tumours in that the growing portions consist of cells more or less loosely held together but not forming definite tissues. These cells readily penetrate into the interstices of the surrounding tissues. Any formed tissues which may be present in cytomata are of secondary, not primary, formation.

Carcinomata arise from epithelium or endothelium. The area of origin may be localised or may involve the whole of an organ as in the rare cases of diffuse carcinosis met with in the breast and kidney. The stroma is derived from the surrounding tissues and represents the reaction of the tissues against the invading epithelial cells. The growth in carcinomata is almost entirely peripheral, and takes place by individual cells or small group of cells penetrating into the surrounding connective tissue spaces. This can be detected even in columnar-celled carcinomata, at the growing edge of which can be seen rows and groups of columnar cells invading the surrounding tissues, the tubes being secondary formations. The growth therefore differs entirely from that of an adenoma in which the growth takes place primarily in the form of tubes.

Sarcomata arise in any form of connective tissue and the area of origin may be limited or may involve the whole of the connective tissue of an organ, as is seen in the rare cases of a sarcoma arising at the site of a fracture in a bone. These extrinsic factors, which are known by the general term *irritants*, are also the exciters of inflammatory processes, but there is this difference between the two cases. When inflammation follows the action of an irritant the amount of inflammation depends on the amount of irritation and on removing the irritant the inflammatory process ceases and the injury is made good; in the case of a tumour following the action of an irritant, on the other hand, the action of the irritant may be momentary while the growth of the tumour is prolonged and the removal of the irritant does not cause the cessation of the tumour growth.

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[7] Transactions of the Pathological Society of London, 1892.

[8] Journal of Pathology and Bacteriology, vol. vii.

These extrinsic factors, therefore, cannot be the essential causal factors of tumour formation and can only be remote factors which act through the medium of intermediate intrinsic factors. We must, however, consider the possibility of the existence of a special extrinsic factor, such as an animal or vegetable parasite. The theory of parasitic causation of tumour formation has gained a large amount of acceptance at the present time and, indeed, almost all those who are working at the subject are approaching it from this point of view. This theory is only supposed to apply to those tumours which are malignant, but it is equally necessary to explain the formation of simple tumours if an extrinsic factor is thought to be essential at all, because the continuous and increasing growth of the tumour demands a continuous and increasing causal factor. I myself have not engaged in the search for a parasite although I have seen the bodies claimed to be of that nature. I have, however, studied minutely the histology and general pathology of tumours with a view to determining whether or not tumour formation can be explained by this theory and I have come to the conclusion that the essential causal factor cannot be found in any extrinsic irritant, whether parasitic or not. On account of the importance of this theory it is necessary to examine it closely and carefully to consider the arguments on both sides. In the following remarks I shall, for the sake of simplicity, use the term carcinoma, but the arguments will, as a rule, equally apply to sarcoma.

### Parasitic Theory.

In discussing this theory, I shall first consider the basis on which it is founded, afterwards I shall consider in detail various objections which can be brought against it. The theory is based :—

1. *On the apparent resemblance of carcinoma to infective diseases such as tuberculosis.*—Carcinoma, at first sight, closely resembles tuberculosis in many respects. Both have a local origin and give rise to secondary deposits, first in the regional lymphatic glands, and later in the various organs of the body. When, however, we come to study the histology of the lesions in the two cases, the resemblance at once disappears. We find that the tuberculous nodule is made up of cells which are derived partly from cells which have exuded from the blood-vessels, and partly from the tissues of the part in which the bacillus has settled. A carcinomatous nodule, on the other hand, is composed of cells which are derived in secondary growths not from the part in which the growth is situated, but from the primary tumour, wherever this may be placed. We can, indeed, compare the epithelial cells of the carcinomatous nodule with the bacilli in a tubercle, and if we do this the analogy between the two diseases is complete, the stroma of the carcinoma corresponding to the histological tubercle, while the epithelial cells correspond with the bacilli in the tubercle. If, however, the comparison is made in this way the argument in favour of the parasitic origin of carcinoma from the analogy with tuberculosis completely fails, because, if we grant that the tubercle bacilli are capable of spontaneous proliferation, we cannot argue that their analogues, the epithelial cells of a carcinoma, can only proliferate under the influence of a parasite.

2. *On the inoculability of malignant growths.*—A few cases are on record in which a patient afflicted with carcinoma has apparently infected another person with the disease; these cases are, however, extremely rare and would seem to be no more than coincidences. If tumours were due to parasites we should expect the infectivity to be much more marked. Growths are sometimes met with on the genital organs of bulldogs; they have been especially described by Washbourn and Bellingham Smith[15] under the name of infective sarcomata. These growths are highly contagious but show only a slight degree of malignancy; they are slow of growth and rarely give rise to metastasis and they cannot be transferred to any animals except dogs. Microscopically they closely resemble round-celled sarcomata. In two cases which I have had the opportunity of examining the growths had been present for 12 months and yet there was very little infiltration of the surrounding parts. Both were situated in the vagina and in one case there was a secondary growth in one of the mammary glands, yet, notwithstanding this, a complete cure took place after the removal of the affected part of the vagina and the secondary growth. As, therefore, these growths differ so largely from sarcomata as we meet them in man, we must be careful how we use them as an argument in favour of the parasitic theory. The fact that a tumour is inoculable does not necessarily imply that it is due to a parasite. The infective agent may very well be the epithelial cells themselves, since it must not be forgotten that they are living units. In skin-grafting we see that epithelial cells can be transplanted and, if this is true of normal cells, it is probably true also of the cells of a carcinoma. Malignant tumours have been successfully transferred from one animal to another but only if the two animals are of the same species.

3. *On the analogy with the lesions produced in the rabbit's liver and elsewhere by the coccidium oviforme.*—In coccidiosis of the liver we find numerous small cavities which are filled with the coccidia in various stages of development. On examining these spaces we find that they are lined by columnar epithelium and are evidently local dilatations of the bile-ducts. The younger forms of the parasite are found within the epithelial cells while the older are lying free in the cavity. This has been regarded as an example of true tumour formation caused by a parasite. I have not myself examined critically many of these cases, but from what I have seen I am more inclined to look upon them as a kind of retention cyst caused by the accumulation of the parasites in much the same way as bronchiectasis may be due to the accumulation of the bronchial secretion. The proliferation of the epithelium would in that case be of the same nature as that found in catarrhal inflammation. Occasionally the parasites are found in a cavity in the connective tissue and in that case the wall of the cavity consists of fibrous tissue without any epithelial lining, as would be the case with any other chronic irritant. In any case we do not in coccidiosis find the essential lesion of carcinoma—namely, penetration of the connective tissue by the epithelial cells,—so that if any conclusion is to be drawn from the supposed analogy it is that non-malignant tumours are caused by parasites.

4. *On the topographical distribution of carcinoma.*—Carcinoma may in a sense be called a disease of civilisation—that is, it is more frequent among civilised nations than among savages and it is more common among domesticated than among wild animals. It is said to be more frequent in valleys the rivers of which are liable to floods. These are conditions which affect the general health and it does not seem necessary to assume a parasite in explanation. In some places there are said to be certain houses the inmates of which are more liable to cancer than are those of other houses, but we require more information on this point before we can draw any conclusions from it.

The above four facts are the bases on which is founded the general idea that malignant growths are due to parasites. There remains to be considered the question whether carcinoma is due to certain bodies described as parasites which are found in the tumour cells. From time to time during the last 11 years certain structures which are found within and between the cells of carcinomata have been described by numerous observers as parasites. There is, however, no agreement among the different observers as to the nature of these bodies nor as to which of the various cell inclusions are and which are not parasitic in nature. Two of the best papers which have been published of late years on this subject are those by Plimmer[16] and Gaylord.[17] Plimmer describes the parasite as a round body varying in size from 0·004 to 0·04 millimetre or more in diameter. In the centre is a minute body which he calls a nucleus, although, as he says, it probably does not correspond with the nucleus of an ordinary cell. Round the nucleus is a layer of homogeneous protoplasm which is bounded by a definite capsule. According to Plimmer, the nucleus of the parasite differs from the nucleus of a cell in its staining properties by refusing basic stains such as hæmatoxylin and medicine—even Allbutt's System of Medicine—are silent on the medical aspects of carcinoma and sarcoma and little is to be gathered from other sources. There seems to be no full account of the temperature and urine, and the blood has not received the attention that it deserves. We require much more information as to these points, especially with regard to the excretion of nitrogen.

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[15] Brit. Med. Jour., vol. ii., 1898.

[16] Practitioner, April, 1899.

[17] American Journal of Medical Sciences, May, 1901.

## LECTURE II.

*Delivered on Feb. 12th.*

MR. PRESIDENT AND GENTLEMEN,—In this lecture I propose to consider certain theories which have been advanced to explain the causation of tumours, but it will first be necessary to draw your attention to the minute structure of the cell and to the changes which it undergoes during the process of cell division.

### CELL STRUCTURE AND CELL DIVISION.

In the normal cell at rest the following constituents can be recognised.[13] 1. The *cytoplasm* or protoplasm of the cell body. 2. The *nucleus*, which consists of the following parts: (*a*) the *nuclear membrane*, which gives to the nucleus its sharp contour; (*b*) the *nuclear reticulum*, which consists partly of chromatin, which is the most important constituent and which gives to the nucleus its intense staining properties, and partly of linin, which resembles the cytoplasm in staining reactions; (*c*) the *nucleoli*, of which there are two kinds, the *plasmosomes* or true nucleoli, which stain like the cytoplasm, and the *karyosomes*, which stain like the chromatic substance; and (*d*) the *karyolymph*, which occupies the meshes of the nuclear reticulum. 3. Lastly, there is the *centrosome*, which is usually situated in the cytoplasm, but which is occasionally found in the nucleus. The centrosome is a permanent constituent of some cells, but it has not been shown to be so in all. It appears as a minute body staining with the nuclear dyes and is surrounded by a spherical body known as the *centrosphere* or attraction sphere. From the centrosome there often radiate achromatic fibres forming the *aster*. The functions of the centrosome are not yet fully known, but there are reasons for regarding it as the dynamic centre of the cell—that is, the centre which regulates the movements of the cell. In some cells the centrosome has been found to have intimate relations with the cilia; this is especially the case in the spermatozoon in which the centrosome is found in the middle piece at the attachment of the tail. In the leucocyte the centrosome and aster are permanent and are supposed by some to influence the amœboid movements. In epithelial cells the centrosome is usually found towards the free border of the cell. The chromatin of the nucleus at rest is arranged in the form of a network. Now, the first indication of division of the cell by mitosis is found in the centrosome which divides. This division sometimes takes place immediately after the preceding division, so that the centrosome in the resting cell often appears double. The two halves then separate and, at the same time, there appears a structure composed of achromatic fibres known as the *amphiaster*, which consists of an aster at each end with its centre at the centrosome and the intervening *achromatic spindle* uniting the two centrosomes. At the same time that these changes are taking place in the centrosome the nucleus undergoes alterations; the chromatin becomes arranged in the form of a skein or *spireme*, which then splits into a certain number of segments called *chromosomes*, which are themselves composed of minute granules called *chromomeres*. The chromomeres next undergo division in such a way that each chromosome comes to consist of two parallel rows of chromomeres. The nuclear membrane has by this time disappeared and the chromosomes are drawn into the axis of the achromatic spindle, to the fibres of which they become attached. The two halves of the chromosomes, then, under the influence of the achromatic fibres, become separated and pass towards the centrosomes and finally rearrange themselves so as to form the nuclei of the daughter cells. The cell body begins to divide as the chromosomes separate, apparently also under the influence of the achromatic substance. We thus see that, while the division of the chromosomes is spontaneous, their separation is due to the action of the centrosomes and the amphiaster and that, in consequence, the centrosome should be considered as the prime agent in the division of the cell.

The centrosome and its associated achromatic substance or *archoplasm* have been strangely neglected by pathologists, although they form such an important part of the cell. Under normal conditions the result of mitosis is that each daughter cell contains exactly the same number of chromosomes as the mother cell, this number being fixed for each species of animal. In animals multiplying by sexual reproduction this number is always even, and in man it is said to be 16. I have been able to verify this number in the case of a few carcinoma cells which I have come across in which it has been possible to enumerate the distinct chromosomes.

In malignant growths and in some other conditions accompanied by rapid proliferation we often find a deviation from the typical form of mitosis; thus we find *asymmetrical mitosis*, in which the daughter cells contain an unequal number of chromosomes, and *multipolar mitosis*, in which the cell divides simultaneously into more than two daughter cells. Multipolar mitosis arises from the division of the centrosome into more than two parts; each part is associated with a cone of achromatic fibres which passes to the chromosomes. I have not been able to determine the number of chromosomes in the daughter nuclei in these cases. In most cases of quadripolar mitosis which I have seen the daughter nuclei were not in the same plane but were at points corresponding to the angles of a regular tetrahedron.

*Amitosis*, or direct division, is often met with in malignant tumours and especially in those which are undergoing degeneration. In this mode of division the nucleus becomes divided in two by a septum; the two halves then separate and this is followed by division of the cytoplasm. Frequently, however, the cell body fails to divide and thus arise cells with two or more nuclei. Another method of amitosis is described by Brault,[14] and from my own observations I can confirm his description. In this method the nucleus becomes drawn out into two or more parts, each part becoming the nucleus of a daughter cell. In other cases the nucleus may give off buds which form daughter nuclei. Occasionally the nucleus becomes split up into a number of chromatin particles of varying size which become scattered in the cytoplasm. That is known as fragmentation or *karyorrhexis*.

*Endogenous formation* of cells used to be thought a common event in carcinoma; lately, however, doubts have been thrown on its existence, chiefly by those who uphold the parasitic theory. Personally I have no doubt that this process does occur and I should describe the method as follows. A portion of the nucleus becomes separated by fragmentation or budding, it then gathers round it some of the neighbouring cytoplasm which becomes separated from the rest of the cell body, and thus forms a daughter cell which gradually increases in size until it becomes a fully formed cell lying in a vacuole in the mother cell. In other cases the daughter cell is the result of an amitotic division in which one of the resulting cells lies within the other instead of separating from it as is usually the case. In this connexion it must be remembered that the chromomeres, of which the nuclear chromatin is composed, are, to a certain extent, living units capable of division and growth, so that it may be possible for a minute portion of the nucleus to grow so as to form the nucleus of a new cell. These included cells are of common occurrence in some carcinomata and sarcomata, and it is not uncommon to see a granddaughter cell within the daughter cell. I have proved by means of serial sections that these cells are really inclosed and not merely invaginated, and it is difficult to conceive how they come to be so inclosed unless they are formed *in situ*.

### EXTRINSIC CAUSES.

Causal factors may be divided into those which are of extrinsic and those which are of intrinsic origin. When we speak of a disease as a whole the term *extrinsic* implies that the factor is derived from outside the body; when, however, a disease is considered in its relation to any particular organ the term implies that the causal factor is derived from outside that organ, but not necessarily from outside the body. Extrinsic factors undoubtedly play an important part in the causation of tumour formation. Tumours may arise as a result of chronic irritation such as that produced by constant friction or by the presence of a chronic ulcer; they have also been ascribed to a blow or sudden injury as in the case which contain the inclusion do not divide, but, as a rule, begin to show degenerative changes similar to those in phagocytic cells in other diseases when the cells cannot conquer. These degenerative changes would, however, seem to be very slight in amount.

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[13] Wilson: The Cell in Development and Inheritance.

[14] Manuel d'Hist [illegible] Pathologique

As regards the relation between the supposed parasite and the cell, we have to consider how the parasite, in the case of intracellular parasites, enters the cell. Is the entrance active on the part of the parasite or passive as in phagocytosis? or does the parasite fulfil its whole cycle within the cell? The last supposition is impossible, for, since the containing cell does not divide, the parasite would not have any opportunity of continuing its existence when the cell had degenerated. If the entrance is an active process on the part of the parasite it is difficult to understand how a parasite which causes destruction of the cell into which it enters can cause active proliferation of the surrounding cells. If, on the other hand, it is a phagocytic action on the part of the cell, how is it that the youngest forms of parasite which are described are either within or close to the nucleus? The abnormal increase in the phagocytic properties of the epithelial cells is left wholly unexplained. Mr. Plimmer tells me that there is not sufficient evidence to show whether the entrance of the parasite into the cell is active or passive.

An example of true defensive reaction is seen in catarrhal inflammation. In this the affected epithelial cells degenerate and are cast off, those that are left proliferating to take their place. In carcinoma, however, the affected cells are not cast off, but penetrate into the deeper tissues; it is, therefore, the exact opposite of a defensive reaction. If, therefore, carcinoma be due to a parasite, we have the curious phenomenon of the organism not attempting in any way to defend itself against an injurious parasite. This would be a unique occurrence in the processes of disease. It might be suggested that the parasites spread into the connective tissue and are followed by the proliferating epithelial cells. This is highly improbable and implies a mechanism of defence which is entirely unknown and yet there would seem to be no reason why the ordinary means of defence should not be available. Another objection to the theory is the fact that we are not told whether each species of carcinoma and sarcoma has its own parasite, or whether they are all due to the same parasite. The different species of carcinoma are usually so distinct that it is difficult to suppose that they are due to the same parasite. If this were the case we should expect to find the metastatic growths differing according to the kind of epithelium in which they occur. For instance, in the case of a squamous-celled carcinoma with secondary deposits in the liver we should expect to find the latter composed of spheroidal cells derived, by the action of the parasite, from the liver cells, but this is a state of things that we do not meet with. Moreover, if sarcoma and carcinoma are, as Plimmer and Gaylord suggest, due to the same parasite, how is it that we do not meet with a primary carcinoma giving rise to secondary sarcomatous deposits? If, on the other hand, each species has its own parasite, how are we to account for those tumours which show intermediate forms between the better marked species? In columnar-celled carcinoma of the uterus we occasionally find areas of squamous cells lying among and evidently formed from the columnar cells. There are also the highly complicated compound sarcomata which it would be impossible to explain on the supposition that each kind of sarcoma has its own parasite. Again, if each kind of tumour has its own parasite, we must suppose a series of parasites each of which are only capable of acting upon one kind of cell. It would therefore be necessary to suppose different carcinoma parasites for each gland in the body and we should also have to suppose a different series of parasites for each species of animal. Either of these suppositions, therefore, lands us in inextricable difficulties.

The parasitic theory, *then*, will *not explain* the production and growth of the primary tumour, nor will it explain the different species and the manner in which they breed true. Will it explain metastasis? Here, at all events, this theory ought to be capable of affording an explanation, since it is this feature which has afforded the chief ground on which the theory is based. In reality, however, instead of assisting the explanation of this feature, it increases the difficulty.

A metastatic growth cannot be due simply to the presence of a parasite for, if it were, we could not have a metastatic carcinoma in a position devoid of epithelium. We must therefore conclude that, besides the parasite, at least one epithelial cell must be transferred from the primary growth to form the mother cell of the secondary deposit, but this cell cannot be the cell in which the parasite is lodged, since the parasite-containing cells, at least in the case of the described parasites, do not proliferate but undergo degeneration. Therefore we must imagine a parasite and a cell independently conveyed to the site of the metastatic growth. Again, the adoption of this theory will not explain the situation of the primary growth. It will not explain, for instance, the frequency of malignant disease in the female organs of generation or the rarity of it in situations in which we should expect it to be frequent, such as the lungs and small intestine. Nor does it explain why the acini of the breast are more frequently affected than the ducts. In the case of sarcoma it is even more unsatisfactory, since, except in the rare cases of sarcoma starting in a wound, we must suppose the parasites conveyed to the seat of the tumour by the blood, and if this were the case we should expect multiple primary growths to be common

Carcinoma differs markedly from parasitic diseases in the almost absolute natural immunity possessed by children. To no parasitic disease is there such an absolute natural immunity at any particular period of life as there is to carcinoma during the first two decades. Brault[22] finds an objection to this theory in the fact that in malignant tumours the cells contain large quantities of glycogen, while in the cells resulting from parasitic irritation there is none. In the coccidium nodules in a rabbit's liver the glycogen is situated, not in the epithelial cells, but in the parasites themselves. Another important objection is the fact that it cannot by any possibility explain the origin of congenital sarcomata, and especially those tumours which I have called blastomata. In the case of tumours associated with the presence of bilharzia ova we find that the ova are not the immediate cause of the tumour, but are only remote causes since they are found, not in the tumour itself, but in the neighbourhood. Finally, there is the important fact that all the phenomena of malignant and other tumours can be explained on other grounds—namely, on the view that the cells take on an independent mode of growth and behave as parasites themselves.

We thus see that while the grounds on which this theory is based are inadequate the theory itself will not explain any of the phenomena of malignant disease. We are therefore justified in saying that malignant growths are not to be explained on the assumption of special extrinsic causal factors. It is equally impossible to explain the occurrence of tissue tumours on the parasitic theory, although, as I have shown, if these tumours are due to extrinsic causal factors, these factors must necessarily be of the nature of parasites. But it will be said that extrinsic factors are not necessary to explain simple tumours; to this I answer that there is no justification for separating the tissue tumours from the cell tumours so as to say that, while the one are due to intrinsic factors alone, extrinsic factors are necessary to explain the others. The common factor, therefore, in tumour formation is not to be found in the extrinsic causal agents.

### INTRINSIC CAUSES.

We have next to consider the intrinsic factors concerned in the causation of tumours, that is, the factors which arise within the organism at the seat of origin of the tumour. Thiersch, in 1865, called attention to the fact that in old age the connective tissue of the body undergoes atrophy and in consequence becomes unable to withstand the ingrowth of the more active cutaneous epithelium, and to this fact he attributed the origin of cutaneous carcinoma. Cohnheim, who attempted to find the common factor in tumour formation in the rudiment from which the tumour springs, made use of this observation of Thiersch to illustrate his views on the nature of malignancy. According to this author malignancy depends, not on any structural peculiarity of the tumour itself, but on a diminution of the physiological resistance of the surrounding tissues which enables the tumour cells to penetrate into and to destroy them. This diminution of the physiological resistance might be caused by an antecedent inflammatory condition or by the atrophy consequent on old age, or it might be inherited. Woodhead,[23] in his Morton Lecture delivered before this College in 1892,

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[22] Loc. cit.

[23] THE LANCET, May 7th, 1892, p. 1018.

staining with acid stains such as acid fuchsin. The parasites are found only in the growing edge of the tumour and are absent from the centre; they are said to multiply by fission and segmentation, and perhaps, also, by budding. He found them in 1130 out of 1278 cases of carcinoma. Gaylord accepts Plimmer's bodies as parasites and also includes other forms such as Russell's fuchsin bodies. He relies chiefly on unstained specimens, but in an investigation of numerous specimens by Plimmer's methods he found them in every case of carcinoma and sarcoma that he examined and also in specimens of myxoma, adeno-fibroma, colloid goitre, and syphilitic lymphatic glands. According to him the parasites in the fresh state closely resemble fat globules from which, however, they can be distinguished by the fact that they are insoluble in ether and that they do not react like fat to osmic acid. He further states that the parasites can be detected in the blood of all cases of carcinoma and sarcoma in which cachexia is well marked. In opposition to Plimmer he says that the fluid obtained from the centre of carcinomata which have undergone degeneration consists practically of a pure culture or the organism.

As regards the cultivation of these parasites Plimmer was able from one case of carcinoma of the breast to isolate an organism which he identified as a blastomyces, and he was able by inoculating guinea-pigs to produce growths of endothelial origin in which he could recognise the organisms. Gaylord, on the other hand, working with a pure culture of Plimmer's yeast, was unable to reproduce in inoculated guinea-pigs bodies having a similar appearance to those met with in carcinoma. The results of inoculation were of a granulomatous nature. He was unable to obtain a culture of blastomyces from carcinomata except in one case, although he used as many as 64 different kinds of culture medium. Gaylord, by inoculating guinea-pigs with ascitic fluid derived from a case of carcinoma of the peritoneum, claims to have been able to produce nodules in the lungs which had some resemblance to carcinoma, but, judging from his illustrations, these nodules bear a close resemblance to the lymphoid nodules which are normally present in a guinea-pig's lung. His researches are being continued and we are promised a further communication on the subject.

We thus see that these two observers, both ardent advocates of the parasitic theory, differ from each other on some important points. Now it will be said, If these bodies are not parasites what are they? The answer to this question involves a consideration of the different inclusions which may be met with in carcinoma. Firstly, the cells of carcinomata are prone to degenerations of different kinds such as fatty, hyaline, colloid, and mucoid changes. According to the two observers, the parasites can readily be distinguished from the appearances due to these changes. The case, however, on which Gaylord made most of his observations was one of colloid carcinoma. Many pathologists, also, regard Russell's fuchsin bodies as resulting from hyaline degeneration. In the next place we meet with leucocytes and, occasionally, red corpuscles included in carcinoma cells. Of these, the red corpuscles would give rise to the greatest difficulty, but with reasonable care they should be readily distinguished. Then there are various appearances dependent on the rapid and irregular division of the cells, and it is here that the greatest difficulty would present itself. I have frequently seen a particle of chromatin which has become detached from the nucleus surrounded by a layer of protoplasm lying in the protoplasm of the epithelial cell, the whole forming a body exactly resembling one of Plimmer's bodies except that the nucleus stained with basic dyes. It is difficult to suppose that bodies so exactly similar should be of such entirely different characters, and I think it justifiable to suppose that those bodies in which the nucleus takes the acid stain may be of the same nature as those in which the nucleus stains with the basic dye, the nucleus having, perhaps, undergone some change which alters its staining properties. Gaylord states that he has succeeded in staining the nuclei of Plimmer's bodies with hæmatoxylin.

The various stages of endogenous formation may account for some of the structures supposed to be parasites. Sections through a daughter cell inclosed within a mother cell which do not pass through the nucleus of the daughter cell give rise to the appearance of a non-nucleated body lying in the epithelial cell such as is shown in one of Gaylord's illustrations. Again, nucleoli, especially plasmosomes, frequently escape from the nucleus into the protoplasm and give rise to bodies closely resembling the so-called parasites. Lastly, there are the centrosphere and its contained centrosome. Borrel,[18] who is in favour of the parasitic theory, has shown that alterations in the attraction sphere may give rise to exactly the same appearances as those described as parasites, and I think that no one who has seen the illustrations of his paper can have any doubt that the appearances which he ascribes to variations of the attraction sphere are the same as those which others ascribe to the parasites. In the spermatocytes of the testis of the guinea-pig there are bodies of archoplasmic origin which are sometimes called "paranuclei." These bodies are round and may contain one or more centrosomes; they stain with acid dyes and sometimes show a central spot which takes the stain more deeply than the periphery. They vary in size, some of them being almost as large as the nucleus. Like Plimmer's bodies, they are not found in cells which are undergoing mitosis. I am certain that if these bodies were seen in the cells of a carcinoma they would be at once branded as parasites. The appearances described by Plimmer as being characteristic of the parasites could all be explained on the assumption that they are of archoplasmic origin. Therefore, before these bodies are accepted as parasites the possibility of their being derived from pre-existing cell-structures must be fully considered.

From the foregoing remarks it will be seen that the grounds on which the parasitic theory is based are by no means satisfactory. I must next consider various objections to the theory. In the first place, as I have pointed out elsewhere,[19] we know of no disease characterised by definite anatomical lesions which is at the same time characterised by a definite extrinsic causal factor; neither do we know of any disease characterised by a definite extrinsic factor which is at the same time characterised by definite lesions. Therefore, since tumours are characterised by their anatomical structure, we should not expect them to be due to definite extrinsic causal agents. In the next place, we know of no parasites which are capable of producing primarily a proliferation of cells. Adami[20] is somewhat inconsistent on this point, for he says in one place that proliferation is an intrinsic property of the cell and is only influenced indirectly by external conditions and in another place he states that an irritant which, when concentrated, produces destruction, when diluted produces proliferation. In the case of all known parasites the first effect is injury or destruction, any proliferation which subsequently takes place being compensatory in nature to replace the cells which have been destroyed. I am not convinced that the proliferation of epithelial cells in coccidiosis is primary—that is, that the parasite directly causes proliferation. Even if a parasite were capable of causing a primary proliferation it would not explain the occurrence of a carcinoma since the essential lesion of carcinoma is not proliferation but is penetration of the epithelial cells into the connective tissue. In the next place, the reaction of the organism against all known parasites, animal and vegetable, is of a defensive nature and characterised by the phenomena of inflammation. The parasite first gives rise to injury or destruction of the tissues: this is followed by exudation of leucocytes which remove the damaged tissue and, if possible, the parasite, and this again by proliferation of the surrounding tissue which repairs the injury. A tuberculous nodule, for instance, is formed by centripetal proliferation of the surrounding tissue—that is, by proliferation taking place towards the irritant. It is far otherwise in carcinoma; here we have proliferation taking place in a centrifugal direction away from the supposed parasite and, instead of a defensive reaction, there is produced an ever-increasing amount of epithelial tissue in which the parasite can grow and multiply. In fact, the organism would seem to welcome the parasite instead of repelling it. This is so opposed to the accepted laws of parasitism that one may be excused for doubting its possibility. Some have supposed that the parasite acts on the cell in somewhat the same way as a sperm cell acts on a germ cell and thus induces proliferation. This seems to me a very far-fetched and unwarrantable supposition and is negatived by the fact that, as regards the parasites that have been described, the parasite-containing cell does not undergo division. To make sure of this fact, which was mentioned by Ruffer and Plimmer,[21] I recently wrote to Mr. Plimmer and he tells me that the cells several years have elapsed less than is that which exists on the opposite side. If the permanent teeth are lost in young life the alveoli waste and the bones along which force is distributed either as pressure or strain become progressively thinner. The rough, prominent surfaces to which the tendinous insertions of muscles are normally attached do not exist. This is seen most conspicuously in the case of the angle of the lower jaw which no longer presents the vertical ridges on its outer surface or the eversion of its margin characteristic of the normal vigorous state, but is rounded and smooth, a considerably larger angle being included between the posterior margin of the ramus and the lower border of its body. Precisely similar changes take place in the jaw of the edentulous old subject. The lower jaw is moulded upon the upper and anything that interferes with the free movement of these bones on one another impairs to a corresponding extent the development of the former.

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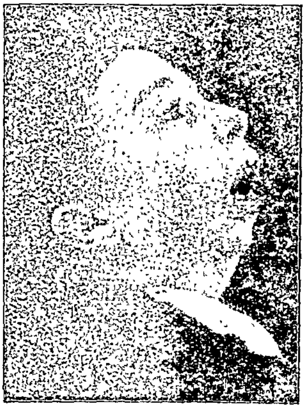
[18] Annales de l'Institut Pasteur, February, 1901.

[19] Relation between Cause and Effect in Disease, Brit. Med. Jour., vol. ii., 1900.

[20] Brit. Med. Jour., vol. i., 1901.

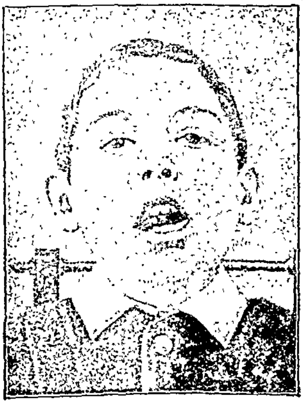
[21] Journal of Pathology and Bacteriology, vol. i.

FIG. 1.



Showing the condition of a girl, aged 12 years, operated upon in 1893. The joint was destroyed when she was 18 months old, and at the operation all trace of it had disappeared completely.

FIG. 2.

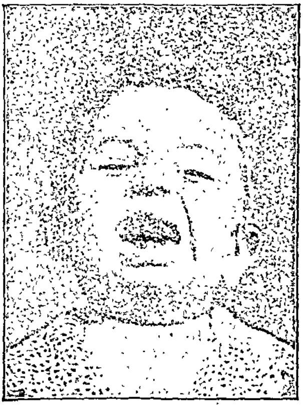


Representing the result of this operation on a boy, aged nine years, in 1892. The jaw was fused to the temporal bone, no evidence of the original joint being visible.

Figs. 1, 2, 3, 4, and 5 represent cases of ankylosis of the temporo-maxillary articulation which have been successfully operated upon, the ankylosed joint having been freely excised. They are introduced here as illustrating very well the fact that in them the degree of imperfection of the lower jaw varies directly with the duration of the ankylosis and inversely with the age of the child at the onset of the destruction of the joint. In these cases this factor alone—namely, the movements of the jaws and teeth on one another—was in abeyance, since the necessarily very efficient naso-pharyngeal respiration due to the complete apposition of the jaws had developed the naso-pharynx and the surrounding bones as completely as possible in a manner which will now be considered.

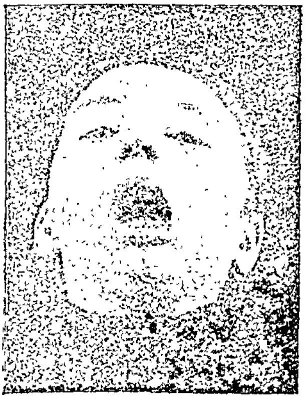
I need hardly repeat here that the eruption of all the teeth is necessary to the perfect development of the jaws. The pressure exerted by the tongue is an important factor in determining the form of the lower jaw. This is illustrated very well by the disproportionate size of the jaw, which is presented when the tongue is abnormally large, often resulting in an "underhung bite" or in "open bite," conditions very familiar to the dental surgeon. (See Figs. 6, 7, and 8.) I intend to discuss in detail in a subsequent communication the causation and treatment of these conditions.

FIG. 3.



A boy, aged four years, who was operated upon in 1894. The joint had been disorganised three years before.

FIG. 4.



A girl, aged 10 years, who was operated upon in 1896. The joint was destroyed when the child was seven years old.

I will pass on to study the mechanical influence which the passage of air through the naso-pharynx exerts upon its development and upon that of all the bones of the face, and showed sections of the tongue at different ages in confirmation of Thiersch's observations. These showed that the subepithelial connective tissue, which in the young is relatively abundant, continually decreases with the increase of age, while the overlying epithelium continues active, so that in old age there is a tendency for the epithelium to send down processes into the subjacent tissues.

We come now to the consideration of Ribbert's[24] theory. This author holds that the tissues in the normal condition are prevented from over-stepping their natural bounds by the action of the "tissue tension" of the part; if this tissue tension is diminished proliferation is set free and a tumour results. This tissue tension represents the sum of the physiological forces acting on the part and is equivalent to the physiological resistance of Cohnheim. According to Ribbert a tumour arises from a collection of cells or a piece of tissue which has become separated from its organic connexion with the surrounding parts and, in consequence, is not subject to the restraining action of the influence of the surrounding tissues; the rudiment is therefore free to proliferate and this proliferation results in the formation of a tumour. The separation of the rudiment may be effected by three means: (1) it may be separated by irregularities in the course of development; (2) it may be the result of trauma; and (3) it may be caused by inflammatory changes in the surrounding tissues. For instance, he explains the origin of carcinoma of the skin as follows. The earliest change is of an inflammatory nature, resulting in a new formation of connective tissue between the epithelium and the cutis vera; this new-formed tissue grows into the superjacent epithelium and isolates either single cells or groups of cells; these cells, being freed from their organic connexion with the rest of the epithelium, are released from the tissue tension of the part and therefore undergo proliferation, penetrating into the subjacent connective tissue and thus giving rise to a carcinoma. The new-formed tissue may be abundant or minimal in amount, but it is never absent. This theory of the causation of tumours is undoubtedly the most satisfactory one that we have yet considered and it possesses the merit of endeavouring to find a cause which shall satisfy the requirements of logic. It is available for the explanation of all tumours and of other conditions such as hypertrophy. I do not agree with Ribbert in assigning so great a part to the connective tissue in tumour causation. The difficulty of deciding this point is great because it is seldom that one examines a carcinoma in a sufficiently early stage, and it is impossible in many cases to say whether the changes observed in any particular specimen would have given rise to a carcinoma if it had been allowed to continue growing.

A theory which is closely allied to that of Ribbert is that which ascribes the origin of a tumour to the loss of nervous control over the cells of which it is composed. The tumour, not being under the control of the central nervous system, grows in an irregular and purposeless manner. This theory was supported by Marshall[25] in his Morton Lecture. The difference between this theory and that of Ribbert lies in the fact that, while Ribbert ascribes the origin of a tumour to the separation of its rudiment from the organic connexion with the surrounding parts, this theory ascribes it to the loss of nervous control. There is no proof that this loss of nervous control can give rise to tumour formation, but, on the contrary, there is ample evidence that it does not necessarily do so, as, for example, in skin-grafting. Beatson[26] suggests that carcinoma of the breast is due, in some way or other, to the influence of the ovaries. There is no evidence in favour of this idea except the fact that certain cases of carcinoma of the breast improve when the ovaries are removed. This fact, however, is not sufficient to form a groundwork of a theory of the origin of carcinoma, since the removal of the ovaries causes profound alterations in the metabolism of the body at large.

### ADAMI'S THEORY.

Recently Professor Adami[27] of Montreal delivered an address before the Yale University Medical Alumni Association in which he made known his views on the causation of cancerous and other new growths. It is difficult to give in a few words a *résumé* of this most interesting address and I must refer you for the details to the original. Professor Adami agrees, to a certain extent, with Ribbert that the initiation of a tumour is due to the alteration of the tissue tension, but he also admits the action of prolonged stimulation if at the same time the cells are in some way or other prevented from performing their specific function. Proliferation once started will continue as long as the primary modification of physical relationships or the primary stimulus continues to act, if there is adequate nutriment, and if the tensions acting on the cells do not become excessive. The longer the cells are diverted from the performance of their special functions to proliferative activity the greater the tendency for them to acquire permanently the "habit of growth"—that is, the power of proliferation independent of extrinsic conditions, and we thus obtain the purposeless cell-growth characteristic of a tumour.

Now, although I agree with Professor Adami's views to a large extent, yet there are a few points in his reasoning which, to my mind, are not quite satisfactory. In the first place, he states that the controlling agency in the higher katabolic activities of the cell, both functional and proliferative, is the nucleus. In this statement he altogether ignores the centrosome which, as we have seen, plays the leading part in the division of the nucleus and the cell. In the next place, he states that proliferation and the active performance of specific function are to a large extent incompatible owing to the different structure of the nucleus under these two conditions, and he argues from this that proliferation can only take place when the cell is unable fully to utilise the assimilated material in the performance of its specific function. I think, however, that in most cases we are equally justified, if not far more justified, in saying that the cell does not perform its function because it is undergoing division. He does not give any reason for supposing that the cessation of function precedes division, and it certainly seems more natural to suppose that the reverse is really the case and that the cell ceases to functionate because it is dividing. It is also impossible in many cases to draw a sharp distinction between the performance of function and proliferation, since in some cases the two are identical. Another defect in this theory is the fact that it does not explain the penetration of the epithelial cells into the surrounding tissues which constitutes the essential lesion in carcinoma. Nowhere in his address does Professor Adami refer to this penetration, but he seems to regard proliferation as the characteristic feature of carcinoma. We may, however, have any amount of cell proliferation without carcinoma, and, indeed, until penetration is present, we cannot be certain that we are dealing with carcinoma at all. Nothing that merely explains the presence of proliferation without at the same time explaining penetration can be satisfactory in affording an explanation of carcinoma.

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# ON CLEFT PALATE.

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THE subject of this paper is the conditions of imperfect development of the septum between the mouth and nasopharynx which are comprised under the term "cleft palate." I will attempt to place the treatment of this deformity on a scientific basis and to do so it will be necessary to consider in the first instance the factors that determine the form of the bones of the face.

The functions of the bones of the face are four in number: (1) to surround the passages by which air alone is transmitted to the lungs; (2) to sustain the strain exerted by the muscles of mastication and to transmit and diffuse the resistance offered by the crushed food in the forcible approximation of the jaws during its attrition by the teeth; (3) to surround and protect the eyes; and (4) to accommodate the tongue.

Experiments are made by nature on all sides showing the influence which the exercise of these several functions exerts upon the skeleton, all capable of accurate measurement and definition. If an eye be removed early in life the degree of development of the orbital space which contained it, and of the soft parts which surrounded it, is after

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[24] Allgemeine Pathologie. 1901.

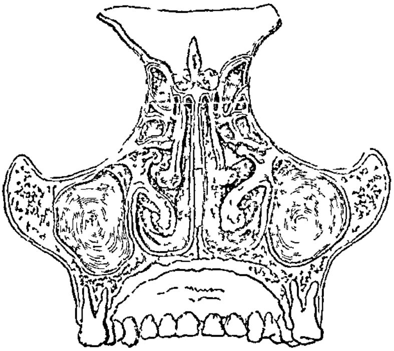
[25] THE LANCET, Nov. 23rd, 1889, p. 1045.

[26] Brit. Med. Jour., vol. i., 1899.

[27] Loc. cit.

It is well known how exceedingly common are such cases of imperfect development of the nasal cavity, of which Fig 10 is an excellent example It has often been observed that if such diseases of the nose, ear, larynx, and even lungs as are directly or indirectly consequent upon some imperfect development of the naso-pharynx could be excluded a not unimportant section of their consideration and treatment would have to be deleted from works on these subjects

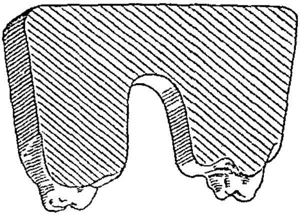
FIG 9



A vertical transverse section through the nasal cavities and adjacent structures

Indeed, if it were not for popular ignorance of the mode in which respiration should be performed and for the accidents associated with civilisation which often render it difficult to apply the knowledge even if possessed, the nose and throat surgeon would have practically no reason whatever to exist He is merely a product and an evidence of degeneration, and this fact he too often fails to appreciate It behoves us, therefore, to consider very carefully the factors which are responsible for these conditions of imperfect development, in order that by early and prompt treatment we may save our patients from innumerable complications, some of which may not at first sight seem to depend directly upon it I believe that they result solely from the fact that for some reason or other the mechanical factor that affects the development of the naso pharynx is in abeyance, and that in consequence this space does not enlarge as it should

FIG 10

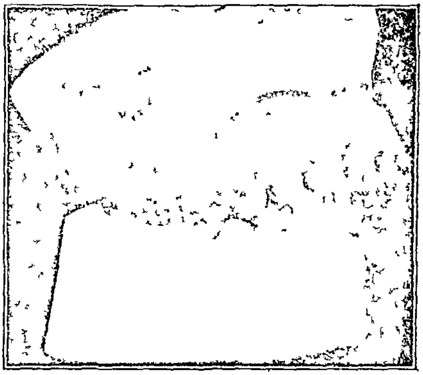


A transverse vertical section of the palate and alveolus, life size of an adult with an imperfectly developed naso pharynx The model was made by Mr Edgar Ashby

I have shown that the large majority of the conditions known to dental surgeons as "superior protrusion" result from deficient development of the naso pharynx (see Figs. 11 and 11A)

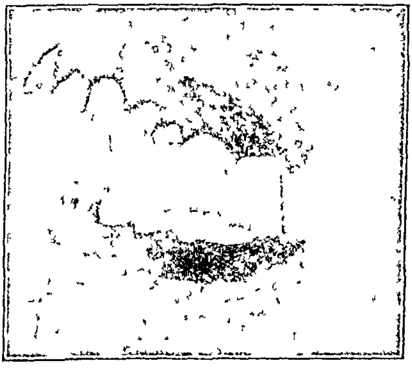
Of course, it is to be borne in mind that some children inherit a degree of development which is less than the normal An interesting and ready means is afforded, by the study of such imperfectly developed conditions, of determining how quickly an acquired deformity in the parent may arise in the offspring Personally, I believe that the transmission of this particular condition is very direct and rapid The absence of this developmental factor is brought about by an infection of the mucous membrane of the nose, of which the most common type is a cold in the head In the young subject the mucous membrane of the nasal cavities is peculiarly liable to inflammations, being usually the "area" of least resistance, and this inability to resist varies inversely with the respiratory capacity of the individual In those with a subnormal respiratory capacity the naso pharynx becomes the seat of recurring infections or of a chronic infection The inflammatory swelling of the mucous membrane and the presence of mucus interfere sufficiently with the entry of air during inspiration to make it necessary to breathe through the mouth Take some of those children who suffer from these attacks, and let them be observed carefully As they stand they assume the "symmetrical posture of rest," which is shown very well in Figs 12, 13, and 14 The chest is flattened in front, depressed, and the abdomen is thrown forward, the dorsal spine is flexed, the shoulders project forwards, and the lower angles of the scapulæ are prominent on the back of the chest To this condition the term "dorsal excurvation" is applied by the profession and that of "round shoulders" by the public If the child is standing at rest on one leg the trunk assumes the position which I have described as the "asymmetrical resting posture." This, from its habitual assumption, may have become fixed and later exaggerated By the profession this is described

FIG. 11.



A profile of a case of "superior protrusion resulting from imperfect development of the naso-pharynx

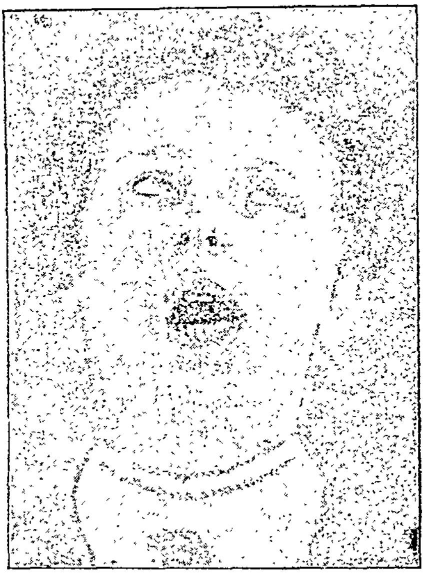
FIG 11A



A profile of a similar case with the jaws apart.

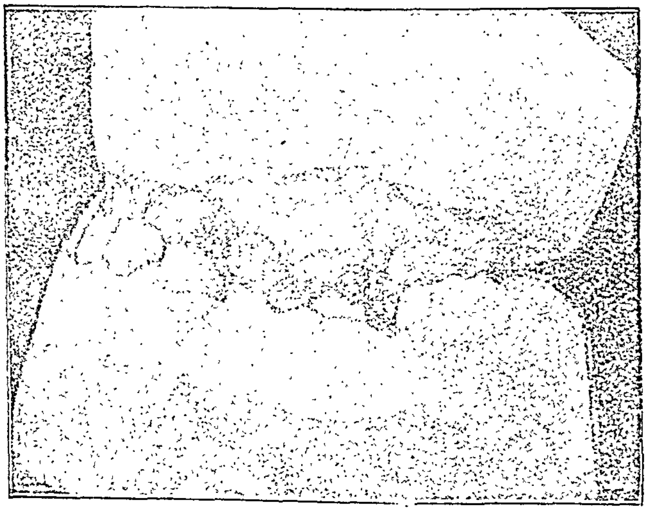
I think it will be quite clear that, under ordinary circumstances, its influence is paramount, being quite out of all proportion to that exerted by the factors to which I have already referred. The chief function of the naso-pharynx is to transmit air into the lungs in order that the sensitive surface of its mucous covering may become affected by substances contained in it. In other words, this part of the body is constructed essentially for the purpose of smell, and in the several groups of animals the degree of its development varies with the importance of the sense of smell to each. The upper portion of the nasal cavities is used for the ramifications of the olfactory nerve, and the current of air is distributed especially over this area by the act of sniffing. During the normal process of respiration the mouth is kept shut, the upper lip covering the upper incisor teeth entirely and projecting below them. The breathing air passes chiefly through the lower meatus, while there is hardly any current in the upper part of the space. It is therefore obvious that anything interfering sufficiently with the calibre of the lower part of the nasal cavities impairs their capacity for transmitting air to an extent to make it necessary to keep the mouth open while breathing. When this is done air enters so freely through the larger and more direct channel formed by the mouth that it ceases to pass through the nose either during inspiration or expiration; the most important function of the part is lost, and the forces which act upon it normally and develop it are in abeyance. Even after air has ceased to pass through the nose in inspiration it does so during the expiratory process of vocalisation, though in a diminishing degree. Therefore the so-called nasal intonation does not develop as early as one would imagine in association with much loss of nasal inspiration. It is seen at once from an examination of Fig. 9, which represents a vertical transverse section through the nasal cavities and surrounding structures in the normal subject, that the calibre of the lower part of the nasal cavities, or of their respiratory section, if I may so describe it, is enormously encroached upon by any ascent of the hard palate above the normal level, and that the air-transmitting capacity of the naso-pharynx varies inversely as the height of the palate; also that the calibre of the entire nasal space is very much affected by the slightest variation in the interval between the septum and the structures forming the outer wall of the space, such as is necessarily associated with any cramping of the alveolar arch laterally.

FIG. 5.



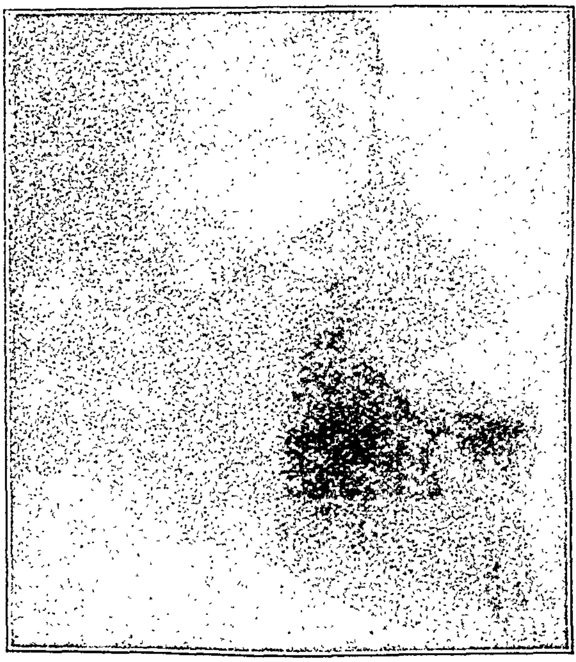
An adult whose joint had been disorganised in infancy. The operation was performed in November, 1895, and the illustration represents the condition of the patient in April, 1896. In 1902 her joint was working excellently.

FIG. 6.



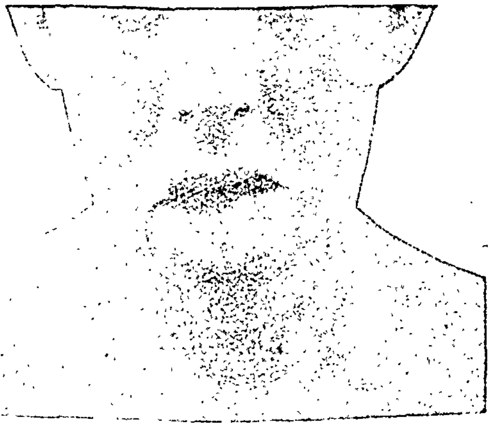
A specimen of "underhung bite."

FIG. 7.



A radiograph of a case of "open bite."

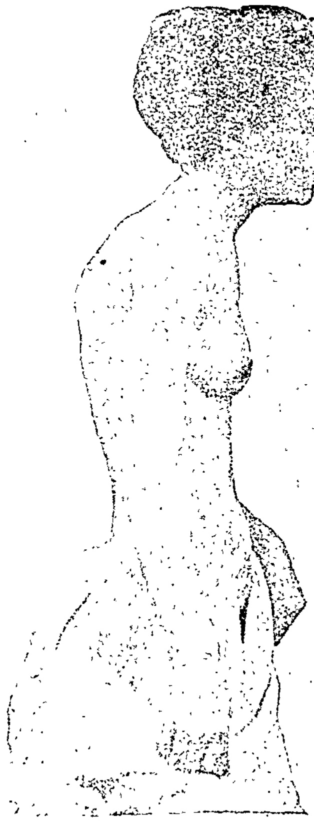
FIG. 8.



Showing the unusually large condition of the tongue present in the patient whose radiogram is illustrated in Fig. 7. The structure of the tongue was quite normal.

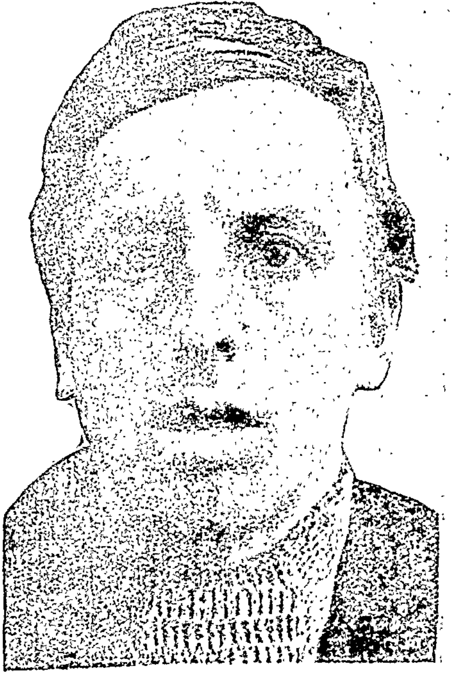
and naso-pharynx. It is kept open, and more or less of the upper incisor teeth are seen. In some cases even the gum may be exposed. The nose immediately above the lower lateral cartilages is compressed laterally, and little or no movement can be observed in the narrow slit-like anterior nares during respiration. The nose is frequently tip-tilted, so that its under-surface looks somewhat forward. On either side of the nose the face below the orbit is hollowed, the normal rounded prominence of the part being wanting. Owing to the interference with the development of the septum, consequent on the imperfect descent of the palate, deflections of this structure and the formation of "spurs" upon it are frequently very marked features, and with their immediate neighbour, the inferior turbinate bone, may call for surgical treatment in some instances with the greatest possible benefit to those adult patients whose nasal breathing space is so rendered very much less than normal and correspondingly insufficient. The width of the face forming the cheeks is less than normal, the malars being flattened and the whole face being wedge-shaped. These changes are particularly noticeable in Fig. 15. Looking into the mouth you notice that the alveolar arch of the upper jaw is compressed laterally and that the palate is very high along its central part. Indeed, the height of the palate bears a direct proportion to the changes just mentioned in the nose and face, or, in other words, the development of the nasal cavities varies inversely with the height of the palate and with the breadth of the alveolar arch. The lateral diminution in the breadth of the alveolar arch of the upper jaw results in its elongation in an antero-posterior direction, in which case the upper incisors project forwards considerably beyond the lower, constituting the "superior protrusion" of dentistry. Or this forward protrusion may be obviated by a corresponding amount of irregularity of the teeth. If a large number of models of cases of superior protrusion be examined it will be found that with very few exceptions the condition is consequent on imperfect development of the naso-pharynx (see Figs. 10 and 11). The width of the alveolar arch of the lower jaws bears a direct relation to that of the upper, upon which it is moulded in its development. The faucial tonsils are probably large, as is also the pharyngeal tonsil. There may be a variable amount of deafness owing to imperfect aeration of the middle-ear, to obstruction to the exit of mucus from it, or to interference with the function of the Eustachian tube. The deficiency in vitality consequent on, and proportionate to, the degree of imperfection of aeration of the blood in the lungs results in the child catching cold readily. The infection starts in the naso-pharynx and may extend to the larynx, trachea, and bronchial tubes. There is often a chronic snuffly cold in the head, with perhaps some irritation of the anterior nares and not infrequently of the upper lip also. The muscles of such children are usually soft and flaccid and their degree of intelligence is very variable. Sometimes they are considered dull and stupid, while others, on the contrary, are said to be very intelligent. This, I take it, varies with the state of the nutrition of the brain and with the variety of the demands made upon it. If the child uses up its limited brain power in muscular exertion its capacity to make intellectual effort is small, while if the same energy is employed intellectually under pressure that to spare for the muscles is correspondingly decreased. It also depends to some extent on their

FIG. 14.



Symmetrical posture of rest

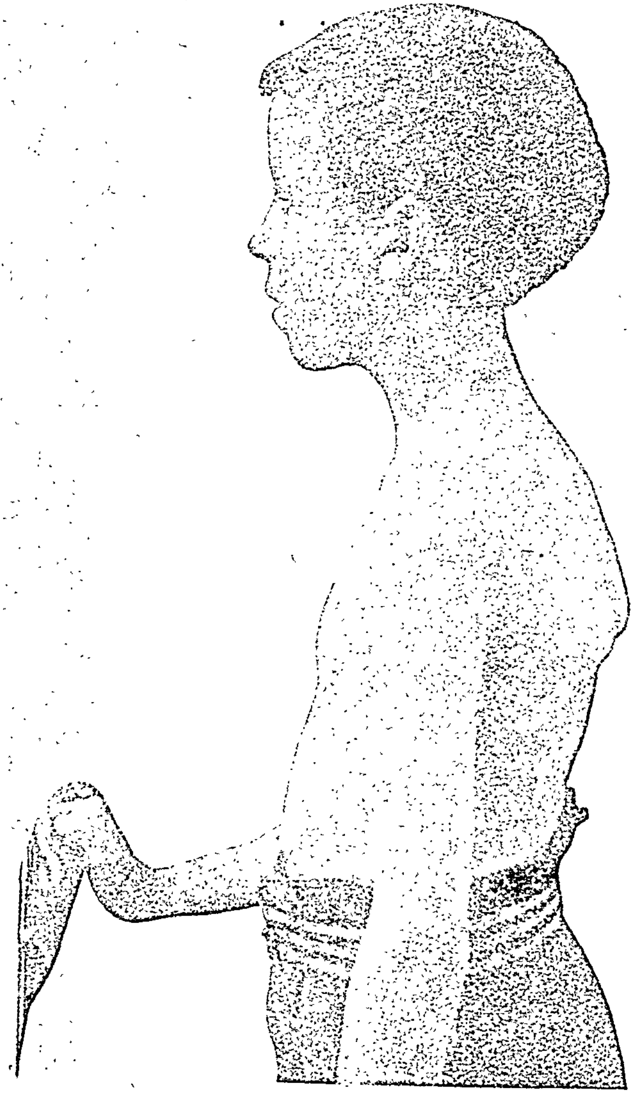
FIG. 15



Representing a case of imperfect development of the naso-pharynx.

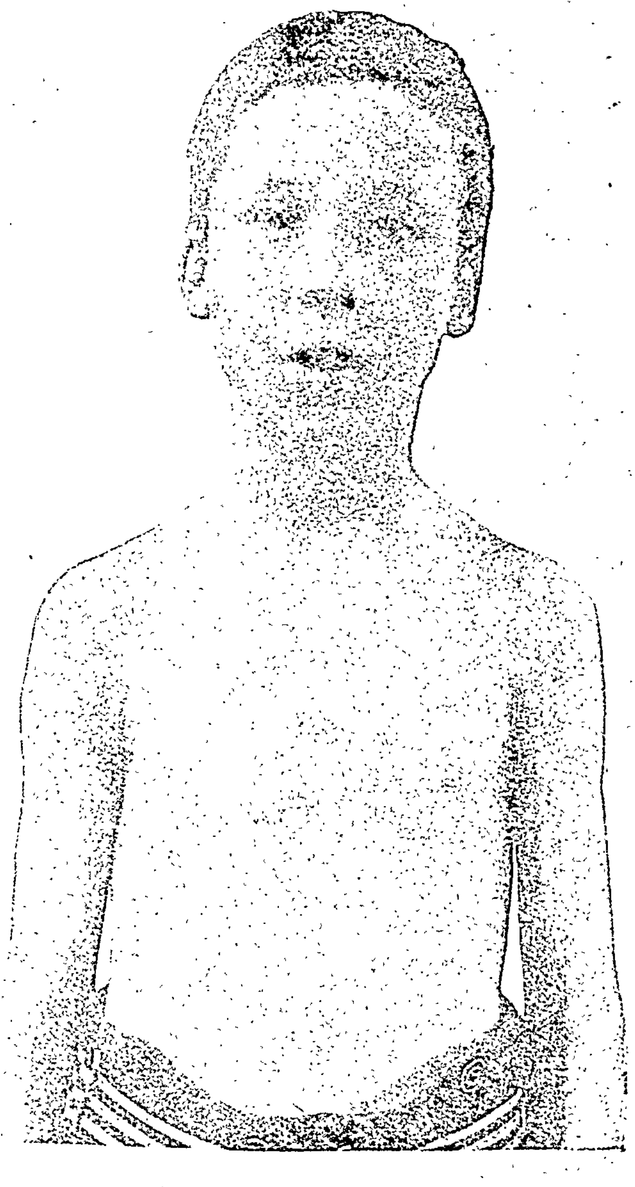
as "scoliosis" or "lateral curvature," while the public, being most struck with the prominence of the right scapula, regard it as "growing out of the shoulder." It may be fixed or exaggerated if the period during which it has been assumed is of sufficiently long duration. Respiration is superficial, rapid, and entirely diaphragmatic. A tape encircling the chest at the level of the nipple shows probably no variation whatever during ordinary inspiration and expiration. If the patient is told to breathe as deeply as possible the measurement of the chest is increased to a varying degree above that point, but it returns to it in expiration, the normal position being that of almost complete expiration. The skin of the chest is opaque and white, and is marked by large, conspicuous, dark-coloured veins in which the circulation appears stagnant. On looking at the back the skin is seen to be covered over a varying area by a fine down which extends beyond the middle line and becomes continuous above with the hair of the scalp. The margin of the hairy scalp is equally ill-defined in front, encroaching often to a considerable extent on the forehead and on the cheeks in front of the ears. Again, the feet are retained usually in a position of abduction, including between their inner margins a considerable angle. This position of the feet may after a time become fixed and later exaggerated. This I showed to be merely the habitual assumption by the foot of the "position of rest" or of abduction, but by the profession and the public it is spoken of as "flat foot." The condition of knock-knee, or a diminution of the normal external femoro-tibial angle, is not unfrequently seen in a slight degree, due to the habitual assumption of the resting erect posture, whether symmetrical or asymmetrical, but especially the latter. During the time the position is being assumed most of the superjacent weight falls outside the knee-joint, so that the outer part of the epiphysial line is exposed constantly to a much greater pressure than that sustained by the inner segment. In consequence, a correspondingly smaller amount of bone is formed by the outer part than by the inner, the femoro-tibial angle decreasing proportionately. This general law I formulated in the following words: "The several parts of a growing line form bone at a rate inversely proportionate to the pressure which they transmit." And one might add to this that these conditions are exaggerated in proportion as the nutrition of the osseous system is impaired, as, for instance, in rickets and the excessive growth which ensues in the skeleton in prolonged recumbency. The head is thrown forward (see Figs. 12 and 14) because of the flexion of the dorsal spine which is of necessity associated with expiration, flexion and extension of the spinal column being, as I explained, the most conspicuous of the thoracic respiratory processes, and produced chiefly by the action of the intercostal muscles, the internal being the most powerful but indirect extensors of the dorsal spine, and the external the most powerful flexors. They exert their action upon the vertebræ through the ribs. Those muscles are associated in their action with such portions of the internal and external abdominal oblique the fibres of which continue their directions. The mouth is small in proportion to the deficiency in the development of the jaws

FIG. 12.



Symmetrical posture of rest.

FIG. 13.



Symmetrical posture of rest.

corpuscles is undoubtedly altered. Thus I have found that defibrinated rabbits' blood, if kept for a day or two, showed hæmolysis after 19 hours at 13° C. in a solution which was isotonic for the same blood in a fresh condition. Stewart's results, recently published, furnish a corroborative instance. "There is," he states, "a noteworthy distinction between the perfectly fresh corpuscles and corpuscles which have stood some time in the length of the period of resistance to the entrance of $NH_4Cl$, which is much greater for fresh than for stale corpuscles." Other reasons for discarding the use of defibrinated blood are to be found in the chances of bacterial contamination, and the difficulty of obtaining fresh defibrinated blood when required. I accordingly use blood obtained fresh from an ear-vein. It was found, however, that if no precautions were observed to prevent clotting the control tubes containing isotonic salt solution showed at the end of 19 hours distinct hæmolysis. This autolysis may be attributed in great probability to the fibrin carrying down the proteolytic enzyme of the blood, which in some way influences the permeability of the stroma of the cells. To obviate this a solution was made up consisting of 0·1 per cent. sodium oxalate and 0·85 per cent. sodium chloride. The blood on escaping is at once thoroughly mixed with this solution. This procedure proved quite effectual in preventing autolysis of the red corpuscles. Microscopical examination of a hanging drop showed that, on the whole, the cells preserved their contour with comparatively little variation from the normal—slight crenation of the corpuscles proving that the fluid is, in fact, somewhat hypertonic. It is advisable that the osmotic pressure of the medium should be slightly greater rather than exactly equivalent to that of the corpuscles; the balance of osmotic pressure is then less easily disturbed by adventitious causes. It has been stated, as a matter of fact, that normal human plasma is hypertonic with respect to the red corpuscles. Another point which arises by implication from what has been already stated is the question of the time limit, which may be considered a fair one for the exposure of the blood to the hæmolytic agent. I believe that conclusions derived from experiments of a duration of over 19 or 20 hours are of uncertain value. Careful controls should be simultaneously carried out with isotonic salt solution.

So far as one has read of the methods of conducting these experiments, roughly quantitative tests, varying rather widely in the way they are carried out by different observers, appear to be used. It seems desirable that greater accuracy should be introduced into the procedure adopted, because if one wishes to investigate the comparative powers of two or more different fluids containing the same hæmolysin, or if variations in the permeability of different corpuscles be the subject of inquiry, the results are invalidated unless absolutely identical conditions have obtained during the experiments. For this reason it is necessary to add definite percentages of the hæmolytic fluid to the isotonic solution in which the corpuscles are suspended. In the same way equal amounts of blood, measured accurately in a calibrated pipette similar to those used in the various kinds of blood-estimation apparatus, should be added to each test-tube. These must be of equal diameter, in the lower part at least, so that the hæmoglobin diffused in the liquid may be estimated with greater accuracy. The spectroscope may be requisitioned in cases where a slight or doubtful hæmolysis has taken place. Complete sedimentation of the corpuscles by means of a rapidly-revolving centrifuge is important, because the hæmoglobin bands are given equally by the red cells and by the hæmoglobin after it has left the corpuscles. It is obvious, also, that the use of perfectly fresh blood in the manner described will ensure more trustworthy results for comparative purposes than if specimens of defibrinated blood of different ages be used. An advantage to be gained by instituting an accurate system of examination in hæmolytic tests is that a method conducted on these lines is easily adaptable for clinical application.

To summarise the steps briefly:—1. Use absolutely fresh unclotted blood. 2. Prepare in test-tubes of equal size known percentages of the hæmolysin in isotonic oxalate solution. 3. Add to each of the tubes exactly the same amount of blood and mix well. 4. Incubate tubes for the same length of time at 37° C. 5. Centrifugalise till all the corpuscles settle at the bottom of the tube, forming a sharp line of demarcation between the blood and the supernatant liquid. 6. In every experiment have control tubes containing isotonic salt solution alone. 7. In doubtful cases examine microscopically.

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# PRIMARY SARCOMA OF THE VAGINA.

BY H. MACNAUGHTON-JONES, M.D., M.A.O. Q.U.I.,
F.R.C.S. IREL. AND EDIN.

A CASE of primary sarcoma of the vagina is of such comparatively rare occurrence that a special allusion to one which has recently come under my care justifies my giving it prominence through the columns of THE LANCET.

I am indebted to Dr. Otto Seitz, of Professor Winckel's Universitie Frauenklinik in Munich, for a recent synopsis of the literature of the subject, which may be of interest in a condensed form.[1] Of all the cancer cases occurring in the hospitals at Berlin and Vienna some 20 per cent. were of the nature of vaginal carcinoma, and of 8287 cases of cancer in Paris only 14 had primary vaginal carcinoma. It would appear that vaginal sarcoma is still more rare. The first case was published in 1872, and up to 1899 there had been 32 cases recorded. In medium-sized growths there is a quantity of cellular tissue with spindle-shaped cells and oval nuclei, epithelial and big round cells, the nuclei differing in size and staining. The pavement epithelium is absent, the blood-vessels are normal, and the lymphatics are richly developed. In larger growths, Dr. Seitz says, the endothelium of the lymphatic glands contains spindle-shaped cells, the lumen in some cases being nearly occluded. There is a general tendency to proliferation of the endothelium. There are spindle-shaped cells with horseshoe nuclei, giant cells, and others with vacuoles in the nuclei. No oblique muscle-fibres could be discovered. In a case recorded by Professor Klein the patient was aged 56 years, the growth grew from the posterior vaginal wall, and the starting-point was the para-vaginal connective tissue. The lymphatics were dilated and they contained blood. Gebhard has recorded a case of a girl, aged 14 years. Here there were alveolar spaces lined with endothelium and endothelial proliferation. The vaginal pavement epithelium was intact and the probable origin of the growth was the same as in the last instance. Again, in Amann's case there were spindle-shaped cells due to lymphatic endothelial proliferation. Franke's patient was an old woman. The new growth occurred in the posterior vaginal wall, in the nature of a hard infiltration, and the starting-point appeared to be in the vascular endothelium. The inguinal glands were normal. In 1898 Rubeska published a case of cure of the sarcoma, and Yung reported three cases in 1899. The first was in a patient aged 50 years. For some time there had been an irregular foul-smelling discharge. The tumour, which was of the size of the fist, grew from the right side of the vagina and was enucleated. The inguinal glands at the time were normal. There was a return of the growth 11 months after, though the glands were still normal. There was a second operation, with profuse hæmorrhage. Pathologically the growth contained both spindle-shaped and giant cells in large numbers. Vaginal pavement epithelium was absent. In the second patient, aged 52 years, there had been purulent discharge from an ulcerated surface in the right vaginal wall where the growth was situated. The glands were normal. There was a rapid return of the tumour and another operation at the end of two months, and, again, three months later the tumour, which was found to be of the size of a bean, in the left vaginal wall was excised. The patient was seen for the fourth time three months after the last operation. The tumour then occupied the whole of the right wall of the vagina. It was immoveable, with an ulcerated surface. The glands were normal and the patient was still at work. The pathological features of the tumour were those of a round-celled sarcoma. In the third case, that of a woman aged 30 years, the tumour was of the size of a small apple and was pedunculated; it appears to have grown rather from the margin of the external surface of the os uteri than from the vagina. Microscopically it proved to be a small and round-celled sarcoma.

As to the seat of vaginal sarcoma in adults, it would appear that out of 25 cases it grew from the anterior wall in 15 and from the posterior in 10. The disease is more common under the age of 50 years. Of 27 patients, greater association with people older than themselves owing to their dislike to engage in active games.

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[1] Uber primäres Scheidensarkom Erwachsener, Gynakologie, No. 107, by Otto Seitz of München.

Now, it is clear that every child who is suffering in this manner does not exhibit all these evidences of a purely mechanical relationship to its surroundings described here, but they all show that the process of aeration of the blood is carried out very imperfectly, and in consequence the blood is not oxygenated in a satisfactory manner. Respiration is diaphragmatic, while thoracic respiration is completely neglected. Diaphragmatic respiration is a more perfect reflex than thoracic respiration and requires much less effort for its performance. For this reason it is, as is apparent to all, employed alone, to the practical exclusion of thoracic breathing by feeble subjects, both young and old. Because of a deficient supply of oxygen the child therefore has not enough energy to carry on the work of the muscles, brain, and other tissues of the body, or to protect itself from the power that organisms have of obtaining a foothold on tissues whose vitality is lowered by injury of some sort. In the young subject the mucous membrane of the nasal cavity is that which, from local depreciation by cold, becomes invaded most readily by organisms which, having secured themselves there, manifest their occupation by symptoms which are popularly comprised under the term "cold in the head." As the result of their presence the nasal cavity, with those cavities which communicate with it, becomes more or less completely blocked by the swelling of a very vascular mucous membrane and by the inflammatory secretion poured out from its surface. The lymphatic tissues in the vicinity become secondarily inflamed. These exist as irregular masses in the wall of the upper part of the pharynx and are described as the "pharyngeal tonsil." Whenever they have become more or less chronically enlarged, in consequence of the infective process in the mucous membrane with which they are necessarily associated, they are dignified by the dread and unmeaning name of "adenoids." Surgeons under the influence of the suggestion of Wilhelm Meyer have considered that the secondary infection of the so-called pharyngeal tonsil is the primary cause of the obstruction of the naso-pharynx, and they have hoped to cure their patients by cutting away a varying proportion of this substance. It is quite apparent that the removal of this lymphatic tissue cannot alone restore to the naso-pharynx the mechanical factor which is the active agent in its development, since it does not increase the respiratory power of the individual and consequently does not improve the resistance of the naso-pharynx to infection. If, however, this operation is associated with such measures as bring about an improvement in the respiratory capacity and forcible ventilation of the naso-pharynx, such a procedure may frequently be of considerable service. What a misfortune it was when this name of adenoids was applied to this collection of inflamed lymphatic tissue subsequent generations will recognise with amazement; but for the time, at all events, it has served to popularise an operation which everyone who has a ring knife or even a long finger-nail believes himself capable of performing sufficiently skilfully. It is well known how this operation has been modified by time. At first a small piece was picked out by biting forceps, without an anæsthetic, this process being repeated at intervals as frequently as the patience and the income of the sufferers allowed. For some considerable time now the removal has been effected at a single sitting under an anæsthetic.

The faucial tonsil, whose lymphatics are closely associated with those of neighbouring parts and whose resisting capacity is depreciated equally with that of the naso-pharynx, not infrequently becomes inflamed in consequence of septic absorption, as may also the lymphatic glands in the neck which receive the lymph-supply from the masses above them. These enlarged cervical glands, the vitality of which is depreciated by this septic process, readily become colonised by tuberculous organisms which are supplied in abundance in food and air. If a vigorous child becomes affected by a cold in the head he never rests till he has cured himself by the forcible and free ventilation of the naso-pharynx by powerful inspiratory and expiratory efforts In other words, he blows his nose and snuffles vigorously till he has restored the inflamed mucous membrane to its normal condition. The feeble child does not do this, but is satisfied to obtain the small portion of oxygen which he requires by keeping the mouth open. The organisms continue to thrive under these circumstances which are most favourable to them, as opposed to the individual; and the conditions dependent on their presence continue to increase, depreciating still more the vitality of the sufferer.

*(To be continued)*

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# A NOTE ON THE METHODS OF CONDUCTING HÆMOLYTIC EXPERIMENTS.

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I HAVE had occasion recently during the course of work bearing upon the products of the bacillus pyocyaneus, carried out at the suggestion of Dr. Allan Macfadyen, to make a number of experiments relating to the hæmolysins elaborated in the course of its growth. These have been shown, first of all by Bulloch and Hunter, and somewhat later by Weingeroff, to exist in cultures filtered a variable time after the date of inoculation. So far as the scope of my work in this direction has extended, the conclusions arrived at coincide in the main with those of the above-mentioned authors. Thus the resistance of the pyocyanolysin to heat was found in my experiments to be very great. On the other hand, hæmolysis seemed to go on equally well at comparatively low temperatures—e.g., exposure at 13° F. for 19 hours without preliminary incubation at 37° C. as usually recommended. The fluid chiefly used was a Berkefeld filtrate of a culture derived from the laboratory stock culture grown between 20° and 25° C. for four months in the solution recommended by Emmerich and Low as a suitable medium for the growth of the bacillus pyocyaneus The medium before inoculation was tested on the blood selected for the experiments and was found to cause no hæmolysis. Ordinary peptone broth cultures were also employed, and it was observed that no hæmolysis took place until the cultures were incubated for at least a week at 37° C. (this refers, of course, to the filtered cultures).

In carrying out these experiments a considerable amount of evidence accumulated to shew that hæmolytic tests present a wide margin of possible fallacy in the conclusions arrived at from positive results. It must be remembered that hæmolysis is not a phenomenon dependent only on specific complex bodies found in cultures of various micro-organisms. On the contrary, it is, of course, well known that extremely simple agents, such as distilled water, solutions of certain simple salts, &c., easily bring it about, and that the reaction of the medium has an important influence. The complexity of the constituents entering into the composition of cultures after bacterial growth has gone on for some time makes it extremely difficult to appreciate the exact rôle played by each of them in a phenomenon of the nature of hæmolysis, and it is therefore important to complicate the reaction as little as possible. With a view to lessening the risks of misinterpreting positive results it seems preferable to avoid, as far as possible, the use of preservative reagents, especially in cases where a comparative estimate is required of the hæmolysis of several kinds of blood. It is significant that each of the constituents of Ehrlich's reagent—carbolic acid, glycerine, and distilled water—is capable of hæmolysing red corpuscles. I have found that in the proportion recommended—viz., 5 per cent. of the solution to be tested (in this experiment 5 per cent in isotonic solution)—50 per cent. of the resulting fluid added to an emulsion of blood in isotonic solution caused well-marked hæmolysis and 20 per cent. distinct hæmolysis of rabbits' red corpuscles. In cases in which the lysin is destroyed by heat—e g., the staphylolysin—a simple control test is provided, but it is otherwise with hæmolysins, such as the pyocyanolysin and typholysin, which seem to possess very great heat-resisting powers Then, again, apart from the composition of the medium in which the corpuscles are immersed, the condition of the cells themselves is a factor which must be taken into account in assessing the value of the results obtained in hæmolytic experiments Defibrinated blood, if kept even at a fairly low temperature, is liable to undergo autolysis, and short of this the permeability of the red then passed through a Berkefeld filter, and the filtrate was tested for hæmolysins. Varying quantities of the filtrates were placed in a series of test-tubes and each was made up to five cubic centimetres by the addition of salt solution (0·85 per cent.). To each tube one-twentieth of a cubic centimetre of defibrinated dog's blood was then added and the tubes were kept for two hours at 37° C., and subsequently for 12 hours in the cold room before examination. I may here state that neither human blood nor the blood of rabbits or guinea-pigs form suitable media for testing the hæmolytic properties of the typhoid bacillus. The most suitable blood is that of the dog and the same observation applies to the dysentery bacillus. Pane objects to E. and P. Levy's results on the ground that the red corpuscles of the dog part easily or spontaneously with their hæmoglobin. I cannot confirm this statement of Pane, for in all control tubes made with salt solution and dog's blood I could not detect any trace of hæmolysation.

In order to be as brief as possible, I have collected my results in the following table. The table gives only the results obtained by using 0·5 cubic centimetre doses of the filtered culture, this being as a rule the maximum amount which I used.

| — | Age of cultures in days. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 | 5 | 7 | 10 | 12 | 14 | 15 | 16 | 18 | 20 | 25 | 30 |
| Typhoid bacillus... ... | – | – | – | $+^{-}_{-}$ | +– | ++ | ++ | + | +– | $+^{-}_{-}$ | – | – |
| Dysentery bacillus... ... | – | – | – | – | $+^{-}_{-}$ | ++ | ++ | +– | $+^{-}_{-}$ | $+^{-}_{-}$ | – | – |
| Colon bacillus I. | – | – | – | – | $+^{-}_{-}$ | $+^{-}_{-}$ | $+^{-}_{-}$ | – | – | – | – | – |
| Colon bacillus II ... ... .. | – | – | – | – | – | – | – | – | – | – | – | – |

++ equal complete; + equals almost complete; +– equal partial; $+^{-}_{-}$ equal slight: and – equals no hæmolysation.

As will be seen from the table, the typhoid bacillus is capable of forming a hæmolysin which produces a complete solution of the erythrocytes of the dog's blood. The maximum amount of the hæmolysin is found in cultures of about two weeks old. Filtrates from 14 days' cultures produced complete hæmolysation in much smaller amounts than 0·5 cubic centimetre; for example, 0·01 cubic centimetre proved sufficient.

The dysentery bacillus gave equally positive results and thus presented a new point of resemblance, in addition to the many others, to the typhoid bacillus.

The colon bacilli did not exhibit any marked hæmolytic properties, either as regards the erythrocytes of the dog or those of other animals. I have, however, only tested two races of the colon bacilli, and it is possible that other strains may possess hæmolytic properties.

As regards the typhoid bacillus, I have been successful in obtaining an anti-hæmolysin. For the purpose a rabbit was treated with a filtered typhoid culture which contained active hæmolysins. The serum of the rabbit developed anti-hæmolytic properties 10 days after the first injection of the typhoid culture. On the addition of 0·05 cubic centimetre of the serum of the treated rabbit to an amount of the typhoid hæmolysin capable of producing complete hæmolysis of one-twentieth of a cubic centimetre of dog's blood, the solution of the dog's erythrocytes was inhibited. The serum of a normal rabbit used as a control did not exhibit any anti-hæmolytic properties.

I am indebted to Dr. Allan Macfadyen for the help which he has afforded to me as well as for the performance of the necessary inoculations.

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EXETER GUARDIANS AND VACCINATION.—At the meeting of the Exeter Court of Guardians held on Feb. 4th it was decided to thank a gentleman who had forwarded the fees for the vaccination of his children by the public vaccinator to the guardians. One guardian remarked that it was a sin for people who could pay for vaccination to be vaccinated by the public vaccinator. Another guardian said that there were two sides to the question, as vaccination was essential for the public safety and the public should not grumble at the expense.

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# A CASE OF PERFORATED GASTRIC ULCER SIMULATING APPENDICITIS.

BY C. A. B. HORSFORD, M.B., CH.B. EDIN.,
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THE following case may be of interest to the readers of THE LANCET, not only because of its comparative rarity, but because it illustrates well the possible similarity between, and the frequent difficulties in the diagnosis of, the above-named conditions.

The patient, a married woman, aged 32 years, was admitted to the Royal Albert Hospital, Devonport, on the evening of Monday, Jan. 13th, 1902. On the previous Wednesday morning (Jan. 8th), before breakfast, she had an attack of acute pain in the abdomen, most marked in the right hypochondrium. Vomiting soon commenced and persisted at intervals throughout the day. The *conjunctivæ* were somewhat jaundiced, but the urine contained no biliary constituents. Tenderness was marked over the gall-bladder. The abdomen was generally flaccid and there was no distension. The temperature remained normal during the day and the patient showed no signs of collapse. For two years she had suffered from "attacks of indigestion" with occasional vomiting, but she had never had any hæmatemesis. On the 9th the temperature rose to 100° F., but after the constipation, which had been present for some days, had been relieved by repeated turpentine enemata her condition seemed to improve considerably. On the 11th, however, she had another attack of severe pain. Her right leg was drawn up and tenderness at McBurney's point and slight bulging in the right iliac fossa were marked. Vomiting of bile-stained fluid was frequent and on the evening of the 11th it had a marked stercoraceous odour. The temperature was then 100° and the pulse was 95. Nothing definite was revealed per vaginam. A diagnosis of appendicitis was made but no operative interference was considered necessary. On the 13th she was decidedly worse. The pain extended all over the lower half of the abdomen, and as she was rapidly losing strength she was sent to the hospital.

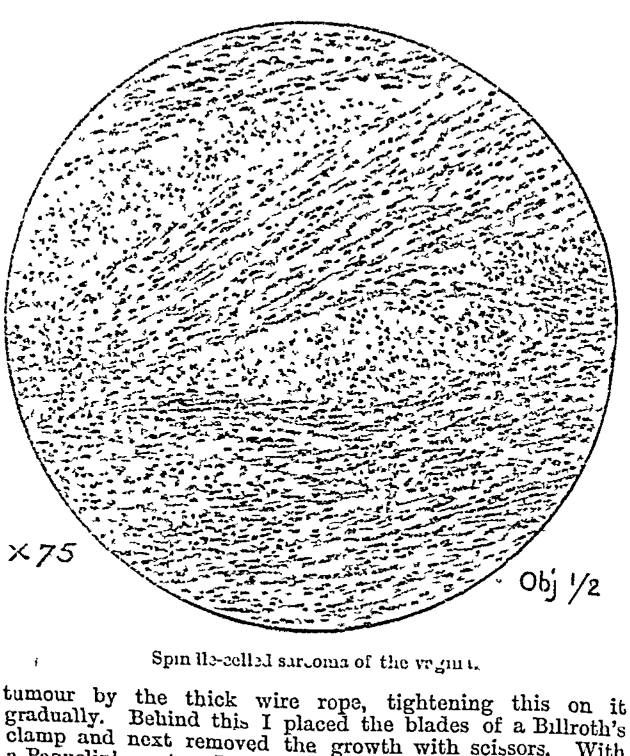
On admission the patient appeared to be in great pain and considerably exhausted from want of sleep. Her temperature was 99° and her pulse was 88 and of good quality. She had vomited that forenoon, but not since. The abdomen was not generally distended, but it bulged slightly in the hypogastrium and right iliac region. There was slight movement of the upper part with respiration; tenderness was acute in the lower half but only slightly so above, and on percussion a dull area was found in the right iliac fossa. Liver dulness was present. Per vaginam there was great bulging of the anterior vaginal wall, the uterus being pushed backwards and upwards. This was confirmed per rectum and there was obviously a large collection of fluid in the pelvis. It was decided to perform laparotomy on the next morning. The patient took small quantities of milk at frequent intervals without discomfort and after a hypodermic injection of one sixth of a grain of morphia she passed several hours in comparative ease. At 1 A.M. her condition appeared to be no worse, but at 4.30 A.M. she suddenly became collapsed. She was cold, sweat poured from her, her abdomen became rapidly distended and her breathing shallow and quick, and her expression was most anxious. She was stimulated freely but in about an hour she died.

At the post-mortem examination on opening the abdomen the great omentum was found to be slightly adherent to the anterior abdominal wall and firmly so to the coils beneath. The stomach contents filled the right half of the abdominal cavity and pelvis. An abscess between the coils of small intestine occupied the right iliac fossa, extending downwards into the pelvis and upwards along the ascending colon. Elsewhere there were signs of more recent peritonitis. The vermiform appendix was healthy. On examining the stomach there was found on the anterior surface near the pylorus a perforated ulcer, oval in shape and three-quarters of an inch long. The peritoneal margin was ragged and apparently recently destroyed, but the mucous edge was smooth. The ulcer was not terraced. Neither was it thickened nor adherent to neighbouring structures. No other ulcers were to be found.

10 were under 31 years of age and six were under 40 years. In its circumscribed form it has been mistaken for myomatous or fibro-myomatous and cystic tumour of the vagina. When ulceration has occurred and the disease has extended it has been mistaken for carcinoma, tubercle, and syphilis. The prognosis is essentially bad, as the disease is generally not seen in time. According to Dr. Otto Seitz, of all known cases only three patients have recovered.

In the case which occurred in the Munich Klinik the patient, a multipara, was 41 years of age. The principal symptoms were severe hæmorrhage, accompanied by fœtid discharge and pain on micturition, attended by emaciation. The inguinal glands at either side were enlarged. There was no evidence of any heart or lung complication. The growth appeared from the middle line of the posterior wall, occupying its entire length, easily bleeding, and with a rough fissured surface; there was infiltration of the recto-vaginal septum. The growth had extended so far in the paravaginal tissue as to make a radical operation impossible. A partial operation, by enucleation and cautery, was attempted, but two months afterwards there was a return of the growth, with partial involvement of the glands.

My own case, which I brought before the British Gynæcological Society, was that of a woman aged 44 years. She had been married for 23 years and her last pregnancy—there having been no miscarriage in the interval—was 22 years previously. She first noticed a vaginal discharge in May, 1901, and this had continued almost constantly up to the time of my seeing her in November, 1901. She had run down in her general health and had lost weight. Until I saw her she had refused to allow any examination to be made. On attempting a digital one by the vagina, I found a considerable mass filling the lower part of the canal and bleeding so freely that I had to desist. I was able, however, to trace the growth to the vaginal wall, but did not discover at the time that the cervix uteri was not involved. Indeed, my own impression was that it was a carcinomatous mass sprouting from the cervix. On anæsthetising her I found that the uterine neck was completely concealed by the ulcerating mass and that it was in no way involved, while the lateral and posterior walls of the vagina were perfectly healthy. I further found that the growth was connected by a broad base, more or less pedunculated, to the anterior wall of the vagina, not involving the external genitalia. The inguinal glands were quite free. I adopted the following plan for its removal. I surrounded the entire tumour by the thick wire rope, tightening this on it gradually. Behind this I placed the blades of a Billroth's clamp and next removed the growth with scissors. With a Paquelin's cautery I then cauterised down to the blades of the clamp, which I was now able to remove. I next made two circular incisions into the healthy vaginal wall at either and exposed a healthy subjacent raw surface, being careful of the bladder. When all bleeding had been arrested, with a Paquelin blade I again cauterised the whole of this surface and raising the healthy vaginal mucous membrane at either side for a short distance, brought the clean edges together with Cumol gut, leaving only a single linear incision in the anterior vaginal wall. The entire operation was thoroughly aseptic. The vagina was kept tamponned with sterilised iodoform gauze and the urine was drawn off for some 10 days after operation. The wound united by primary union. Up to the present everything has been most satisfactory. I am indebted to Mr. J. H. Targett for a microscopical report on the specimen and for the section from which the accompanying drawing was made.



Spindle-celled sarcoma of the vagina.

*Report on the growth by* Mr. J. H. TARGETT.—This growth is a spindle-celled sarcoma of the vagina. The surface is ulcerated and covered with necrotic material. Among the spindle cells there are a few larger polynuclear cells.

Harley-street, W.

# ON HÆMOLYSINS PRODUCED BY CERTAIN BACTERIA.

BY ALDO CASTELLANI, M.D.,
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ALTHOUGH the production of hæmolytic substances in the cultures of certain bacteria (bacillus typhi, bacillus coli, and bacillus dysenteriæ of Kruse) was demonstrated originally by Ehrlich[1] and subsequently by Bullock and Hunter,[2] we are indebted to Neisser and Wechsberg[3] for the first complete research on the subject. The last-mentioned observers showed that the filtered as well as unfiltered broth cultures of several races of staphylococcus pyogenes aureus evinced marked hæmolytic properties on the erythrocytes of the rabbit's blood. The formation of hæmolysins was found to reach its maximum in cultures of from 10 to 15 days old, and decreased afterwards by degrees. These observations were soon confirmed and amplified—e.g., by Baiardi[4] and by Lubenau,[5] &c. It has been recently stated by E. and P. Levy[6] that hæmolysins are produced by the bacillus typhi, although this has been denied by Pane,[7] and, on the other hand, has been corroborated by Macfadyen and Rowland.[8]

On account of this difference of opinion I have been led to repeat the experiments of E. and P. Levy. At the same time I considered that it would be of value to carry out a parallel series of experiments with the colon bacillus and the dysentery bacillus of Kruse in order to determine how far they compared in their action with the typhoid bacillus with which they are so closely related. The dysentery bacillus is regarded by Kruse as most probably the cause of the European form of dysentery. It is a rather short and plump bacillus, is non-motile and does not stain by Gram's method. On all culture media its growth resembles that of the typhoid bacillus, it does not produce gas in sugar media and it does not coagulate milk. It is strongly agglutinated by the serum of patients suffering from dysentery. It need hardly be said that the European form of dysentery is in many respects quite different from the tropical form. Further particulars with regard to this interesting organism will be found in the original paper by Kruse[9] as well as in a paper by myself.[10]

As regards the technique I have followed in its general outline the well-known methods of Neisser and Wechsberg. A certain number of faintly alkaline broth flasks were prepared and inoculated with bacillus typhi, bacillus dysenteriæ, and two different races of bacillus coli, which I shall term I. and II. The cultures were incubated for varying periods—e.g., three days, five days, and longer—they were extract were injected subcutaneously into the forearm. Two seconds after the injection the patient complained of a sudden spasmodic contraction of the muscles of the arm and fingers. On feeling the pulse at the radial immediately after injection I was alarmed to find that it almost disappeared for a few seconds. That this symptom was due to the local muscular spasm with which it was coincident is confirmed by the fact that the arterial pulse in the left radial was found to be full and vigorous. 12 minutes after injection the arterial pressure was found to be 150 millimetres of mercury and the pulse-rate was 85. Previously to injection the patient had complained of feeling uncomfortably hot and a couple of minutes afterwards he spontaneously remarked that "all the heat seemed to have gone inside." Two hours after the injection the pulse-rate was 89 and the pulse itself was much stronger and fuller. The patient still complained of feeling cold at the extremities. Three hours after injection the pulse-rate was 95 and the blood-pressure 135 millimetres of mercury. There were some pain and localised swelling at the site of the injection. There was marked diuresis during the 24 hours succeeding the injection; the urine was acid with a specific gravity of 1010. There was no glycosuria, an effect frequently noticed after suprarenal injection. I have taken considerable quantities of the pressor substance by the mouth but have never been able to record any result, although the substance is unaltered by peptic digestion and is dialysable. The pressor substance would appear to be proteid in nature. It is precipitated from salt solution by trichloracetic acid, gives biuret, xanthoproteic and Millon's reactions. It is not precipitated by saturation with a neutral salt, it is unaffected by peptic but decomposed by prolonged tryptic digestion. The iodine found in the pituitary is not apparently in combination with the pressor substance. Its cardiac, vascular, and diuretic action would indicate that it may prove to be of service in cases of heart disease.

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[1] Ehrlich and Morgenroth. Berliner Klinische Wochenschrift, 189 , No. 1.

[2] Centralblatt für Bakteriologie, Band xxviii., No. 25.

[3] Zeitschrift fur Hygiene, Band xxxvi., 1901.

[4] Annali d'Igiene Sperimentale, Fasciculus iii., 1901.

[5] Centralblatt fur Bakteriologie, Band xxx., No. 10.

[6] Ibid.

[7] Gazzetta degli Ospedali, 1901, No. 144.

[8] Centralblatt fur Bakteriologie, Band xxx., No. 20.

[9] Deutsche Medicinische Wochenschrift, No. 23, 1901.

[10] Revista di Critica Medica, No. 15, 1901.

# Clinical Notes:

## MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

### A CASE OF RECOVERY AFTER VERY EXTENSIVE INJURIES.

By MONTAGUE TENCH, M.D. BRUX.,

MEDICAL OFFICER TO GREAT DUNMOW INFIRMARY.

As an example of extensive injuries followed by complete recovery the following case may prove of interest.

In the course of 1901 a man, aged 55 years, a farm labourer, was knocked down and run over by the barn works of a threshing machine, drawn by four horses which he had been leading and which had taken fright. Both wheels on the near side passed diagonally across his pelvis and chest while he lay on his left side. When picked up and admitted to Great Dunmow Infirmary he was collapsed and pulseless and appeared to be in a dying condition. He recovered consciousness within a couple of hours and the following injuries were recognised. Both iliac bones were broken off above the pelvic brim, being freely moveable with coarse crepitus. There was no injury to the bladder or the urethra, but the torn rectum was extruded through a rent reaching from the anus to the scrotum rather to the left of the middle line. Large hæmatomata extended from the buttocks down the outer side of both thighs to their middle. Several ribs on both sides were broken, so that the sternum was protruded and moveable with crepitus. Surgical emphysema developed the same evening on both sides of the trunk and on both arms to the wrist, though there was no external breach of surface and no hæmoptysis. The left clavicle was extensively comminuted, otherwise the limbs and head escaped.

Extensive sloughing of the back and buttocks occurred during the ensuing six to eight weeks, laying bare the sacrum, and the hæmatomata, which had suppurated, discharged through an area eight inches in diameter over and above the sacrum. Pus and sloughs were discharged for 10 weeks.

The patient left the infirmary six months after the accident walking without limping, and is now contemplating resuming his work.

The temperature rose to 102° F. within the first week with the onset of suppuration, and assumed a hectic type while the discharge continued. Considerable wasting occurred during this time, but was rapidly made good afterwards. There was no indication of injury to internal organs other than that inferred from the general emphysema.

Great Dunmow.

### QUININE AS A DRESSING.

By J. REID, M.A., M.D., C.M. ABERD.

QUININE has been used in lotion for various diseases, but combined with cod-liver oil externally I do not know of any reference to the subject. I have used it with good results (one drachm to eight ounces in emulsion, to be shaken up before being used) in tertiary and rheumatic ulcers of the leg and for ordinary ulcers, in a case of gangrene of the skin, and after a burn, where a large surface (about a foot square) formed a slough and had to be removed as ulceration loosened the thick slough. All wounds took on a healthy and kindly action, and the pus from the sloughing derma smelled sweet and contained a limited number of cocci. I do not know that the dressing has anything to recommend it in the way of cheapness or of odour, but it has the advantage of supplying a weakened system with an oily food and a tonic drug. For intertrigo I have used it with good effects if not long required. For eczema it seemed to act well if stomach troubles were seen to.

Bristol.

# A Mirror

OF

# HOSPITAL PRACTICE, BRITISH AND FOREIGN.

> Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

## ST. MARY'S HOSPITAL.

### A CASE OF TRAUMATIC RUPTURE OF THE PROSTATIC URETHRA; COMPOUND FRACTURE OF BOTH LEGS; OPERATION; RECOVERY.

(Under the care of Mr. EDMUND OWEN.)

IN the following case the urethra was ruptured by external injury in an unusual situation. The most common site of rupture when occasioned by external violence is certainly the membranous portion of the urethra, but in this case the urethra was torn behind the posterior (superior) layer of the triangular ligament. This lesion is not very rarely produced by fracture of the pelvis, though in the case recorded below no signs of fractured pelvis were present. For the notes of the case we are indebted to Mr. W. J. Finlayson, dresser.

On the afternoon of Oct. 21st, 1901, some children were playing in the timber-yard of an undertaker, when they upset a pile of coffin-lids which fell upon them, killing one of them. As a result of this accident, a boy, aged seven years, was brought into St. Mary's Hospital with compound fracture of each tibia, and in a state of serious *collapse*. The house surgeon, Mr. V. Nesfield, at once took him into the theatre, and, under the influence of chloroform, cut down on to the right tibia, clearing dirt and blood-clot from the wound; then, having sutured the periosteum which had been extensively stripped up, he inserted a drainage-tube and dressed and fixed the limb. He treated the left tibia in the same way (this fracture was comminuted as well as compound, and the fibula was also broken and exposed). Marks of severe bruising were noticed over the lower part of the abdomen.

When the house surgeon saw the boy at night he found that some blood had escaped from the urethra, but that no urine had been passed. He, therefore, tried to introduce a catheter, but though he could not make it enter the bladder, Although on the first day of the illness the probability of an attack of biliary colic was entertained I need hardly dilate on the symptoms of the following days, for they were sufficiently clear to justify a diagnosis of appendicitis. The detection of a collection of fluid in the pelvis, continuous with a dull area in the right iliac fossa, is not infrequently found in that condition. The perforation of an ulcer of the anterior gastric wall usually produces general peritonitis, with a rapidly fatal termination. The ulcer appeared to be acute in its formation and probably the perforation was slow in its completion, an example of the "subacute" perforations. The escaped fluid no doubt took such a course as has been well described by Mr. B. G. A. Moynihan in a published paper on perforated duodenal ulcers.[1] In this case the fluid, having passed over the edge of the transverse meso-colon and along the ascending colon to the iliac fossa, became shut off from the general peritoneal cavity by the great omentum which formed an effective lid for the suppurating cavity. Whether the final shock was due to a more complete perforation of the ulcer or due to a bursting of the iliac abscess into the general peritoneal cavity, the complete gastric perforation having already occurred, I am not prepared to say.

Finally, I wish to express my indebtedness to Mr. E. Down for the notes of the case previously to admission, and to Mr. G. Thom, under whose care the patient was admitted, for his kind permission to record the case.

Devonport.

# THE MEDICINAL USE OF THE PRESSOR SUBSTANCE OF THE PITUITARY BODY.

BY F. GOLLA,
LATE DEMY OF MAGDALEN COLLEGE, OXFORD.

*(From the St. George's Hospital Physiological Laboratory.)*

THE physiological effect of injections of pituitary extract has been worked out in the last few years by a number of observers. Oliver and Schäfer[2] demonstrated that an extract of the pituitary body caused a marked rise of blood-pressure when intravenously injected, and they were able to show that this effect was due to a contraction of the blood-vessels and augmentation of the cardiac contraction which persisted after destruction of the central nervous system. They pointed out that it differed in its action from suprarenal extract inasmuch as a definite slowing replaces the accelerating action on the heart of a suprarenal injection after section of the vagi. Howell[3] tested the effects of both the anterior lobe and the infundibular body when injected in saline extracts. He found little change with injection of the hypophysis alone, but injection of the infundibular body caused a marked slowing of the heart with the vagi intact, and with the vagi divided or after atropin the slowing of the heart-beat was less pronounced, though in both cases there was a rise of blood-pressure. Cyon[4] also obtained a rise of blood-pressure and slowing of the pulse from injection of pituitary extract. He showed that section of the vagi either before or after injection had little influence on the results obtained and that atropin injections, unless in very large quantities, did not inhibit the retardation produced by the pituitary extract. Cleghorn[5] was able to obtain slowing of the isolated mammalian heart on perfusion of pituitary extract. More recently Schäfer and Vincent[6] were able to demonstrate the existence of two substances in the infundibular part of the pituitary gland having distinct physiological properties, one of these producing a rise and the other a fall of blood-pressure. These two bodies they distinguished as the *pressor* and *depressor* substances. Of these they found that the pressor substance is soluble in salt solution and insoluble in alcohol and ether, whilst the depressor substance is soluble in all three. The active substances are not destroyed by boiling. The pressor substance was found to produce its action on the heart and the peripheral arteries; its action is prolonged and during its period of action a second dose is inactive or nearly so. They were able to obtain the same retardation of the cardiac mechanism as that produced by injection of pituitary extract in the previously mentioned experiments. In a recent communication Schäfer and Magnus[7] admit that the depressor action of alcoholic extracts of the pituitary cannot be regarded as of a specific nature. They find that the pressor substance of the pituitary body, unlike suprarenal extract, causes no diminution in volume of the kidney when injected intravenously. The injection is followed by a diminution in volume of the spleen, intestines, and extremities with an increase in volume of the kidneys and a prolonged and pronounced diuresis which, however, lasts for a shorter period than the change in volume of the kidney.

The medicinal use of pituitary extracts has hitherto been attended with no very pronounced results. Cyon[8] considered that the hypophysis was able to act vicariously with the thyroid. He also attributed to it a specific action on the vagus as far as its cardiac mechanism is concerned. Lo Monaco and van Rynbuhr[9] have, however, recently disproved Cyon's statement that, after removal of the pituitary, excitation of the cardiac vagus centre is ineffectual and confirm the view of Friedman and Maas that removal of the pituitary is not followed by any morbid results. Schiff[10] found that administration of pituitary extract, though it had no effect on the metabolism of a young man, caused in an old man and a patient suffering from acromegaly marked increase in the phosphorus excretion by the urine and fæces. There was no corresponding increase in the nitrogenous metabolism, and one may conclude that the pituitary influences chiefly the metabolism of tissues rich in phosphorus and poor in nitrogen. These results are confirmatory of the belief in the causal connexion between disease of the pituitary and acromegaly. It would also seem possible that administration of pituitary extract might have a beneficial result in cases of myositis ossificans. Marinesco[11] was unable to effect any improvement of the condition of the extremities in three pronounced cases of acromegaly, but the headaches and neuralgic pains in the limbs were much relieved. Broadbent found great improvement in the psychical condition of patients suffering from acromegaly from treatment with pituitary extract. Rolleston[12] obtained a lasting improvement in the case of a woman who had suffered for three years from acromegaly which was permanent after the pituitary treatment had been suspended. The only cases of subcutaneous injection of pituitary extract that I have been able to find are those of Cyon, where he obtained a marked improvement in cardiac disease, and of Mairet and Bosc[13] who found that injection in a case of epilepsy was without result.

A consideration of the physiological properties of the pressor substance isolated by Schäfer and Vincent led me to try its effects on the human subject. Its slowing action on the heart beat, unlike that of digitalis, appears to be due to a prolongation of the systole rather than of the diastole. The pressor substance would appear to act exclusively on the sarcoplasm. I have been unable to obtain any marked effect on the muscles of amphibia rich in the rapidly contracting anisotropic elements such as the gastrocnemius. For clinical purposes the pressor substance purified by repeated washing of the alcoholic precipitate with ether obtained from 80 grains of the dried infundibulum was dissolved in 30 minims of normal saline. I found on injecting three minims of this solution into the mucous membrane of the lower jaw that a definite local vaso-constriction resulted; the mucous membrane remained blanched for about three-quarters of an hour for a considerable area round the point of injection. On injecting five minims subcutaneously into my right forearm there was a perceptible pallor of the finger nails for a few minutes. The pulse-rate fell from 95 to 84, and the wave was appreciably fuller. A subcutaneous injection was next made on a patient suffering from advanced Addison's disease under the care of Dr. H. D. Rolleston. The blood-pressure in the radial artery before injection was found to be 120 millimetres of mercury by means of the Hill and Barnard sphygmometer. The pulse-rate was 100. Eight minims of the saline of the ulcer and was left in the upper part of the wound, the lower portion of which was closed with salmon-gut sutures. The patient was infused during the operation with two pints of normal saline solution containing 10 minims of liquor strychninæ and an ounce of brandy. She made an uneventful recovery and left the hospital on Jan. 1st, 1902.

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[1] THE LANCET, Dec. 14th, 1901, p. 1656.

[2] Journal of Physiology, vol. xviii.

[3] Journal of Experimental Medicine, 1898, vol. iii., p. 2.

[4] Archiv fur Gesammte Physiologie, Bande lxx., lxxi., lxxiii, and Académie des Sciences, April, 1898.

[5] American Journal of Physiology, vol. ii.

Journal of Physiology, vol. xxv., p. 1.

[7] Ibid., vol. xxvii.

[8] Op. cit.

[9] Atti Accaddei Lincei, x.

[10] Berliner Klinische Wochenschrift, 1897.

[11] Semaine Médicale, 1895.

[12] THE LANCET, Dec. 4th, 1897, p. 1443.

[13] Archives de Physiologie Normale et Pathologique, 1896.

*Remarks by* Mr. HITCHINS.—The following points are of interest. The occurrence of a perforated gastric ulcer in two members of the same family and of the same sex. In each case the ulcers were close to the lesser curvature near its cardiac end, the most common situation being near the pylorus. In the first case perforation took place three and a half hours after the ingestion of food, and in the second case a similar time had elapsed after a meal, perforation usually taking place at a short interval after a meal. The first case illustrates the chance of recovery even where operation does not take place for many hours after perforation—in this instance accompanied by considerable extravasation of food with resulting peritonitis. Free gas was present in the first case with diminution of the liver dulness; in the second case no free gas was present and there was no absence or diminution of the liver dulness. It is rare for perforation to occur at so young an age as that of 16 years. Both patients had good teeth I believe the second case to be one of the youngest recorded. I have to thank Mr. Whipple and Mr. Lucy for kindly permitting me to record the cases, and Dr. Pethybridge for notes on the cases up to the time of their admission.

# Medical Societies.

## ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

### *Two Cases of Ligature of the Left Carotid for Aneurysm of the Arch of the Aorta.*

A MEETING of this society was held on Feb. 11th, Dr. F. W. PAVY, the President, being in the chair.

Mr. CHRISTOPHER HEATH read a paper on two cases of Ligature of the Left Carotid for Aneurysm of the Arch of the Aorta, and showed post-mortem specimens of four cases. The cases reported were the sixth and seventh in which Mr. Heath had performed the operation. The sixth case was in a woman, aged 61 years, under the care of Dr. A. H. Robinson in the Mile End Infirmary, where she was admitted in July, 1890, with all the symptoms of aneurysm of the arch of the aorta. She was kept in bed and had large doses of iodide of potassium for many weeks, but no alteration in the pulsation resulted. She always sat up in bed with the knees drawn up and her head resting upon them. On attempting to lean back against the pillows the dyspnœa increased and inspiration became stridulous. The left carotid was tied without an anæsthetic on Nov. 16th, 1890. On Nov. 19th the respiration, which had been distinctly noisy, was now unaccompanied by the least noise and the patient was able to recline against her pillows. On Nov 22nd she was able to sleep for seven hours consecutively. In January, 1891, there was some return of pain in the right shoulder. In February the pulsating tumour above the sternum had decreased and the patient was able to lie and to sleep in any position. She continued to improve and was discharged at her own request on August 8th She was admitted to the London Hospital on Sept. 3rd, when the pulsating tumour could be just felt above the clavicle, and she died suddenly on Nov. 29th, more than a year after the operation. The seventh case was that of a man, aged 36 years, admitted into University College Hospital under the care of Dr. F. T. Roberts on Nov. 4th, 1898, with aneurysm of the arch. The physical signs were well marked and included "tracheal tugging" and a blowing systolic sound over the aneurysm. The lungs were examined and found to be healthy During November, December, and January the patient had severe attacks of pain in the shoulders, back, and neck. The aneurysm at first diminished, but in January it increased in size and definite swelling and pulsation appeared beneath the pectoral below the right clavicle. Mr. Heath tied the left carotid with silk under eucaine β on Jan 18th, 1899. On the 20th the pulsation was distinctly less marked and daily improvement was noted till Feb. 1st, when the patient returned to the medical ward with the operation wound healed. The pulsation in the aneurysm was now much less distinct and the patient was free from pain and had slept well since Jan. 20th. On Feb. 16th the patient had pain in his chest and next day his temperature went up to 103° F. and he rapidly developed all the symptoms of acute phthisis and died on March 21st. The aneurysm gave no trouble and was daily less evident. The specimens shown were four in number, one from a man under the care of Dr. Cockle on whom Mr. Heath tied the left carotid in February, 1872, and who greatly improved for a twelvemonth, when he resumed his hard agricultural labour and the aneurysm began to grow and eventually burst four and a half years after the operation. In this case the necropsy was made three days after death in very hot weather and the decomposed clots were unfortunately washed away. The second specimen was from a case of a man, aged 38 years, in whom Mr. Heath had tied the left carotid on March 8th, 1890, and the patient died suddenly on May 12th. The aneurysm was filled with laminated clot. The third specimen was from Case 6 and showed an aneurysm of the size of an orange almost completely filled with laminated clot. The fourth specimen was from Case 7 and showed an aneurysm of the arch of the size of a clenched fist and a second small aneurysm of the root of the innominate, both of which were nearly filled with laminated clot, the centre of the larger being occupied with soft clot. Mr. Heath maintained that ligature of the left carotid undoubtedly produced an immediate effect upon aneurysm of the arch and discussed the theories which had been proposed to explain the formation of laminated clot in the sac. He thought that the ultimate solidification of the aneurysm, though its only method of cure, accounted for the sudden deaths which occasionally occurred some months later, owing partly to pressure effects and partly to the induction of syncope.

Mr. A. CARLESS mentioned the case of a woman, aged 40 years, who for five months before coming under observation had had pain in the right shoulder, arm, and neck, with dysphonia and dysphagia. She had a brassy cough. There was no specific history and she had had two healthy children. When admitted to hospital the chest wall was pushed forward at the level of the first and second ribs on each side. There was a swelling below the left sterno-mastoid muscle. Both the temporal and radial artery on the left side were diminished in size. While under observation she had several attacks of syncope and the aneurysmal sac seemed to become more tense. The left carotid was tied and for a few days after the operation there was a slight increase in tension of the sac and there was also slight loss of power on the left side of the face and the left side of the tongue. A few days later these symptoms disappeared, the dyspnœa became less, and the pulsation diminished 24 days after the first operation the first part of the subclavian artery was tied; shortly after this she had a bad attack of cardiac failure and cough which was relieved by the use of digitalis. Six months later very little pulsation could be felt above the clavicles, and for three years she was able to go about and do her work with comfort. She died suddenly from rupture of the aneurysm into the left pleural cavity At the necropsy the aneurysm was found not to be sacculated. The left carotid and subclavian arteries were small and contracted. The conditions under which he considered the operation advisable were when the pulsation was marked on the left side and involved the root of the left carotid artery.

Dr. F. T. ROBERTS said that the main point of discussion was under what circumstances the carotid and subclavian vessels should be tied. He considered that the two chief causes of aneurysm were heavy work and alcohol, and he was also of the opinion that smoking had a deleterious effect on the walls of the vessels. The chief indication for operation was pain, while aortic regurgitation and degeneration of the arteries were unfavourable to operation.

Mr. R. BARWELL, in discussing the suitability of cases for operation, said that in those cases in which the dilatation of the aorta was symmetrical clot was not likely to form even if the vessels were tied, whereas if the aneurysm was sacculated clot was much more likely to form. He also agreed with Mr. Heath that the clot did not extend down from the ligature but was formed in the sac itself near the exit of the vessel from the sac. He considered that it was frequently advisable to tie the right carotid and right subclavian rather than the vessels on the left side—indications which vessel should be tied being derived from a consideration of the vocal cords and the state of the pupil. He he drew off a little blood-stained urine. As the boy was recovering somewhat from the shock, and as there did not appear to him to be urgent need for further active interference, Mr. Nesfield decided to leave the boy quiet for the night.

Next day Mr. Owen saw the boy, and, finding that no urine had been passed, he had him at once taken into the theatre. The bladder was evidently distended, and there was great tenderness all over the hypogastric region. There was slight fulness in the perineum, and some blood was oozing from the meatus urinarius. As it was impossible to pass a catheter, Mr. Owen opened the urethra in the perineum, but he found there neither blood nor urine; and as he still could not find the way into the bladder, he had the boy placed flat, and made an incision through the lower part of the linea alba, so as to expose the front of the bladder below the peritoneum. This being done, and before the bladder was reached, blood and urine freely escaped, showing that leakage had occurred into the pelvis. But the bladder was so much distended and was so firm that it was evident that the leakage was not from it. An incision was then made into the bladder, when urine and clots escaped. The pool of stagnant urine on the floor of the pelvis was drained by making an incision through the pelvic fascia and levator ani at the side of the prostate, and passing a large, soft tube through it into the wound already made in the perineum. The bladder and pelvis were then washed out with hot water. The boy was so extremely ill when upon the table that it was impossible to make search for the exact position of the rent; but inasmuch as no instrument could be passed into the bladder whilst there was escape of urine into the pelvis (but not into the perineum), there could be no doubt but that the rupture was behind the triangular ligament. Had the neck of the bladder itself been torn the bladder would probably not have remained full of urine under pressure. The rent, therefore, must have been between the neck of the bladder and the triangular ligament. To the surprise of all concerned the boy recovered. For a time some of the urine passed by the suprapubic wound and some by the perineal drain. Eight days after the operation Mr. Nesfield placed the boy under chloroform for the sake of rearranging the dressings of the legs, and he took that opportunity of exploring the bladder. He then found that he could pass his finger through the suprapubic wound and out through the perineal incision, and he formed the opinion that the rupture was in the prostatic portion of the urethra. With his finger thus in the bladder, he succeeded in introducing a steel bougie through the urethra and into the bladder. Gradually the openings closed and the urine flowed more abundantly by the proper route. From time to time a No. 7 English bougie has been passed to give assurance that no contraction is taking place, and up to the present all the urine has come the right way and the boy is convalescent.

## SOUTH DEVON AND EAST CORNWALL HOSPITAL.

### TWO CASES OF PERFORATING GASTRIC ULCER OCCURRING IN SISTERS; OPERATION; RECOVERY.

(Under the care of Mr. R. H LUCY and Mr. WHIPPLE.)

THE cases of perforating gastric ulcer treated by operation which have been recorded in THE LANCET within recent years have been very numerous, but in nearly every case there is some special point of interest or importance. The two cases recorded below are remarkable in that two sisters suffered from perforation of gastric ulcer. Inasmuch as such an occurrence, so far as we are aware, has not been recorded before, we must look upon it as little more than a coincidence, though the same predisposing factors were probably present in the two cases. Instances have been observed in which two members of the same family have suffered from ulceration of the stomach,[1] but without perforation In the second case recorded below the patient was only 16 years old. An instance of perforation in a younger child has been described[2] in which a child, 13 years of age, died from a perforating gastric ulcer. For the notes of the case we are indebted to Mr. F. C. Hitchins, late house surgeon.

CASE 1.—A young woman, aged 20 years, was admitted into the South Devon and East Cornwall Hospital on March 9th, 1900, under the care of Mr. R. H. Lucy. On the 8th the patient was at work in her usual health, when at about 11.30 A.M. she was seized with an attack of sudden severe pain in the epigastrium. She was slightly sick once and was taken home. The pain continued with no improvement until the evening. About two years previously she had been treated for dyspepsia, but recently she had not complained of anything definite. She had never had any hæmatemesis. At 10 P.M. Dr. W. L. Pethybridge saw the patient. She was very anæmic and had an anxious expression. The pulse was 120 and feeble and the temperature was 100° F. The abdomen was generally distended and there was great tenderness in the epigastrium and the left hypochondrium. There was resonance everywhere with the exception of some slight dulness in the right flank. The liver dulness was distinctly diminished. A diagnosis of perforated gastric ulcer was made and the patient was advised to enter the hospital at once for operation, but she declined to do so. A quarter of a grain of morphia was injected. On the next morning at 10 o'clock she was seen again, when the pulse had increased to 140 and the liver dulness was still further diminished. She now consented to the performance of an operation and was removed to the hospital. At 12.30 P.M. the abdomen was opened under chloroform. Free gas at once escaped and a perforated ulcer of the size of a shilling was found on the anterior surface of the stomach close to the cardiac end of the lesser curvature. The edges were very indurated, the aperture being so large and the patient's general condition so bad that it was thought inadvisable to attempt to suture it. The abdomen was flushed out with hot saline solution and the contents of the stomach, which were free in the peritoneal cavity and included a large piece of orange, were evacuated. A rubber drainage-tube was passed through the ulcer into the stomach, iodoform gauze being packed round the tube. The lower portion of the wound was then closed with salmon-gut sutures. During the operation the patient was infused with six pints of saline solution containing an ounce of brandy. She remained in a very critical condition for 48 hours after the operation, after which she began slowly to improve. Two days later the gauze round the drainage-tube was removed and was replaced by fresh gauze. On the 14th the drainage-tube was removed and a No. 12 Jacques catheter was passed in its place. On the 19th the Jacques catheter was removed. On the 30th the wound, which had suppurated rather freely, was quite sound. The patient was discharged from the hospital on May 1st. She could now take chicken, mutton, &c., is free from pain, and feels quite well.

CASE 2.—A girl, aged 16 years, the sister of the patient in the preceding case, was admitted into the South Devon and East Cornwall Hospital on Nov. 16th, 1901, under the care of Mr. Whipple. The patient had complained of pain after taking food and of shortness of breath with occasional vomiting for three months. There had been no hæmatemesis. On Nov. 16th she had her dinner, consisting of meat and vegetables, at 1.45 P.M., after which she worked at a sewing-machine for about two hours. At 5.15 P.M., when sitting quietly in a chair, she was suddenly seized with acute pain in the epigastrium and left side which continued until 8 P.M., when she was attended by Dr. Pethybridge. There had been no vomiting. When seen her face was pale and anxious-looking, her legs were drawn up, the respirations were rapid and shallow, and the pulse was 126 and of fair volume. The abdomen was distended in its lower half, tender all over, and moved very slightly with respiration. There was dulness extending from the pubes nearly to the umbilicus; this, however, proved to be due to a distended bladder. The patient was sent into the hospital with a diagnosis of perforated gastric ulcer. At 10 P.M. the abdomen was opened under chloroform followed by ether. On opening the general peritoneal cavity fluid, but no free gas, escaped. A perforated ulcer of the size of a sixpence was found at the extreme cardiac end of the stomach on its posterior surface high up under the diaphragm. In order to expose the ulcer considerable traction had to be made on the stomach. The ulcer was round and clear-cut with indurated edges. Semi-digested food escaped through the opening. This was removed with swabs, the edges of the ulcer being approximated with considerable difficulty by means of Lembert catgut sutures passed about a quarter of an inch beyond the margins of the ulcer. The sutures tended to cut out when being tightened. A gauze drain was passed down to the seat enlargement of the epiphyses which was present in the first case made it probable that the case was one of rickets. The term "osteomalacia" should not be used for this class of cases.

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[1] THE LANCET, Oct. 9th, 1858, p. 370.

[2] Medical Times and Gazette, 1872, vol. i., p. 220.

Dr. W. ESSEX WYNTER showed three cases of Chronic Œdema. The first patient was a single woman, aged 23 years, who had enjoyed good health till November, 1900, when she developed a cough which lasted through the winter. For the past 10 years the patient had complained of attacks of misty vision lasting one or two minutes which had lately increased in frequency. Three years ago there was some swelling of the lips and tongue noticed chiefly on rising and lasting two months. The swelling of the face and legs appeared to have come on gradually and to have been notably worse since May, 1901, especially after walking or long standing, the legs being at times so stiff that she could only flex them with difficulty. In the mornings the swelling was softer and less distinct. The swelling of the face was noticed a few months earlier than in the legs, especially about the right eye. The general health appeared to have been unaffected and there had been no pain. The thoracic and abdominal organs appeared to be normal. The reflexes were brisk. The urine was of a dark amber colour and was cloudy and acid; its specific gravity was 1020; no albumin or sugar was present. Some improvement was noted in the degree of the swelling of the face and the legs;—it varied, but it did not entirely disappear with massage, and subsequently it had been as much as at first. With the disappearance of the hardness pitting could be more easily obtained. The temperature was normal throughout and the bowels acted regularly. Thyroid extract had been given freely for three months without effect. The second case was that of a girl, aged 17 years, who had had erysipelas seven years ago. The mother stated that from infancy the patient's legs were very "fat." About three months ago the face and hands were noticed to be swollen on rising and the enlargement of the legs increased. The swelling continued to increase daily and became more persistent. Recently she had noticed some dyspnœa on exertion and polyuria; otherwise the general health had been good. The face was pale and was uniformly swollen, the eyes being half closed; the hands also were swollen but were not distorted in shape; and dimples over the knuckles were well marked. The legs were uniformly enlarged and were very firm, only pitting slightly on hard and sustained pressure, the skin not being white or shiny. The thoracic and abdominal organs appeared to be normal. The urine was pale, clear, alkaline, of specific gravity 1009, and was free from albumin and sugar. The pulse ranged from 60 to 70 and was full and regular. There was a marked depression over the trachea and the rings could be readily traced, the thyroid isthmus being apparently absent. Thyroid tabloids had been increased from one to three daily. While lying in bed there was at first marked improvement, but on the patient getting about the measurements of the legs had returned nearly to their original dimensions, but were not so hard. The temperature had been fairly normal and the bowels had acted about once a day. There was an increase of seven pounds in weight in three weeks. The third case was that of a female, aged 25 years, who stated that she had never felt brisk and active but had not had any definite illness. For eight years she had suffered with diarrhœa, the bowels sometimes acting every quarter of an hour, accompanied with pain and prolapsus ani. She had suffered with severe depression. There had been menorrhagia of late with anæmia. The complexion was of a peculiar tallow-white and the face was somewhat puffy, with drooping of the lower lids and marked thickening of the upper lip, giving the appearance of a facial diplegia or Erb's paralysis; the muscles, however, retained the power of voluntary movement. The hair was rather thin over the forehead. The patient was full-necked and her speech was slow and monotonous. Knee-jerks were present. The diarrhœa was checked, but after a month the general condition remained unaltered. Five-grain doses of thyroid extract were ordered daily and rapid improvement ensued.

Mr. T. H. KELLOCK showed a case of Actinomycosis of the Tongue after Treatment by Cauterisation and Iodide of Potassium. The patient, a youth, aged 18 years, who had lived all his life in London, was admitted to hospital on Nov. 26th, 1901, for hæmatocele of the spermatic cord for which an operation was performed on Dec. 4th. On the 31st, two days before he was going to leave the hospital, he drew attention to a swelling on his tongue which he stated he had noticed that day for the first time. On examination a soft swelling of about the size of a small pea was seen on the dorsum of the tongue on the right side, rather yellowish in colour, and a somewhat similar swelling on the right side and slightly under the tongue. It was painless and not tender. An incision was made into it, and a little blood and pus were let out, which contained many yellowish-white granules. These, under the microscope and on cultivation, showed masses of streptothrix. On the following day, under an anæsthetic, the swellings were both freely incised, were scraped out with a spoon, and then were freely treated with the actual cautery. A little sloughing followed this, but it soon cleared up and the patient was discharged from the hospital on Jan. 9th, 1902. Two days after the operation he was given a mixture containing eight grains of iodide of potassium three times a day, which was gradually increased to 20 grains.

Dr. BERNARD E. POTTER showed a case of Nodding Spasm in a child, aged nine and a half months, who had suffered from nodding movements for four months. The child had always lived in very dark rooms with the exception of the two months of August and September, 1901, when the parents took her away with them to Norfolk. They returned with her about the middle of September, and the nodding movements began a month later, the child being then five and a half months old. Teething began at the age of five months. The child had been breast-fed and had had no other ailment. She was well nourished and had never had convulsions. The mother's labour had been natural and no instruments were used. The movements were almost entirely in the vertical direction. Soon after these head movements began a rotatory nystagmus in both eyes was noticed. The interest of the case lay in the following facts—that the movements began almost immediately after the commencement of dentition, that the change from the light rooms in Norfolk to the present dark ones in London appeared to have influenced the child, and that the movements were nodding in character and not from side to side as is more commonly the case.—Dr. ARTHUR F. VOELCKER said that the nystagmus in these cases differed from that seen in disseminated sclerosis in that the nystagmus was often of a convergent type.—Dr. CAUTLEY said that the etiology of these cases was of interest. He did not believe that they were due to teething, to rickets, or to dark rooms. He said that the prognosis was good except in those cases associated with microcephalus.

Mr. SPENCER showed a case of Scirrhous or Atrophic Cancer of the Tongue. The patient was a thin man, aged 72 years. He came to the hospital in November, 1901, complaining of increasing difficulty in swallowing and speaking owing to fixation of the tongue. Since then he had been taking iodide of potassium and mercury, but the disease had progressed and he required now 10 grains of compound pill of soap every night to obtain sleep. The patient spoke and swallowed with difficulty. The tongue was seen to be depressed to the level of the floor of the mouth and fixed, especially as regards its anterior half, whilst the epithelial surface was unaltered except as regards puckering, and there was no evidence of previous inflammation or ulceration. The tongue felt like a board and formed the surface of a densely hard mass to be felt bulging below the jaw and fixed to the horizontal rami, especially on the right side, on which side also the submaxillary glands appeared to be already involved in the tumour. The case appeared to be one of the rare variety of malignant disease of the tongue called scirrhous or atrophic cancer, from its likeness to that form of disease in the breast, and is mentioned by Butlin, also by Lagoutte and Wright.[2] There was an absence of any history or sign of syphilis, and the anti-syphilitic treatment had failed. It did not appear to be feasible to attempt removal in this patient, so that it was proposed to continue the present administration of iodide of potassium and opium. As to the pathology of the case, Mr. Spencer said that it had not been examined microscopically, but it did not seem to be a case of fibroid epithelioma as there was no lesion in connexion with the mouth. It might be a glandular carcinoma commencing from some deep racemose gland-cells under the tongue.—Mr. J. HUTCHINSON, jun., said that he had seen a typical scirrhous carcinoma of the penis and he believed that that had originated from the glandular structure in the fossa navicularis.

Mr. H. L. BARNARD showed two cases of Facial thought that in Mr. Heath's fourth, sixth, and seventh cases, it would have been better if the vessels on the right side had been tied.

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[2] See Butlin and Spencer, Diseases of the Tongue, pp. 322, 462.

Dr. T. R. H. **BUCKNALL** mentioned the case of a man, aged 47 years, who had had syphilis, in whom there was a tumour below the left sterno-mastoid muscle. The patient had signs of pressure on the trachea and left bronchus, but there were no signs of pressure on the recurrent laryngeal nerve. The left carotid and the subclavian artery in its third part were ligatured. The pulsation became less and the patient was free from symptoms for two months.

Mr. **HEATH**, in reply, said that his rule had been to tie the artery which came off next beyond the aneurysm. He quite agreed that in certain cases it was better to tie the right, rather than the left, carotid.

# MEDICAL SOCIETY OF LONDON.

## *Exhibition of Cases.*

A MEETING of this society was held on Feb. 10th, Dr. W. H. ALLCHIN, the President, being in the chair.

Mr. **EDMUND OWEN** showed a case of Traumatic Rupture of the Prostatic Urethra in a boy, aged seven years, on whom a pile of coffin-lids had fallen on Oct. 21st last. The boy had been admitted into St. Mary's Hospital in a state of grave collapse. He was at once taken into the theatre where the house surgeon treated a compound fracture of each tibia. When the house surgeon saw the boy at night blood was oozing from the urethra and no urine had been passed. He then tried to introduce a catheter, and though this did not enter the bladder it drew off a small quantity of blood-stained urine. There was no swelling in the perineum. The house surgeon took no further steps that night towards relieving the bladder, and when Mr. Owen saw the boy next day he had him at once placed upon the operating table and he tried, unsuccessfully, to pass a catheter. He then opened the urethra in the perineum but failed to hit off the track; so he made an incision between the recti abdominis below the peritoneal reflection, and in doing so discovered a quantity of bloody urine around the base of the distended bladder. He next opened the bladder and let out much urine, and then he passed a large drainage-tube through the floor of the pelvis and out by the perineal incision without investigating further. A week later the house surgeon having occasion to put the boy under an anæsthetic passed his finger through the suprapubic wound and out by the perineum, demonstrating the presence of a laceration in the prostatic urethra. Moreover, he was then able to introduce a No. 7 English silver catheter through the urethra and into the bladder. The wounds gradually closed and the boy now passes all his urine the proper way. There is no indication whatever of the prospect of a traumatic stricture.[1]

Dr. **WILLIAM EWART** showed a case of Senile Anæmia associated with Gouty Rheumatoid Arthritis and Dyspepsia. The patient, a man, aged 68 years, was admitted into hospital with great pallor (without yellowish tinge), debility, and slight anasarca (without albuminuria or valvular disease), anorexia, and flatulency with foul tongue and gums, and an indolent, painless, rheumatoid swelling and stiffening of both wrists and of the mid-phalangeal knuckles and of both knees. This swelling had set in about three weeks previously. No hæmorrhages or any other definite cause could be found for the anæmia. The patient had had syphilis 40 years previously and gonorrhœa 23 years previously. He was laid up 20 years before for a month with gout in the toe, and he had had occasional twinges since. He had always been temperate though not a teetotaler. The blood-count gave 2,800,000 red cells and 60,000 white cells per cubic millimetre, and the amount of hæmoglobin was 60 per cent. On careful physical examination no splenic enlargement or other visceral abnormalities could be detected, nor any glandular swellings or other indications of cancer. The case was regarded as one of senile anæmia and arthritis of toxic (alimentary) origin, with leucocytosis. The etiology of the anæmia and leucocytosis in this instance was obscure. Latent carcinoma might be present, although the general improvement which had taken place under treatment rendered this improbable, and, moreover, the gastritis and rheumatoid arthritis might be regarded as a sufficient pathological burden. The patient's age and gouty bias might explain the slowness of recovery from the anæmia.

Dr. **EWART** also showed a case of Tabes Dorsalis in a man who had been for five years subject to attacks of acute abdominal pain, for which he had from time to time been admitted to the hospital. Other symptoms had recently developed which showed the case to be one of tabes.

Mr. C. B. **KEETLEY** showed a case of Excision of a Tuberculous Hip, in which the wound of excision was carefully lined with Thiersch's grafts. The patient was six and a half years old when her left hip-joint (the acetabulum and the head of the femur) was removed by erasion for tuberculous disease. The tubercle, however, extensively affected the superficial parts, subcutaneous and inter-muscular; therefore three weeks afterwards operation was repeated and the whole wound, including the deep part leading into the cavity left by erasion of the joint, was lined by Thiersch's grafts. All the deep grafts and most of the superficial grafts adhered, and from a fortnight after this second operation what little discharge there was came from the superficial sore. This was further grafted, and had occasionally broken out afresh in small parts which, however, readily healed. The hip-joint itself had given no more trouble. This had never been drained by any artificial tube. The temperature rose above 99 5° F. only twice during her stay in the hospital and was generally at or about normal.

Mr. E. **MUIRHEAD LITTLE** showed two cases of Late Rickets. The first patient was a girl, aged 13½ years, who suffered from knock-knee. She had walked badly since she was four years old, but much deformity was not observed until a year previously to her being admitted to the hospital. She was a healthy-looking girl, but was very small for her age. There were bosses on the forehead and on the parietal bones, some teeth were carious, the chest was well shaped but there were distinct enlargements of the ends of the eighth and ninth ribs on both sides, the spine showed lordosis, and the abdomen was slightly distended and the muscles were somewhat flabby. The liver and spleen were normal to palpation. The lower ends of the ulnæ and radii were enlarged and skiagrams showed cupping of the diaphyses as in infantile rickets. She had knock-knee, the ankles being five and a half inches apart when the knees were in apposition. The tibiæ were not obviously deformed. Macewen's osteotomy was performed on both sides and the legs were straightened and were put in gypsum at once. Later, when this was removed, the ankles could be put in apposition without strain. The second case was that of a youth, aged 17 years, who suffered from knock-knee. His mother stated that no deformity had been noticed until he was five years old. Four or five years ago he was an out-patient at the Evelina Hospital for Sick Children and he wore instruments for some time. He had always been thin, but no particular notice was taken of any muscular wasting. He was a tall, long-legged, thin lad. There was little or no subcutaneous fat on the limbs, so that all bony prominences were much accentuated. There was marked fixed lordosis but no paralysis and no contraction of the hip-joints. The great trochanter on each side was in Nélaton's line; the right lower limb was markedly rotated out and there was genu valgum, the leg forming an angle of 145° with the thigh. The tibia and the fibula were slightly bent in their upper thirds, with the convexity inwards. On the left side the knee was contracted and could not be extended beyond 155°. The inner tuberosities of the tibiæ and the lower epiphyses of the tibiæ and fibulæ were enlarged, especially on the right side. The elbows were contracted and could not be extended below 150°. No tendons were abnormally tight and there were no marks of rickets on the ribs or on the wrists. Skiagrams showed the bones of the lower limb to be unusually pervious to the x rays and the epiphyseal lines at the knees were unusually broad and rather irregular. Macewen's osteotomy was performed on both femurs and the right tibia and the right fibula were divided just below the tuberosity of the former. All the bones were soft and were easily penetrated by the osteotome. The patient left the hospital with the limbs in gypsum on Dec. 28th, 1900. Subsequently he was ordered to wear instruments from the boots to the thighs, with ring catches at the knees, and these he still wears.—Mr. W. G. **SPENCER** said that he thought "osteomalacia of puberty" was a better name to apply to the condition present in the first case than the name "late rickets."—Dr. **EDMUND CAUTLEY** said that the

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[1] A fuller account is given in the Mirror of Hospital Practice, p. 443.

W Byers (Belfast), Dr Edward Malins (Birmingham), Dr John Phillips, and Dr Herbert R Spencer. Treasurer: Dr Francis Henry Champneys. Chairman of the Board for the Examination of Midwives: Dr W R. Dakin. Honorary secretaries: Dr Amand Routh and Dr Montagu Handfield Jones. Honorary librarian: Dr Robert Boxall. Other Members of Council: Dr Comyns Berkeley, Dr Henry Briggs (Liverpool), Dr Thomas Vincent Dickinson, Dr Charles Owen Fowler, Mr Charles Arthur Goullet, Dr Walter Spencer Anderson Griffith, Dr David Berry Hart (Edinburgh), Dr Arthur Corrie Keep, Dr Arthur H N Lewers, Dr Thomas Robert Lombe (Torquay), Dr William Rivers Pollock, Dr Harry Campbell Pope, Mr Edward Reynolds Ray, Dr William Loudon Reid (Glasgow), Dr William Japp Sinclair (Manchester), Dr Thomas George Stevens, Dr Francis T Tayler, and Mr John William Taylor (Birmingham).

## OPHTHALMOLOGICAL SOCIETY

*Intracranial Thrombosis as a Cause of Double Optic Neuritis in Chlorosis.—The Treatment of Cystoid Cicatrix following Cataract Extraction.—Endothelioma of the Orbit.—Ringworm of the Eyelid.—The Visual Purple of the Retina.—Exhibition of Cases and Specimens.*

AN ordinary meeting of this society was held on Jan. 30th, Dr DAVID LITTLE, the President, being in the chair.

Dr C O HAWTHORNE read a paper in which he adduced arguments in favour of regarding intracranial thrombosis as a cause of double optic neuritis in cases of chlorosis.—Sir W GOWERS recalled the fact that he was the first to point out the association of optic neuritis with chlorosis but in such cases there were no true cerebral symptoms, if such a general one as headache was excluded. He doubted the possibility of thrombosis existing without cerebral symptoms, involving at least the sixth nerve. Thrombosis might cause optic neuritis and chlorosis might do so likewise, but to aver that the latter caused optic neuritis by thrombosis was a very wide statement. That chronic bone disease caused optic neuritis was an unquestionable fact, but a great mystery. In such cases there was often no evidence of sinus thrombosis. Middle ear disease might also cause optic neuritis, but not necessarily by inducing thrombosis. Was it possible that disease of the spinal cord and ear disease brought about optic neuritis in the same way? Cerebral tumour often caused optic neuritis, but post mortem there was no thrombosis. Thrombosis might behave like tumour when there was septic contamination with infective tendency. Embolism was associated with septic endocarditis, never with simple thrombosis in an artery.—Dr JOHNSON TAYLOR asked how cavernous sinus thrombosis could exist without proptosis, and why it should affect both sides. The good effects of iron and aperients in chlorosis supported the belief that the optic neuritis was due to some blood change. Mr ERNEST JONES read notes of a case in which thrombosis in the right leg occurred with double optic neuritis.—Dr HAWTHORNE, in reply, said that some chlorotic patients died who suffered from optic neuritis and in these there was nothing but thrombosis present to account for it. He thought that the obstruction need not necessarily be in the cavernous sinus but if it were he should expect proptosis.

Mr G A BERRY read a note on the Treatment of Cystoid Cicatrix following Cataract Extraction. He said that it was not always possible to prevent the formation of cystoid cicatrices after removal of cataract, and when they did occur they were a source of danger to the eye on account of the way in which they facilitated the entrance of micro-organisms. Mr Berry had found that this occurred in about 2 to 3 per cent. of cases operated upon. As a rule the opening was very small and could be seen readily if the conjunctiva were dissected up. For the treatment he preferred to dissect up the conjunctiva and to turn it down as a flap, then with the cautery to burn gently the small opening and at once replace the conjunctival flap. This always cured the defect and he preferred this method to any other that had been introduced.

Mr SIMEON SNELL (Sheffield) related a case of Endothelioma of the Orbit occurring in a girl, aged 19 years, associated with a peculiar varicose condition of the vessels of the surface of the eyeball. A marked feature was the varicose condition of the veins on the surface of the eyeball below, which had been first noticed about three months before the date of operation. There was also marked proptosis, the left eye being about a quarter of an inch in advance of the right. There was no œdema of the eyelids. The smooth surface of the tumour was felt in the floor of the orbit. Movements of the eyeball were normal except downwards, where there was some limitation. Vision was $\frac{6}{9}$. On Oct. 28th, 1901, the entire tumour was removed through an incision in the lower lid without interfering with the eyeball. It had only loose attachments; it reached to the back of the orbit close to the under surface of the eyeball and along the front of the optic nerve. It was encapsuled and measured one and a quarter inches long and about half an inch thick. The eyeball had since resumed its normal appearance and the varicose condition of the vessels had disappeared and vision was $\frac{6}{6}$. Mr Treacher Collins examined the growth for Mr Snell and reported it to be an endothelioma.

Mr SNELL also related a case of Ringworm of the Eyelid in an adult due to a large spored trichophyton, probably of animal origin, occurring in a healthy agriculturist, aged 34 years. The patient was first seen on Dec. 17th, 1901, with a large red patch on the right eyelid which had commenced two weeks before as a rounded, brownish red pimple on the skin near the outer canthus. It gradually increased in size and now measured two inches by one and a quarter inches. It was oval in shape with pustular points and well defined edges. It involved the outer half of the upper eyelid, reached to the temple, and embraced the outer commissure and the outer corner of the lower eyelid. The affected eyelashes and hairs of the eyebrow had fallen out or were loose. The pre auricular gland and the gland beneath the jaw were involved. There were six other lesions on the right forearm and two on the left. In all the patches there was marked loss of hairs. The patient kept cows and one had on the left side a white patch without any hair on it for about two months. The ringworm apparently commenced on the right arm and the eyelid became affected by contact, the man working with his bare arms. Under the application of yellow mercurial oxide ointment improvement soon commenced and on Jan. 30th the patches on the arms had practically disappeared and the one on the eyelid was only distinguishable by its greater redness. Under the microscope a large spored fungus was found, probably megalosporon ectothrix. Cultures from the hairs removed from the cow were not successful.

Dr F W EDRIDGE GREEN read a paper entitled, "Observations on the Visual Purple of the Retina." The expenses of the research were defrayed by a Government grant of £10. He undertook the investigation in order to ascertain whether he could obtain any objective evidence of the diffusion of the visual purple into the yellow spot of the retina. Many phenomena pointed to this conclusion, such as the fact that a perceptible interval elapsed before they were able to see with the yellow spot, and that a light might fall on the fovea without producing any sensation. His first experiments were made with the help of Mr Treacher Collins. On examining the retina of a monkey it was at once evident that the visual purple extended to the yellow spot, but the very deep yellow of the spot prevented them from saying with certainty that the colour altered on exposure to light. Mr Treacher Collins and he had tried numerous chemicals in order to find out a substance which would fix the visual purple but they had not been successful. Nearly every chemical which he had used destroyed the purple. He then examined the eyes of two monkeys by himself and tried to obtain a first view of the yellow spot of the retina through a microscope. It was at first red and then it gradually bleached under the influence of light. He noticed a curious appearance in one retina: on examining the region just external to the yellow spot he saw rose coloured cones surrounded by one or more circles of colourless rods. His last observations were made with the help of Mr Devereux Marshall. Two monkeys were kept in a dark room for 24 hours, and then Mr Marshall excised their eyes under chloroform, the room being illuminated only by a ruby light. The retina having been arranged on a slide was put on the stage of a microscope and viewed with a white light. The whole retina was bright crimson but the brightest part of all was the yellow spot, and it could be seen that the visual purple was situated between, and not in, the cones in the rod free district of the yellow spot. The visual purple in a few minutes bleached, leaving the yellow spot in its usual yellow colour. Dr. Edridge Green

Palsy in Children, one secondary to ear disease and the other associated with hemiplegia of the opposite side of the body coming on after a fall.

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## OBSTETRICAL SOCIETY OF LONDON.

*Exhibition of Specimens.—Tubal Gestation.—Various Reports.—Annual Address.—Alteration of By-laws.*

The annual meeting of this society was held on Feb. 5th, Dr. **Peter Horrocks**, the President, being in the chair.

Dr. **Amand Routh** showed a Dermoid Cyst of the Ovary of the size of a large cocoa-nut removed per vaginam from a patient, aged 53 years. He asked the Fellows to state their experience as to the best method of treating the vaginal incision after the pedicle had been ligatured and returned. He usually partly closed the vaginal incision and inserted a gauze drain, but sometimes closed it completely.—The **President** said that it might be questioned whether posterior colpotomy was as good as abdominal section for the removal of tumours in general and dermoids in particular. It was true that it might be an easy matter to remove a dermoid through the vaginal roof, but one could never tell beforehand, and if the abdomen had to be opened to complete the operation after the cyst had been opened from below there would be increased risk of soiling the peritoneum with the dermoid contents; and it had struck him that the contents of a dermoid were occasionally more virulent than the contents of ordinary ovarian tumours. Bacteriological investigations, however, had not resulted in the discovery of any specific or specially pathogenic microbe. He preferred after a posterior colpotomy not to close the opening but to drain with sterilised gauze. If the opening were very large it might be partially closed by a stitch or better still by forceps.—Dr. **Champneys** thought that the treatment of the vaginal wound should depend upon its size. If large it should be partially closed and a gauze drain put through the remainder; if small no suture was necessary. He now treated the pedicle of cysts, removed by colpotomy, by pressure forceps and gauze drainage, without ligature, and found the result very satisfactory, the forceps (left on for from 30 to 48 hours) assisting drainage.—Dr. G. E. **Herman** said the special danger attending the fouling of the peritoneum with the contents of dermoid cysts was due to the proneness of dermoids to suppuration, apart from which the contents were but slightly irritant. He thought that after removal of such a cyst per vaginam drainage was not needed, unless suppuration had occurred, or the cyst-contents were known to have fouled the peritoneum.—Dr. **Routh**, in reply, said that he preferred not to use a clamp for the pedicle, but to draw the cyst outside the vulva, retroverting the uterus during that procedure, and then to ligature the pedicle at leisure, all tension of the tissues being thus easily avoided.

Dr. **Routh** also showed a Uterus with Fibroids removed at eight and a half months of gestation by abdominal hysterectomy after Cæsarean section. There were six fibroids, two of which were originally in the pelvis. One was pushed up, but the second one remained in the sacral hollow, preventing all chance of normal delivery. At the operation on Jan. 31st last the obstructing fibroid was found to be firmly adherent to the pelvic floor. Both mother and child remain well.—After Dr. **Herman** and the **President** had spoken Dr. **Champneys** said that the position of the fibroid behind the cervix would have rendered birth *per vias naturales* very difficult, even after destroying the child. He therefore thought Dr. Routh's treatment correct.

Mr. J. **Bland-Sutton** read notes of two cases of Tubal Gestation. The first was that of a woman whose husband, a medical man, had diagnosed a tubal pregnancy, which Mr. Bland-Sutton, after confirming the diagnosis, removed before rupture. The gravid tube was larger than usual owing to the size of the contained blood mole and to the unusual size of the amniotic cavity, which contained a misshapen embryo. The second case had been actually diagnosed by the patient herself and reminded Mr. Bland-Sutton of an artisan's wife whose husband had also diagnosed extra-uterine pregnancy after reading his "Diseases of the Ovaries and Fallopian Tubes." The patient, aged 36 years, had been confined in 1891 and was regular till July 5th, 1901, when a period was missed and the patient suspected extra-uterine pregnancy. Severe abdominal pain followed two cycle rides and Mr. Bland-Sutton was called into consultation. He confirmed the diagnosis and on July 19th removed the left tube and ovary and several ounces of fluid blood in the pelvis. The ampulla of the tube contained a clot as large as a walnut, the cœlomic ostium was large enough to admit a goose quill, and blood leaked freely from the opening during the operation. The walls of the tube were extremely thin but had not ruptured. Typical villi were found at the placental site.—The **President** thought that the explanation of the first specimen being so large without causing rupture was due to the fact that the embryo had perished early, and there had been slow hæmorrhage with formation of partially organised clot. With regard to the second specimen he called attention to the ease with which a tubal gestation might be ruptured during examination or during straining by the patient, and gave details of an unsuspected case that had proved fatal in this way.—Dr. **Herman** pointed out that the clot in Mr. Bland-Sutton's first specimen of tubal mole was in different degrees of decolourisation, indicating hæmorrhage at different dates. Had the patient had successive attacks of pain? He had seen rapid increase of size in tubal moles between examination and operation. He thought the thick layers of fibrin lining the tube would tend to prevent rupture, but the patient would be in danger of hæmorrhage from the open end, and for this and other reasons operation was advisable.—Dr. **Cuthbert H. J. Lockyer** asked if Mr. Bland-Sutton could explain the unusually large size of the amniotic cavity in the first specimen, and Dr. **Routh** asked why the amniotic cavity in tubal moles should be so much smaller than in uterine moles of the same date. He also asked if any Fellow had heard of a "hydatidiform" mole of the Fallopian tubes.—Mr. **Bland-Sutton**, in reply, said he had never seen a hydatidiform tubal mole but felt sure that one would come to hand. He emphasised the President's remarks and always discountenanced dressers examining cases of suspected tubal gestation for fear of rupture of the tube. He endorsed the fact that the amniotic cavity was much larger in uterine moles than in tubal moles, but could not explain it.

On the motion of Dr. **Walter Rigden**, seconded by Dr. H. **Russell Andrews**, the report of the treasurer, Dr. Champneys, was received and adopted.

The report of the honorary librarian, Dr. M. Handfield-Jones, was received and its adoption was moved by Dr. G. F. **Blacker**, seconded by Mr. C. A. **Goullet**, and carried.

The report of the chairman of the Board for the Examination of Midwives was adopted on the motion of Dr. **Thomas G. Stevens**, seconded by Dr. **Lockyer**.

The **President** then delivered the Annual Address. He stated that, including 14 honorary Fellows, there were 654 Fellows, and these included every obstetric physician and every teacher of obstetrics and gynæcology from the medical schools of London. The papers read and specimens shown during the past year had maintained the high standard of former years. Of seven papers read six were obstetric and one gynæcological; but of the 50 specimens shown (excluding new instruments) 34 were gynæcological and only 16 obstetric. The papers and specimens were then reviewed. Obituary notices of six Fellows who had died during the year 1901 were read—namely, Dr. Eugene Goddard, Dr. Thomas Tinley, Dr. John D. Williams, Dr. A. E. Aust Lawrence, Dr. Henry Sutherland, and Surgeon-General Robert Harvey, C.B., LL.D.—On the motion of Dr. W. S. **Playfair**, seconded by Dr. **Herman**, a vote of thanks to the President for his address was passed by acclamation.

Dr. **John H. Galton** proposed, and Dr. G. H. **Drummond Robinson** seconded, a vote of thanks to the retiring Vice-President, Dr. W. R. Dakin, and to the other retiring members of council.

Dr. **Champneys** moved, and Dr. W. H. **Tate** seconded, a vote of thanks to the retiring honorary secretary, Dr. Herbert R. Spencer, and to the honorary librarian, Dr. M. Handfield-Jones, and Dr. **Spencer** briefly replied.

Dr. **Galton** proposed, and Dr. **Playfair** seconded, that the by-law which declared that "registrable medical men" were eligible for election to the Fellowship should be changed, as suggested by the council, to "registrable medical practitioners."—The proposal was carried unanimously.—A law was also passed by which Fellows who might make communications to the society would be permitted to publish their papers in scientific journals after being read.

The following gentlemen were declared elected to serve on the council of the society for the session 1902–1903: President: Dr. Peter Horrocks. Vice-Presidents: Dr. John gastric ulcer had been sent into the cancer ward of Middlesex Hospital by competent practitioners as sufferers from inoperable cancer to linger there and to die, but had gone out cured In the treatment of inoperable cancer pain, hæmorrhage, and the foul fœtor of the discharges were the leading symptoms which had to be treated Morphia relieved the pain and so prolonged life in one way, but it caused loss of appetite and the skeleton like frame which made the patients a terror to themselves and an appalling spectacle to others For nausea or vomiting he had found that the most effective drugs were oxalate of cerium and cocaine given in one grain pills once or twice a day half an hour before food For the fœtor of discharges in addition to frequent irrigation he used an ointment containing vaseline, eucalyptol, and iodoform In some cases of cancer of the peritoneum, especially of secondary disease it was remarkable how long the patients lived and how well they remained in general health, requiring, in fact little treatment of any kind beyond frequent paracentesis abdominis He had not found that patients would consent to undergo oophorectomy when the empirical nature and uncertain effect of the operation were properly explained to them, he knew of no permanent benefit having been effected by it either with the administration of thyroid extract or without In his experience thyroid extract for carcinoma of the breast had not been productive of any good In no case which he had seen had the healing produced by the x rays been sound and permanent The cases recorded as "recovering" or "under process of cure' had been, he considered, published prematurely He thought that all of them would be found to retrogress either during the continuance of the treatment or soon after its discontinuance The x rays produced the same kind of effects by a totally different process that Chian turpentine did in some cases Mr Morris concluded his paper by giving a list of cases of inoperable cancer which had been treated in the wards of the Middlesex Hospital by thyroid extract, by oophorectomy and thyroid extract, by oophorectomy without thyroid extract, and by the Roentgen rays

Mr C Ryall thought that a great deal too much importance was placed on the treatment by oöphorectomy His own experience was that by simple abdominal section in carcinoma of the abdomen considerable shrinking of the growth occurred and the inevitable was postponed

Dr Herbert Snow said that they knew that true sarcoma of the mamma did not affect the lymph glands. It could not be doubted that particles of sarcoma and cells were carried there, and a case of his own showed that the glands in the axilla were in active hyperæmia in such a case, but infection did not occur Judging from the course of epithelioma on the wrist or on the foot he formulated the principle that the nuclear cells or infective particles of carcinoma must be destroyed either in the lymph current in these cases on their passage to the gland, or by the cells in the glands, or by some secretion in the glands He had appealed in the columns of THE LANCET for some laboratory to take the matter up, but that was not responded to In that direction only was there any question of real treatment worth the name for inoperable cancer

Mr C R B Keetley said that everyone who accepted the hypothesis that cancer was probably due to some germ must realise that every case of cancer attended by discharge was a possible focus for spreading the disease.

Dr F H Low showed the apparatus used in the production of high frequency currents and the methods of their employment therapeutically Locally applied a large number of skin diseases were being treated in this way and with very promising results The general effect obtained was one of increased nutrition resulting in marked improvement in general health and tone

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# EDINBURGH MEDICO-CHIRURGICAL SOCIETY

*Exhibition of Patients Specimens, and Apparatus — Chloroma*

THE fifth ordinary meeting of the present session of this society was held on Feb 5th, Professor T R Fraser, the President, being in the chair

Dr William Stewart showed a man who had suffered a Compound Dislocation of the Ankle, with Fracture of the Neck of the Astragalus and Removal of the Outer Malleolus (with stereoscopic photograph)

Mr Francis Caird showed a man, aged 61 years, who had suffered from Chronic Obstruction for two years, the bowels only acting once in two or three weeks The abdomen was very greatly distended and splashing and gurgling were loud The diagnosis was a carcinoma of the ileo cæcal valve. At the operation a bobbin shaped stricture of the ileum was found with involvement of the mesenteric glands. To get clear of the disease 70 inches of gut were removed at the first operation and later the cæcum and a piece of the colon were removed (in all 80 inches) and the two ends were sutured It was found that the infiltration was solely tuberculous The patient had improved daily since the operation

Dr Dawson F D Turner showed 1 A young woman who had suffered from Lupus Vulgaris The disease improved very slowly under treatment by Roentgen rays On Jan 13th ultra violet light treatment was begun thrice weekly with two and a half minute applications and at once great improvement was manifest The patient had had in all seven exposures and she was practically cured 2 A man who had suffered from Rodent Ulcer on the right side of the nose for eight years It was of the size of a small mussel shell and was covered by crusts The ulcer was one eighth of an inch deep On Dec 4th, 1901 x ray treatment was commenced and the patient slowly improved On Jan 10th, 1902 ultra violet light treatment was begun thrice weekly and after only three exposures the patient was almost cured

Dr Turner also exhibited an Apparatus for Generating Ultra violet Light Acting on a suggestion of Mr Leslie Miller he had been comparing the ultra violet radiation of a Tesla spark gap with that of an arc light His apparatus resembled that which had been in use by Dr Hugh Walsham of London and Dr Gorl of Nuremburg, and it consisted essentially of an induction coil, a condenser, and a spark gap of two or three electrodes The ultra-violet radiation of this spark, as tested in his laboratory, was altogether of a higher order than was that of an arc lamp, while the heat radiation was almost negligible Owing to this latter property the light could be brought within an inch or within two inches of the skin with very greatly increased effect After a number of experiments as to relative transparency and convenience Dr Turner preferred to use pure rock salt as a compressing agent The clinical results obtained had been remarkable an exposure of only two and a half minutes being amply sufficient to produce a marked beneficial effect

Cases were also exhibited by Mr Caird and Mr Purves, and card specimens by Dr A Logan Turner, Professor T Annandale Dr Gibson, and Dr S McDonald

Dr G H Melville Dunlop then read a paper upon a case of Chloroma exhibiting microscopical sections and photographs He stated that at the November meeting he had exhibited a little boy suffering from chloroma The child died a fortnight later and he proposed to give a record of the case together with an account of the post-mortem examination and some brief notes on this rare and interesting disease The boy, aged five years, was admitted to Dr Dunlop's ward in the Edinburgh Royal Hospital for Children on Sept 30th, 1901, complaining of great weakness and swelling of the face The family history was unimportant. The father had suffered from an attack of rheumatic fever and the mother from repeated attacks of bloodlessness Two children had died during infancy There was no family history of tubercle or of renal disease As to the previous history it was elicited that the child was born at full term and was a healthy baby He had had whooping cough when he was six months old, measles when he was three years of age and he had had frequent attacks of bronchitis but was, on the whole a healthy child With regard to the present illness it was ascertained that for fully a year patches of ecchymoses were frequently noticed under the skin and were attributed to bruises In May, 1901, the extreme pallor of the face of the patient was first noticed, and for some months previously it had been observed that any scratch which he received appeared to suppurate immediately At the beginning of June a boy dipped him into a horse trough He remained in his wet clothes for some hours The chill which he received kept him in bed for some days with fever and headache The child was never the same after this and he seemed to get more easily tired He commenced to call out in his sleep and to snore at night His appetite became very poor and the pallor and emaciation steadily increased At the beginning of August he became dull and languid and ceased to play or to go out of doors On August expressed his great indebtedness to Mr. Collins and to Mr. Marshall, and also to Professor E. H. Starling for the use of his laboratory and the very admirable dark room at University College.

The following cases and card specimens were shown:—

Mr. **George Keeling**: Unusual Refractive Change after Removal of a Congenitally Dislocated Lens.

Dr. **H. R. Belcher Hickman**: A case of Retinitis Proliferans.

Mr. **G. W. Roll**: A Congenital Anomaly of the Optic Disc.

Mr. **A. W. Ormond**: A case of Double Anophthalmos.

Mr. **J. H. Parsons**: Microscopical Sections of Pseudoglioma due to a Congenital Membrane.

Mr. **Inglis Taylor**: Fenestrated Metallic Balls used by Professor Pflüger in Mules's operation.

Mr. **Holmes Spicer**: A case of Third Nerve Paresis with Argyll-Robertson Pupil and Marked Association of Convergence and Contraction of the Pupil

Mr. **R. Marcus Gunn**: Unusual Deposit on the Inner Surface of Each Cornea of Recent Origin and Slow Development.

## HARVEIAN SOCIETY OF LONDON.

*Scleroderma and Raynaud's Disease.—Epistaxis and Rheumatism.*

A MEETING of this society was held on Feb. 6th, Mr. **W. Watson Cheyne** being in the chair.

Dr. **William Ewart** read the clinical history of a case of Scleroderma associated with Raynaud's Disease, making special reference to treatment. The patient was a woman, aged 30 years, who had been under observation since November, 1900, and had then suffered for five years from mild symptoms of Raynaud's disease and from aggravated dyspepsia and gastric and cardiac attacks. These latter symptoms had been much more severe during the last six months, when she became aware of the tightening of the skin of the hands and feet and of the face, slightly also of the shoulders. Dr. Lee Dickinson, who had treated her at the end of 1900, had then observed the early beginnings of scleroderma, and the first alteration in facial contour and expression had been noticed by the husband four years ago. Since her admission to St. George's Hospital on Jan. 2nd, 1902, she had made considerable progress. The face had lost much of the pinched aspect and was smooth and oval. The lips were again supple for articulation, smiling, whistling, &c., the fingers and wrists had ceased to be rigid and, indeed, were freely moveable, and she could once more stoop to the ground so as to reach her feet. The treatment had been chiefly hygienic for the visceral, and thermo-mechanical for the cutaneous, trouble. She had been kept at rest in bed and had been fed on light food which had been well digested, on port wine, and on olive oil and whisky. The hands had been kept oiled and gloved and perpetually in contact with a hot-water bottle inside of a bag of cotton-wool, except for the periods of passive movement, of massage, and of skin massage. The recurring local asphyxia of the fingers had in this way been quickly remedied and pliability of the skin had been restored to a great extent, whilst the gastric and cardiac symptoms had remained in abeyance. The medicinal treatment had been diaphoretic and vaso-relaxant, the medicines administered having been liquor trinitrini (nitro-glycerine), spirit of nitrous ether, acetate of ammonia, and an occasional mercurial pill. After a few days she was allowed to get up for part of the day and to take exercise. In her case the scleroderma had preceded the Raynaud's disease by several years, as shown by the history of the minute scars on all the finger tips Emaciation had been marked and the thyroid was small.—Dr **Alexander Morison**, Dr. **Barton**, and Dr. **G. A. Sutherland** took part in the discussion.

Dr. **Sidney P. Phillips** read a short paper on Rheumatism as a cause of Epistaxis in Children. (We hope to publish this paper in an early number of THE LANCET.)—Dr **Ewart** said that the great frequency of epistaxis in childhood which must be due to definite causes hitherto imperfectly explained must lead to its being not uncommon in children suffering from rheumatism, particularly as in this disease there was a well-marked tendency to hæmolysis. The mechanical factor of local congestion, as in tonsillitis, might also have a great share in this result.—Dr. **Leonard G. Guthrie** said that in his experience epistaxis was more frequently associated with migraine than with rheumatism in children.—Dr. **Morison**, Dr. **Travers R. M. Smith**, Dr. **E. Cautley**, Dr. **C. S. Jaffe**, Dr. **H. J. Macevoy**, and Dr. **Sutherland** also took part in the discussion.

## WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

*Discussion on Inoperable Cancer.*

A MEETING of this society was held on Feb. 7th, Mr. **Alfred Cooper**, the President, being in the chair.

Mr. **W. McAdam Eccles**, in opening the discussion, said that the cases which interested most of them, if not all of them, were those cases of recurrent carcinoma after operations upon the mammary gland. He thought that surgeons and medical men generally should study any means that there might be for the treatment of these cases. There had come up of recent years an operation quite away from the local field of the original growth that generally went by the name of "Dr. Beatson's operation," consisting of removing both ovaries. He considered that the operation was perhaps one which was justifiable under certain circumstances, not only from the possible good that might accrue to the patient, but also from the knowledge that might be gathered. In spite of the fact that no good had followed in a considerable number of the cases the operation, in his opinion, was justifiable provided the patient clearly understood its nature—namely, that it was the removal of both ovaries and that it was distinctly an experiment so far as her individual case was concerned, and provided further that the patient and her friends desired that it should be undertaken. Surely, the very fact that a certain proportion of cases had been benefited made the procedure right even if they could not hope for a complete cure. Although they did not know what were the exact points for and against the operation he thought that it was a subject which they ought to consider further and to investigate, because there seemed to be something in it which they did not quite fully understand

Mr. **Stanley Boyd** said that the results of a successful oöphorectomy were: (1) the relief of pain; (2) the vascularity of the nodules became reduced and the nodules shrank and disappeared in the course of a few weeks or months; (3) secondary nodules in the opposite breast receded more slowly; and (4) strength and weight were gained, the patient's spirits rose, food was taken better, and life presented itself to the patient in a different aspect. The question asked by a patient was, Supposing the cancer disappeared how long would it remain away? In order to answer that it was necessary to consider the indications which pointed to the most likely cases for affording the best results. 1. It was only in cancer of the breast that the operation, so far as they knew, was of any influence at all. 2 The amount of disease present provided it was local was not a contra-indication to operation. 3. Cancers of slow growth had yielded more favourable results than cases of acute cancer. 4. A larger number of good results seemed to have been obtained in patients after 40 years of age than before that age. 5. Obvious lesions of the viscera and bones had never been known to disappear after the removal of both ovaries, but it was possible, of course, that unrecognised nodules which were small had disappeared. They did not know, but it might be that the growth of some of those visceral troubles had been controlled or retarded by the oophorectomy. 6. Complete establishment of the menopause had not been shown to be a contra-indication to the operation. There was very little experience on the subject. He had performed the operation in one case on a woman, 64 years of age, the cancer having been, so far as he could judge, a rapid one up to the time of the oöphorectomy, but it changed its character afterwards and he considered that it was retarded in its growth. With regard to the thyroid treatment he had not seen any good result from it. In his opinion they would get something good out of the x rays, and he had no doubt that the burning would be avoided in the future.

Mr. **Henry Morris** communicated a paper in which he described how patients suffering from syphilitic ulceration, chronic inflammation, polypus of the rectum, and cicatrised tumours originated from the periosteum of the head and face, and they grew secondarily in other organs. Nearly every organ had been invaded by secondary growths in the cases recorded with the exception of the nervous system. The brain might be compressed by, but it was never invaded by, the tumour growth. Of the internal organs the kidneys were most affected, but in only one other case besides the present one was the muscular substance of the heart invaded. The bones were frequently so distended by the growths as to become translucent. Erosion or pitting of the bone was a marked feature in many of the cases. The consistence of the tumours varied from that of a soft gelatinous mass to a hard and gelatinous consistence. The cut surface was homogeneous, with or without fibrous septa, and no trace of blood-vessels was to be seen. Microscopically the tumours consisted of large round or oval-shaped cells slightly larger than a white blood corpuscle, containing many nuclei and nucleoli occasionally. These cells were either embedded in an inter-cellular amorphous material of a very clear and transparent character or in a delicate network. At other times the tumour was interspersed by coarse bundles of connective tissue. In the midst of this network the granules, with the highly refractile properties referred to, were found lying in and between the cells. Chloroma was chiefly a disease of children and adolescents, and boys seemed to be attacked to a greater extent than girls. With regard to the relationship of this condition to leukæmia Recklinghausen first noted it. Dock pointed out a further resemblance in the similarity of the symptoms. Thus deafness was common to both; in chloroma it was due to the pressure of tumours in the internal, middle, and external ears. In leukæmia, though sometimes ascribed to hæmorrhage, in many cases it was caused by the pressure of leukæmic tissue in the ear. Exophthalmos was common to both diseases, while progressive anæmia of a marked character—accompanied by petechial extravasations, epistaxis, and subconjunctival and retinal hæmorrhages—was found in both. So far as Dr. Dunlop had been able to gather the case which he described was the first in which a diagnosis of the condition was made during life. Before the appearance of the tumours a diagnosis would be impossible as the symptoms would be only those pointing to leukæmia. When subsequently to those symptoms exophthalmos, failing sight, deafness, and tumours in the temporal regions and in other parts of the body supervened the diagnosis of chloroma should always suggest itself. The prognosis was invariably fatal from exhaustion, the average duration being five or six months, although cases had been recorded lasting above two years.

Dr. **BYROM BRAMWELL** then read full notes of a case of Chloroma, and also of a case of Lymphatic Leukæmia. An account of these cases will be given in our next issue.

*(To be continued.)*

## ROYAL ACADEMY OF MEDICINE IN IRELAND.

### SECTION OF MEDICINE.

*Scarlet Fever.—Traumatic Functional Paralysis.*

A MEETING of this section was held on Jan. 24th, Dr **J. HAWTREY BENSON**, being in the chair.

Dr. **J. M. DAY** read a paper on the Diagnosis of Scarlet Fever. This, he said, had now become a far more difficult matter than formerly when the disease was of a severer and better marked type. The chief symptoms of scarlet fever were vomiting, sore throat, elevation of temperature, frequent pulse, and a rash. If scarlet fever was present the red punctiform appearance on the pharynx, soft palate, tonsils, and hard palate would be found. The pulse-rate was quick, even in the mildest cases. The rash was never seen in the circum-oral zone. The skin was dry, but sweating might occur in rheumatic subjects. When the disease was accompanied by gastric catarrh the tongue was furred. Scarlet fever might occur a second time without eruption. Desquamation might commence on the sixth day, or might be delayed until the twenty-first day. It spread centrifugally from points. Scarlet fever might be confounded with rötheln, measles, septicæmia, urticaria, erythema, rheumatic fever, meningitis, enteric fever, and drug-rashes.—Dr. **HAYES** said that he had found the difficulty of diagnosis of scarlet fever most in adults. In mild cases there was no constitutional disturbance and the typical scarlet fever throat might be absent. He based his diagnosis principally on the punctiform rash of the hard and soft palate and the rapid pulse. Temperature was of little diagnostic value and desquamation was not easy of recognition in every case.—Dr. **HEAD** said that he thought that desquamation might be deferred for a longer period than 21 days. He spoke of a series of cases in which desquamation was deferred for a month. In the "fourth disease"[1] the skin peeled in large patches.—Dr. **H. C. DRURY**, Dr. **J F. POLLOCK**, and others also discussed the paper.—Dr. **DAY**, in his reply, said that he did not know any surgical scarlet fever. There might be septicæmia with a rash or a surgical patient might contract scarlet fever. The period of incubation, he thought, was generally known—it was eight days. The infection was not so much due to the desquamation as was formerly thought. Any discharge, such as otorrhœa, might convey infection. He looked on the "fourth disease" as non-existent, being no more than a form of rötheln.

Dr. **MARTIN DEMPSEY** brought forward a case of Traumatic Functional Paralysis—a boy, aged about 12 years, who had fallen from a height a considerable distance on his right shoulder-joint. He did not appear to suffer much from the fall at the time. The joint was examined by means of the x rays and was rubbed with an anodyne liniment for weeks, but without benefit. The right arm hung helplessly by his side, with the fingers slightly flexed at their terminal joints. At the slightest touch the boy now complained of excruciating agony in the injured limb as low down as the elbow-joint; he could not recognise hot water in a test tube and yet had no difficulty in recognising the presence of cold water. All the muscles reacted to the faradic current. For two months the current was applied with distinct benefit, the boy regaining some of the power of the limb. He was now able to flex it and had a considerable grasping power in his hands. Dr. Dempsey looked upon the case as one of functional or hysterical paralysis, and his prognosis was favourable.—Dr. **CRAIG** agreed with Dr. Dempsey in his diagnosis. He had had a somewhat similar case in a girl.—Mr. **W. LANGFORD SYMES** said that he had seen many cases of functional diseases in the Great Ormond-street Hospital, London. A diagnosis might usually be made by throwing the patients off their guard. All of the cases were in boys and were associated with phimosis. Dr. Dempsey's patient had a long foreskin.

**LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.**—A meeting of this society was held on Jan. 31st, Dr. T. Churton being in the chair.—Mr. A. W. Mayo Robson read a paper on a series of cases of Fractured Semilunar Cartilage of the Knee-joint.—Dr. Churton, Mr. H. Littlewood, Mr. B. G. A. Moynihan, and Mr. R. Lawford Knaggs took part in the discussion, and Mr. Mayo Robson replied.—Dr. W. McGregor Young read a paper on the Advantages of a Bag Pervious to Air in Ether-giving. He said that air-limitation for all practical purposes was a necessity, but the question arose as to whether in using the ether-bag they did not go too far and produce often an undesirable state of anoxyæmia; certainly in unskilled hands this was apt to occur. It seemed to him that the advantages of the semi-open method in vogue in America might be combined with those obtained in using a Clover's regulating apparatus if instead of an air-excluding rubber bag a bag made of some porous fabric was used. Although by no means the only cause of cyanosis, the rubber bag was probably the most common one, and cyanosis was an undesirable and even dangerous condition and the reproach of ether-giving. Besides, the rubber bag was an unclean thing. Dr. Young showed the bag which he proposed as a substitute made of Holland linen. He claimed that with this bag cyanosis was avoided, and as regards cleanliness it was beyond reproach, for a fresh bag newly washed and starched from the laundry was used for each case. He had tried it in a very large number of cases with excellent results. Chloroform could be added to hasten the anæsthesia by simply dropping it on the outside of the bag. He found that the asphyxial factor being absent the corneal and pupillary reflexes were no longer indicative of the same depth of anæsthesia.—In the discussion which followed Mr. Mayo Robson spoke strongly in favour of Dr. Young's

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[1] THE LANCET, July 14th, 1900, p. 89.

16th the mother noticed that his eyes were prominent and that the veins on the eyelids were dilated. This exophthalmos had gradually increased. Deafness was noticed about the middle of September and this had increased gradually. His teeth had always been bad and he had suffered from toothache since he was three years of age. At the commencement of October the child was treated for an abscess of the scalp and he had an attack of albuminuria accompanied by pyrexia which lasted for a few days. On admission he looked extremely ill; his weight was 39 pounds. His complexion was very pale and of a waxy, yellow tint. He could stand, or sit up, or walk. He was a quiet, placid, good-tempered child. A large number of petechial hæmorrhages, of about the size of, and having the appearance of, flea-bites were scattered over the skin of the whole body with the exception of the face. In addition there were two larger hæmorrhages over the spinal column and over the right knee, as also evidence of an old hæmorrhage on the right shin. The face was pale and pasty, with marked puffiness of the eyelids, especially of the left eyelid. Some œdema and marked anæmia of the conjunctivæ were noted, as well as considerable protrusion of both eyeballs, though the patient could close his eyes. There were a few slightly enlarged glands under the lower jaw on both sides, as also in the posterior triangles of the neck and in the groins. The axillary glands were not enlarged. The thyroid was normal in size, as also was the thymus. The respiratory and circulatory systems were normal, with the exception of a loud hæmic bruit heard on both sides over the vessels of the neck. The digestive system showed nothing abnormal with the exception of a very large number of carious teeth. The urinary system was normal. Hæmoglobin in the blood, 32 per cent.; red blood corpuscles, 1,800,000; and leucocytes, 24·5000. Films showed a large number of lymphocytes, both large and small, the former preponderating and numbering about 73 per cent.; polymorphonuclear, 17 per cent; myelocytes, 5 per cent.; unclassified and transitional forms resembling myelocytes, 5 per cent. A few nucleated red cells were present. On Oct. 15th two fresh hæmorrhages had appeared and the eyeballs were becoming more prominent and the deafness was increasing. A hard, indurated swelling of a purplish colour was found occupying the hard palate on both sides in its whole extent antero-posteriorly, and a similar but smaller swelling was present on the right side of the lower jaw externally to the teeth. By the 22nd a smooth, rounded swelling had appeared in each temporal region extending into the orbit on either side. This was firm but not of a bony hardness, and was attached to the bone below but not to the skin. The diagnosis of chloroma was made at this date. A few days later the upper eyelids became infiltrated with firm, smooth swellings, as also the lower right eyelid. During sleep the eyeballs were only half covered by the lids. The ophthalmoscope revealed a minute hæmorrhage near the disc of the right eye. The retinal veins were tortuous and distended in both eyes. The appearance was like that of optic neuritis. On Nov. 6th a pale, greenish-yellow tumour of a jelly-like consistence appeared at the inner canthus of the right eye and it gradually advanced over the eyeball, covering its lower half. The left eye was affected similarly but to a less extent. The boy complained now of severe pain in the frontal region and photophobia was marked. The temporal tumours appeared to have diminished in size and the optic neuritis had increased in severity and the retinal hæmorrhages in number. By the 12th the growths had covered both eyeballs and the corneæ were apparently quite destroyed. The leucocytes were now 107,000, the red blood corpuscles 815,000, and the hæmoglobin was 12 per cent. The boy died from exhaustion on the 16th. At the necropsy the spongy bone of the manubrium sterni was found to be of a dull greenish-grey colour. The lungs were pale, but they were interspersed with irregular patches of congestion and extravasations. Two small greenish areas were present on the surface of the heart. The ribs were of a green colour in their whole extent, the green being deepest just in front of the angles. The periosteum of the vertebræ from the neck to the pelvis was infiltrated and thickened with greenish tissue, continuous with that passing along the intercostal vessels and nerves. During the progress of the post-mortem examination the green colour gradually faded. Many minute hæmorrhages were present in the gastro-intestinal mucous membrane. The kidneys presented very striking naked-eye appearances, being very pale and of a pinkish-green colour and dotted over with distinct green spots under the capsule. On section numerous bright green areas varying in size from a pin's head to a quarter of an inch in diameter were found. These were chiefly found in the cortical areas near the medulla. The mesenteric glands were merely enlarged, while one or two greenish glands were found near the head of the pancreas and others in the same neighbourhood contained brownish pigment. The pancreas was of a pale, yellowish-pink colour and contained small greenish nodules in its substance. On reflecting the scalp green tissue was found extending along all the sutures, but it was confined to the pericranium and could be stripped completely off the bones. Underneath and infiltrating the substance of the temporal muscles new growths from a quarter to three-eighths of an inch in thickness were present; they were bright grass-green in colour. These had evidently developed from the periosteum and had extended deeply into the spheno-maxillary fissure. The diploë throughout was of a dirty greenish colour and over the dura mater numerous green patches were present. The brain and spinal cord were healthy. All the bones in the anterior part of the skull were infiltrated with dull green material. In the orbits numerous sharply defined masses were present surrounding the optic nerve and eyeballs and extending under the conjunctivæ. The soft palate, the walls of the pharynx, the tonsils, the mouth, and the gums were infiltrated with deposit. Numerous bones which were examined showed the presence of this green material in the medulla. Only 24 cases of chloroma had been recorded. The first case was recorded by Alan Burns in 1823. He regarded it as a condition differing from any morbid affection hitherto described. He thought that the new growth originated in the lacrymal gland. Recently Dock of Michigan and Gustav Lang of Nancy had written exhaustive monographs on the subject. The tumours had been variously described as green cancer, fibro-plastic tumours, amorphous fibrous tumours, and pigmented myxo-sarcoma or chloro-myxo-sarcoma. Huber defined the condition as a metastatic periosteal sarcoma and he maintained that the tumours always originated in the bones of the head and face and that the growths in other organs were secondary and were originated by metastasis. Recklinghausen, in 1883, stated that the tumours in chloroma differed in many respects from periosteal sarcomata and he insisted on the intimate relation between this affection and leukæmia. He showed that the structure of all the tumours in his case was of a pure lymphomatous character, and in this belief he was supported by Höring, Dock, and Chiari, and several other writers, with the result that the growths were generally regarded as belonging to the class of tumours known as lympho-sarcomata. "Lympho-sarcoma" was probably the best definition of the growths found in chloroma—resembling on the one hand lymphoma in their histological structure and sarcoma in the fact that they arose from the periosteum and that they spread by metastasis. Recently the view had been advanced by Cordua and Ricker that a very close relationship existed between lympho-sarcoma and tuberculosis. Regarding the cause of the colour of these tumours, which varied from a yellowish-green to a bright grass-green, considerable diversity of opinion was held. No bile pigment had ever been discovered in any of the tumours. Nor was it due to decomposition, as Dittrich suggested, for the colour was confined to the growths absent from the other tissues, and portions of the tumours removed during life had a green colour. Huber had made an elaborate investigation on fresh tumours to discover the source of the colour. He ascribed it to minute molecular granulations possessing great refractive power placed between the cells. Virchow, Dressler, and Chiari were at one with Huber in considering that the colour proceeded from the adipose granulations found in and between the cells. The colour quickly disappeared from periphery to centre on exposure to air or on immersion of the tumour in water, alcohol, chloroform, or ether. Dock, in giving his adherence to the fatty theory, considered that it was simply an exaggeration of the greenish tint so common in the neoplasms of leukæmia and which he maintained was another proof that these conditions were closely allied. In view of the quick disappearance of the colour on exposure to air and on immersion in fluids that had no solvent action on fats the theory of the fatty granules appeared difficult of acceptance, and Dr. Dunlop thought that the colour was more probably due to some chemical product allied to lipochrome, hitherto undiscovered, which on exposure to light became oxidised and in the process of oxidation lost its colour. It was admitted generally that the to promote expulsion When separation had not taken place within a reasonable time he adopted the plan of inserting the hand into the uterus —Dr J M Munro Kerr dwelt on the importance of giving time for the placenta to detach itself he waited in some cases as long as 30 minutes Separation was known by bulging of the lower part of the uterus *by the tapering of the fundus*, and *by the descent* of the cord, the latter having been tied with tape at the vulva as an indicator He concluded by discussing the theories held regarding the process of separation of the placenta.—Dr E A Gibson dwelt on the necessity of giving time in the management of the third stage When there was undue hurry and when pressure was applied there was risk of severe hæmorrhage He did not recommend the giving of ergot in the third stage of labour —Dr W K Peden insisted on the necessity of giving time in the third stage and criticised adversely the application of pressure to the uterus before the placenta had separated When separation was unduly delayed the best method in his opinion was to insert the hand into the uterus and to ascertain the cause of delay —Dr James Hamilton remarked that his policy was not to delay longer than 15 minutes for separation and expulsion At the close of this period he made traction with his hand in the uterus He did not advocate delay in the management of the third stage of labour —Mr Alexander Miller said that he only used Credé's method when the placenta had separated and was lying in the lower part of the uterus —Dr R. Jardine advocated a delay of 15 minutes in order that the placenta might separate During this interval he steadied with his hand the fundus of the uterus to prevent relaxation and the filling of the cavity of the uterus with blood Separation having taken place and the placenta lying in the vagina his method was to make traction on the cord In cases of adherent placenta he introduced his hand and separated the placenta himself —Dr Malcolm Black said that he never inserted his hand into the uterus unless the circumstances strongly demanded it He used Credé's method only after separation had taken place and the latter was known by the distance travelled by the cord ligatured at the vulva —After some other members had taken part in the proceedings the President concluded the discussion and expressed the opinion that the third stage of labour was the most important of all After separation of the placenta his practice was to use Credé's method, taking great *care that no part of the membranes was left behind*

OTOLOGICAL SOCIETY OF THE UNITED KINGDOM —A meeting of this society was held on Feb 3rd —Dr Urban Pritchard the President delivered a brief address, in which he referred to the interesting and valuable work done in the two sessions already held and he expressed the hope that some of the younger members would strive to find solutions of the difficult problems connected with non suppurative disease of the middle ear —Dr L Hemington Pegler in conjunction with Mr Richard Lake showed a case of Double Subdural Abscess Secondary pyæmic symptoms developed after the operation , the lateral sinus and brain were explored and the patient made a good recovery —Mr P Macleod Yearsley showed a patient upon whom the complete post aural operation had been done without grafting and had been followed with great improvement in the hearing power —Dr J Dundas Grant showed a case of Cerebral Abscess attended with unusual features and in which recovery had followed operation —Mr L A Lawrence showed a Tortoise Shell Instrument consisting of a flat plate made to fit behind the ear and of the same sort of use as the hand placed in a similar position It was invented by an artist who was not in the least acquainted with any medical matter but who found that his own deafness was benefited by using the instrument In some few cases the instrument had certainly improved the hearing —Dr A. L Whitehead made a brief communication on the Use of Adrenalin Chloride in the Mastoid Operation and also read the notes of Two Cases of Aural Disease terminating fatally —Dr W Jobson Horne showed a specimen of the Middle Ear destroyed by Tuberculosis, and also exhibited Microscopical Sections from the Integuments of the Temporal Bone demonstrating the presence of Tubercles and Tubercle Bacilli

ROCHDALE AND DISTRICT MEDICAL SOCIETY —A meeting of this society was held on Feb 6th —Mr W P Montgomery read a paper on the Treatment of Some Common Deformities of the Feet He said that these conditions giving rise to great discomfort, were usually either left to the surgical mechanician or subjected to operation Much, however, might be done in the way of treatment by applying one's knowledge to each case In talipes equino varus up to the age of six months the varus deformity should be corrected by the moulding of the foot by the mother or nurse. The equinus deformity should be left till later Plaster, boots and artificial muscles were useless Between the sixth and eighteenth months of life tenotomy of the tendo Achillis should be done and some form of splint should then be worn at night only and should be continued up to the age of five years The child should also be trained to walk properly In severe and relapsed cases more drastic operative measures would be required—e g tarsectomy Such operations however, left a short and inelastic foot The occurrence of flat foot was favoured by the position of the feet in the walk of civilisation—viz the toes out position Boots also contributed to the production of flat foot by leading to the formation of corns and bunions and consequently of faulty positions of the feet also by inducing weakness of muscles from disuse With a view to the prevention of flat-foot infants should be made to wear either sandals or light shoes not boots Afterwards the boot should be made on anatomical lines with a straight inner side Curative treatment should include rest, preferably in the tailor's sitting position Tiptoe exercises should be practised daily and a mechanical support should be worn Operation might be necessary in a bad case The treatment of Morton's disease and that of deformities of the great toe and of hammer toe were also discussed With regard to deformities due to infantile paralysis, when these became fixed it had been suggested that the transplantation of the tendon of an active muscle to the site of insertion of a paralysed muscle might be of value —Mr Montgomery was awarded a cordial vote of thanks for his paper

ÆSCULAPIAN SOCIETY OF LONDON —A meeting of this society was held on Feb 7th, Dr Arthur T Davies, the President being in the chair —Dr T G Stevens discussed the subject of Displacements of the Uterus in relation to (1) the physical conditions giving rise to them (relaxation of suspensory ligaments increase in the size weight and consistence of the uterus, relaxation or injury of the pelvic floor and increase of intra abdominal pressure) , and (2) their treatment Anteflexion he considered to be usually not a true displacement but a local malformation Retroflexion and retroversion were sometimes congenital, commonly so when occurring in unmarried girls These cases if not associated with congestion leucorrhœa or menorrhagia, were best left alone In married patients retroflexion was usually an effect of ovarian irritation with relaxation of the uterine ligament the uterus falling back into the hollow of the sacrum and being retained there by the pressure of the bowel which passed down in front of it Relief of ovarian trouble was the first consideration This object was best attained by ichthyol suppositories and vaginal douching Replacement (bimanual) should precede the use of a pessary which at best was but a palliative measure Operation alone was curative In this connexion it was best to incise the peritoneum through the anterior fornix and to stitch the fundus uteri to the peritoneum of the utero vesical pouch—vaginal fixation Prolapse was of two kinds—(1) acute, produced by sudden strain and constituting really a hernia of the pelvic floor in which the uterus took part and (2) chronic due to gradual relaxation and subsidence of the peri uterine tissues The former condition was the more tractable and in young girls was often cured by time and dietetic treatment The latter was very intractable Pessaries did little good glycerine plugs with a firm external pad were better Of operative methods Dr Stevens preferred ventral suspension by attachment of the urachus to the abdominal wall In elderly women with great prolapse he advocated hysterectomy with removal of the upper third of the vagina, so as to form a firm supporting fibrous pillar in the vagina —A discussion followed

NORTH EAST LONDON CLINICAL SOCIETY —A meeting of this society was held on Feb 6th, Dr F J Tresilian the President being in the chair The following cases and specimens were shown —Dr A J Whiting A case of Nodding Spasm in an infant with rickets —The President A case of a Testicle for Diagnosis It was considered to be a hæmatocele with thickened walls —Dr S E Dore Some cases of Lupus under method.—Dr. T. W. Griffith and Mr. Michael A. Teale also took part in the discussion, and Dr Young replied.—The following cases, pathological specimens, &c., were shown. Mr. H. J. Roper: A specimen of Amputation through the Forearm for Diseased Wrist-joint in a man, aged 68 years.—Dr. A. Bronner (Bradford): Two cases of Saddle-nose treated by Subcutaneous Injections of Paraffin.—Dr. C. Powell White: Urine from a case of Bilharzia Hæmatobium.—Mr. Littlewood: (1) A child, aged four years, with Volkmann's Contracture, treated by Tendon-lengthening; (2) Renal Calculi; (3) a specimen of Perforating Ulcer of the Upper Part of the Rectum producing General Peritonitis; and (4) a New Instrument—Forceps Dissector.—Dr. Churton: (1) Three patients recovering from Acute Cerebral Endarteritis (Syphilitic) with Aphasia; and (2) a Brain showing Syphilitic Endarteritis.—Mr. Moynihan: (1) A patient operated upon some months ago for supposed Malignant Disease of the Stomach (the tumour, of large size, adherent and irremoveable, had entirely disappeared); and (2) a specimen of Calculous Pyonephrosis.—Dr. Griffith: (1) Two cases of Heart Disease; (2) a case of Progressive Muscular Atrophy; and (3) (with Mr. Moynihan) a specimen of Perforated Gastric Ulcer.—Mr. Mayo Robson: (1) Double Pyosalpinx (tuberculosis); (2) Tubo-Ovarian Abscess; (3) Myxomatous Degeneration of Myoma Uteri—Hysterectomy; and (4) Growth of Mesentery, associated with Intestinal Obstruction by Band.—Dr. A. G. Barrs: (1) A case of Chronic Posterior Basic Meningitis—recovering; and (2) Tumour of the Brain (Pons).—Dr. J. B Hellier: Double Solid Malignant Ovarian Tumour removed a fortnight after labour.—Dr. Allan: (1) Ostitis of the Tibia and Fibula after Chronic Ulcer; (2) Heart showing Dilated Pulmonary Artery and Lung with Infarcts from same; (3) Dilated Pulmonary Artery and Emphysematous Lung; (4) Dilated Pulmonary Artery from a subject with emphysematous lungs; (5) Large Kidneys; (6) Aneurysm of the Aorta and Very Small Kidney; and (7) Brain of an Epileptic—Dr. E. F. Trevelyan: (1) A case of Early Locomotor Ataxia, and another suspected case of the same disease, both with preserved knee jerks; and (2) a specimen of Tubercle Bacilli prepared from a hæmoptysis which occurred at the commencement of acute phthisis.

**BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.**—A meeting of this society was held on Jan. 29th.—Dr. J. Ivor Murray read a note on Hayling Island, where he had spent a fortnight, with the object of directing the attention of the society to the advantages of the island which was comparatively little known to medical men in London. He described the ozone-giving tidal mud of Langston Harbour, the tree-shaded roads, the golf-links, and the hard sands extending for miles and forming a very paradise for sea-bathers. The climate was mild, bracing, and remarkably free from rain and land fogs. The soil was mainly loam lying above chalk, with abundance of springs of good water. The place was a perfect one in which to reside in search of health, especially in the early stages of phthisis.—Dr. W Ewart inquired whether the island presented any hilly ground and whether the prevalence of any epidemic disease was on record. It was much to be desired that the Fellows of the society should address themselves systematically to the climatological survey of the United Kingdom, a task of considerable magnitude but one well within the scope and the purpose of the society.—Dr. Joseph Groves (Carisbrooke) said that Hayling Island was often visited by gales from the south-west.—Dr. R. Fortescue Fox and Dr. G. W. Hamilton Cumming also spoke.—Mr. William Armstrong (Buxton) read a paper on Adjuncts to Spa Treatment, their Advisability and Value. He said that although it had long been the custom at foreign health resorts to use special physical and dietetic methods in aid of their natural waters and baths English spas had lagged behind, and it was only comparatively recently that it had been thought well to press such measures into service. It had been too much the custom to order the baths and waters as a matter of routine or to deny to the patient any treatment except by air, rest, and change; but the old method of routine prescription and of the treatment of spa cases in batches was rapidly giving way to the treatment of the unit and the personal study of the individual. He ventured to formulate the following propositions: (1) that as spa physicians had often such limited periods in which to cope with chronic ailments, and as so many of the cases presented to them were complicated in character and refractory to treatment, it was desirable that they should have at command the best methods of approved physical treatment; (2) that such methods in no way diminished the reputation and value of the natural resources of the spas where they were used and were, as a rule, much more effective when used in combination with natural baths and waters; and (3) that the provision of proper arrangements for dietary at English bathing stations was of the highest importance and might well engage the attention of the medical profession in general and of the British Balneological and Climatological Society in particular.—Dr. Ernest Solly (Harrogate) said that at the English health resorts the hotel managers fancied that to provide an elaborate *table d'hôte* paid them better than to give facilities to patients to fare simply.—Dr. Scanes Spicer pointed out the urgent need for reform in the dieting arrangements existing at most English spas by the substitution of the restaurant system (as seen in Austria at Carlsbad and Marienbad) for the English *table d'hôte* meals. The objection to the latter was that they continued the temptation to overeat which beset the well-to-do Englishman, lessening or nullifying the results of the whole treatment in gouty states, obesity, and abdominal torpor.—Dr. F. A. de T. Mouillot, Dr. W. S. Hedley, Mr. W. Bowen Davies, and Dr. Fox also discussed the paper.

**MIDLAND MEDICAL SOCIETY.**—A meeting of this society was held on Feb. 5th, Mr. Arthur Oakes, the President, being in the chair.—Mr. L. P. Gamgee showed a child upon whom he had operated for Spina Bifida more than a year ago. The tumour was in the lumbar region and was of the size of a Tangerine orange. The sac was opened, those portions of it to which nerves and cord were not adherent were excised, and the two erector spinæ muscles were brought together over the cord by means of silk sutures. A separate row of sutures brought the edges of the skin wound together. The patient was now perfectly well in every way.—Dr. J. Douglas Stanley showed a case of Insular Sclerosis occurring in a boy, aged 12 years. The chief symptoms were very marked intention tremor, high-pitched voice, and some lingual paralysis. Nystagmus was present, but there was not great exaggeration of the tendon jerks.—Mr. A. Lucas read notes of a case of Perforated Duodenal Ulcer, one inch from the pyloric orifice, which occurred in a man, aged 20 years. The edges of the ulcer were brought together with a continuous silk suture and were further closed by two layers of interrupted sutures. A drainage-tube was left in the wound, the remainder being closed. The subsequent course of the abdominal condition was in every way satisfactory, but the patient developed broncho-pneumonia and died on Dec. 29th, 1901. The necropsy showed that there was no peritonitis, but there was a little lymph forming adhesions about the seat of perforation. The ulcer in the duodenum was soundly closed.—Dr. C. E. Purslow showed a specimen of Double Pyosalpinx which he had removed by abdominal section from a young single woman. The patient when admitted to the Queen's Hospital, Birmingham, dated her illness from an attack of influenza from which she had suffered 12 months previously; ever since then she had felt pain in the abdomen and for five months she had lost weight and strength and had noticed a swelling in the abdomen. The tubes were equally enlarged, containing about five ounces of pus in each. The patient made a good recovery and was now at work again. The interest of the case lay in the etiology: there was no evidence of gonorrhœa and the hymen was virginal; no signs of tubercle in the lung or elsewhere could be discovered. An examination of the pus was made by Dr. J. D. Stanley, pathologist to the hospital, and he reported that it contained no micro-organisms. Dr. Purslow was driven to the conclusion that the suppuration must have been due to the attack of influenza.—Dr. A. Douglas Heath read a paper on Some Types of Eczema and their Treatment.

**GLASGOW SOUTHERN MEDICAL SOCIETY.**—A meeting of this society was held on Feb. 6th, Dr. John Stewart, the President, being in the chair.—The subject for discussion was the Management of the Third Stage of Labour.—Dr. James K. Kelly introduced the subject and in doing so he remarked that the process naturally divided itself into the separation and then the expulsion of the placenta. He discussed the theories held regarding nature's method of separation and described the plan associated with the name of Credé After separation had taken place he recommended friction of the fundus of the uterus through the abdominal wall in order to strengthen the contractions and pleura, bladder, &c.—have been carefully revised and brought up to date. The changes which occur in the various organs throughout the body, especially in the circulatory organs, are duly recorded. The clinical symptoms of typhoid myocarditis, for instance, are minutely described. Dr. Curschmann points out that however alarming the disturbances due to this cause may appear to be they seem in general to be attended with little danger in cases of typhoid fever, especially when compared with the anatomically similar myocarditis of diphtheria. In the vast majority of cases, according to Dr. Curschmann's experience, complete subsidence of the symptoms takes place, and this is generally accomplished at the end of the febrile period, at times even somewhat earlier. He further states that he has never observed with certainty chronic myocarditis dependent upon typhoid fever. Some authorities have been inclined to lay stress on the cardiac affections which may follow in the train of typhoid fever, and there is evidently need for further clinical observations on this point.

Worthy of note are the remarks on Afebrile Typhoid Fever. The existence of this condition has been doubted, but the modern conceptions of the infectious diseases must of necessity lead to the belief that this fever may be wholly or almost wholly unattended with elevation of temperature, just as occurs in other infectious diseases, as, for instance, scarlet fever, measles, and variola. Dr. Curschmann agrees with the views of Strube and Fräntzel that these afebrile cases are not always of a mild character. He confirms the statement that severe fatal cases of typhoid fever in elderly, decrepit persons or in those debilitated by over-exertion, alcoholism, or chronic disease, may be entirely unattended with fever or may even be accompanied by a subnormal temperature. It would be interesting to know whether any such cases have occurred amongst the troops in South Africa. Considerable interest will naturally be attached to Dr. Curschmann's opinion on the value of the Widal serum diagnosis, upon which divergent opinions have been expressed. The value of the test has been challenged on the grounds that the reaction occurs even during health and in the presence of a number of diseases other than typhoid fever, especially apparently in acute infectious diseases. These apparent fallacies, however, have been explained; for it has been demonstrated that under the above-named conditions the reaction only takes place when comparatively large quantities of the serum to be examined are added to the culture. It has been found that the occurrence of agglutination with equal parts of serum and culture, even 1 of serum to 10 of culture, is of itself not conclusive of typhoid fever; and, further, that the development of the reaction with a dilution of 1 to 20, even 1 to 30 and 1 to 40, may also occur under other conditions, while a positive reaction with a dilution of the serum beyond 1 to 40 occurs almost exclusively in cases of typhoid fever. These observations should be borne in mind when the Widal reaction is tried; otherwise errors may arise, more particularly in children. A paragraph has been added by the editor on Preventive Inoculation. In common with most authorities, however, Dr Osler withholds a definite opinion but remarks that so far as the statistics yet reported from South Africa are concerned "the experience ...... is strongly in favour of inoculation"

Turning now to the part of the volume dealing with Typhus Fever we again find much that is interesting and instructive The etiology is naturally first considered, and the author remarks that "although we are quite certain that the contagion of typhus fever is a specific poison, elaborated solely within the body of the patient, and, therefore, undoubtedly referable to pathogenic micro-organisms, and although a great deal of useful investigation has been devoted to the subject, we are still in the dark as to its precise nature. Not one of the many micro-organisms brought forward up to the present time has gained complete recognition." Doubtless further investigation will in time solve the problem. In considering the origin and mode of transmission of the contagion Dr. Curschmann says: "Owing to the extreme facility with which the disease is carried from individual to individual sporadic cases of typhus fever are very rare." We cannot altogether agree with this statement. Epidemics of typhus fever are fortunately now of rare occurrence, but sporadic cases are not so uncommon as the author seems to indicate, nor is the infective power of such cases as marked as in the epidemic form. The morbid anatomy and symptomatology of the disease are described in a most interesting and thorough manner. The coloured plate of the eruption is a faithful reproduction of a characteristic case. The remarks on the differential diagnosis are also worthy of note.

In describing the treatment of the disease the author naturally lays great stress on the general management of the patient. He insists that the sick-room should be as large and airy as possible and afford the greatest amount of rest to the patient. He uses the term "open-air treatment" and states that he cannot say too much in favour of it. By adopting this measure he finds that the patients become quiet and that the violent headache and insomnia are more influenced by it than by any other means. The following sentence is also significant: "It is to the strict use of these measures that I attribute the fact that not a single physician was infected and that the percentage of hospital attendants who contracted the disease was conspicuously low during the three years from 1876 to 1878, when all the cases of typhus fever occurring in Berlin were admitted to Moabit and treated by the open-air method."

We welcome a translation into English of this excellent Encyclopædia of Practical Medicine. The first volume contains a vast amount of useful information and the forthcoming volumes will be awaited with interest.

*La Lutte contre la Tuberculose.* Par le Dr. R. ROMME, Préparateur à la Faculté de Médecine de Paris. Paris: Masson et Cie., Éditeurs Libraire de l'Académie de Médecine; *Gautier-Villars, Imprimeur-Éditeur. Pp. 190.* Price 2 francs 50 cents.

THIS little book is one of a series of the publications of the "Encyclopédie Scientifique des Aide-mémoire" which appear under the general editorship of M. Léauté, a distinguished member of the Institute of France. Up to the present time 300 volumes have been published, 24 having been produced each year; and of these one, "L'Alcoolisme et la Lutte contre l'Alcool en France," was contributed by Dr. Romme, the author of the present volume

Dr. Romme's book deals with the problems presented by the effects of tuberculosis viewed from the social and economical points of view. In France, as the author points out, the social aspects of tuberculosis are particularly urgent and that for more than one reason. In the first place, the population, instead of increasing, tends rather to remain stationary or to decrease. The loss to France through tuberculosis of 150,000 persons annually is a grievous one. This loss is the more severely felt because it deprives the country of the services of her citizens at a period of their lives at which in the ordinary course they would be most useful The disappearance of this living capital, Dr Romme says, is a terrible disaster, and he takes what we venture to hope is a too gloomy view of the future prosperity of his country, which is at present, he says, crushed by taxes and depressed by a decline of trade. The author goes on to point out, truly enough, that insanitary houses, want of light and of air, insufficient nourishment, overwork, and the abuse of alcohol—in a word, unhygienic conditions—play treatment by Finsen's method. The cases, which had been previously shown to the society, presented marked improvement on their former condition.—Dr. G. N. Meachen: (1) A case of Leucotrichia Annularis; (2) a Secondary Syphilitic Eruption in a Psoriatic; and (3) a case of Tuberculide.—Mr. Horace Wilson: Specimen of an Undeveloped Uterus and Appendages removed post mortem from an epileptic.—Mr. Herbert W. Carson: A case of Pylorectomy 12 months after operation. The patient had put on two stones in weight since the operation and was in perfect health.—Dr. Arthur E. Giles: Specimens of (1) Hydrosalpinx associated with Myoma Uteri and a Small Ovarian Dermoid; (2) Myoma in a Double Uterus; and (3) Malignant Kraurosis Vulvæ.—The meeting was well attended and the exhibition of cases and specimens gave rise to considerable discussion.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Jan. 30th, Dr. C. H. Willey, the President, being in the chair.—Dr. D. Burgess showed a young woman with Bifid Uvula and greatly Hypertrophied False Cords. The true cord looked like the folds of mucous membrane and the voice was produced by the false cords. The patient's mother had a cleft palate. Dr. Burgess also read notes (1) of a case of Ataxic Paraplegia due apparently to lead-poisoning, and (2) of a severe case of Transverse Acute Myelitis in which the legs were flaccid, the knee-jerks were absent, and there was complete loss of power and sensation for over a fortnight. The patient was able to walk out of the hospital two months after the onset of the illness.—Mr. R. J. Pye-Smith showed a boy, aged 14 years, on whom he had performed Peters's operation of extra-peritoneal transplantation of the ureters into the rectum for congenital retroversion of the bladder. Rectal tolerance of urine had been soon established and the boy's condition had greatly improved during the four months that had elapsed since the operation.—Dr. W. S. Porter showed a specimen of Cerebral Tumour (glioma) and read notes of the case.—Dr. A. J. Hall read a paper on the Varieties of the Ringworm Fungus, their Clinical, Microscopical, and Cultural Characteristics, with some Observations as to their Distribution in the Sheffield District. The paper was illustrated by numerous microscopical preparations, cultures, photographs, &c.

# Reviews and Notices of Books.

*Nothnagel's Encyclopedia of Practical Medicine: Typhoid Fever and Typhus Fever.* By Dr. H. CURSCHMANN, Professor of Medicine, Leipsic. Edited, with Additions, by WILLIAM OSLER, M.D., Professor of the Principles and Practice of Medicine, Johns Hopkins University, Baltimore. Authorised Translation from the German under the Editorial Supervision of ALFRED STENGEL, M.D., Professor of Clinical Medicine in the University of Pennsylvania. London and Philadelphia: W. B. Saunders and Co. 1902 Pp. 646. Price £1 1*s*.

THE excellence of the series of monographs issued under the editorship of Professor Nothnagel has been recognised by medical practitioners sufficiently familiar with German to read these works, and the publication of an English edition will doubtless be most favourably received. A set of 10 volumes will be issued representing the most practical part of the work. These volumes will contain the essence of the entire work and the present series of essays has been selected with especial regard to the needs of the practical physician. At some later date volumes will be published on the more special and scientific subjects

As indicated by the title, the volume now under consideration contains a translation of Professor Curschmann's important work on Typhus and Typhoid Fevers. The translator (Professor Alfred Stengel) has performed his task admirably and the value of the work is further added to inasmuch as Professor W. Osler has acted as editor and has made additions to the text where it has been deemed desirable. With the consent of Professor Curschmann these additions have been made so as to run smoothly with the original text. Numerous changes, necessitated chiefly by the work which has been accomplished since the issue of the German edition, have been thus made. To some of these we shall again refer.

Typhoid fever is first considered, and the essay is divided into sections instead of into chapters. The Morphology and Biology of the Typhoid Bacillus are fully discussed, and then follow some interesting remarks on the Vitality of the Typhoid Bacilli. The investigations of Chantemesse are referred to. This observer showed that artificially prepared and especially carbonated waters may in times of epidemic play an important rôle in the dissemination of the disease when used as presumably innocuous substitutes for ordinary drinking water. Typhoid bacilli have been found to retain their vitality in them for days, and even for weeks.

In dealing with the etiology of the disease another fact to which attention is drawn is that the bacilli of Eberth are relatively resistant to the secretions of the stomach, so that they may leave this viscus with their vitality preserved, especially if mixed with certain articles of food. Well worthy of perusal are the remarks on the Most Important Carriers and Modes of Dissemination of the Virus. Water is, of course, the main source by which infection is carried, although the germs may occasionally be conveyed in the dry state by being attached to particles of dust. The author entirely discards the theory that typhoid fever results from the swallowing or inhalation of putrid gases. This is in accord with modern bacteriological knowledge, although the idea is still held by those who have not followed scientific research.

We cannot express entire satisfaction with the arrangement of Section II. which is headed Pathology. The section is divided into a number of sub-sections. The first deals with the general "symptomatology" of the disease and a picture is sketched in outline of a moderately severe case of typhoid fever terminating in recovery in a previously healthy adult. A summary follows of the post-mortem conditions and then the clinical side is returned to, and an analysis is given of the individual symptoms and complications. Although each sub-section is excellent in itself the alternation between the pathology and symptomatology is confusing. The sub-section on the morbid anatomy has been brought fully up to date by the editor. The researches of Mallory are mentioned. He concluded that the changes which occur in the Peyer's patches are due to the action of a toxin produced by the typhoid bacillus and that a proliferation of endothelial cells ensues. These cells are phagocytic in character, and the swelling of the intestinal lymphoid tissue is due almost entirely to their formation. The necrosis, he thinks, is due to occlusion of the veins and capillaries by fibrinous thrombi which owe their origin to degeneration of phagocytic cells beneath the lining endothelium of the vessels. He describes a similar process occurring in the mesenteric glands and the spleen. These views are interesting as formulating a new theory on the formation of the intestinal lesions.

Dr. Curschmann's observations on the temperature curve are most instructive. Too much attention cannot be paid to the intermittent and remittent febrile types described and to the great irregularities of such curves. An observer who is unfamiliar with, and incapable of, interpreting them is exposed to the liability of great error in diagnosis and prognosis. The typical temperature curve in typhoid fever is well known, but atypical curves frequently occur, and the practitioner should be acquainted with this fact so as to avoid falling into serious error.

Much valuable work has recently been accomplished with regard to the changes which occur in the condition of the blood during typhoid fever. The results have been included in this volume. Thayer's exhaustive studies have been utilised, and the paragraphs on the localised lesions due to the bacillus—particularly of the bones, meninges, heart, who wishes to have a clear idea of the origin and course of the present South African War The facts are plain and there are no rhetorical flourishes to make out that black is white From the preface we learn that Dr Conan Doyle and his publisher wish to translate it into all European languages and to send a free copy to every deputy and every newspaper on the continent and in America We do not suppose for one instant that Dr Conan Doyle's *resumé* will have the slightest effect upon the baser kind of continental detractor of the British Army or upon the unpatriotic kind of person of our own country who writes about "Hell in South Africa," or who seizes upon flying rumours to put "Reported Loss of a British Transport" upon a newspaper poster, or who talks about "methods of barbarism" Such people would not believe if an angel came down from Heaven and told them that the war was being waged with as much humanity as is consistent with any war But for those who are merely ignorant Dr Doyle's little book will be as a light shining in a dark place An appeal is being made to the public for funds to further the distribution of the book and we are sure that it will be well responded to

*The Harveian Oration, delivered before the Royal College of Physicians of London on Oct 18th, 1901* By NORMAN MOORE, M D Cantab London John Murray. 1901 Pp 59 Price 2*s* 6*d* net —We are glad to see Dr Norman Moore's Harveian Oration reprinted in a form so handy to read as the volume now before us Everyone who heard Dr Moore's scholarly oration delivered, or who read it as printed in our issue of Oct 26th, 1901 (p 1097), will welcome it Dr Norman Moore had an inspiriting theme and he treated it in his own fashion He is always happy in his literary treatment, and whether he is discussing the pathological processes which led to the death of Chlodowig, or Merlin—if indeed he be dead—or talking about Celtic mysticism or disputing on the difference between the Bogomiles and the remnant of the Christians of St Thomas, he is always interesting Mr Murray is to be warmly commended upon the style in which he has issued the Oration

*Gonorrhœal Arthritis* By L VERNON-JONES, M D Dub London H K Lewis Crown 8vo, pp 52. Price 2*s* 6*d* —This little book consists of three chapters dealing respectively with the pathology, symptoms, and treatment of gonorrhœal arthritis With regard to the first Dr Vernon-Jones has taken the trouble to collate the various bacteriological information on the subject and states the position of our knowledge clearly if rather narrowly This chapter is the most satisfactory of the three, for the two others are very attenuated The preface explains the appearance of this little book by the "absence of any work on the subject" This being so, Dr Vernon Jones should certainly have gone more exhaustively than he has done into the important question of adequate treatment for this far from uncommon complaint So far as his work goes it is good, but having embarked upon it we wish he had gone further

*The Lemco Cookery Book.* Compiled by Mrs H M YOUNG London Liebig's Extract of Meat Company, Limited 1902. —This is a handy little book, containing 180 everyday receipts for soups, fish, entrées, poultry and game, gravies, sauces, and sweets, with a few novel invalid dishes Its object is to point out that the Liebig Company's Extract of Meat will mix with everything to the advantage of the dish, and, though the author may be thought to protest too much, those of the recipes that we have tried were thoroughly successful We understand that the Liebig Company is distributing a quarter of a million of these cookery books from house to house

## JOURNALS AND MAGAZINES.

*The Medical Magazine* for January contains one article of unusual merit. This is a contribution from Dr G H Savage upon "Conditions other than Heredity as Causes of Insanity," and it is worthy of perusal by every practitioner Moreover, the originality and simple clearness of Dr Savage's method of demonstrating his facts and theories make this address an unusually pleasing piece of reading The main theme of Dr Savage's article is contained in a passage near the beginning, where he says that "very much of the mental disorder which we meet arises from the immediate surroundings of the individual, and that certainly in many cases the sufferer is the cause of his own trouble" This is not only a true but a cheering view of the case, for where all steps are not precluded by the fixed idea of an inevitable hereditary taint patient and practitioner will alike approach treatment with sanguine determination The rest of the magazine deals mainly with legislation and statistics

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ERRATA —*Diseases of the Nose and Throat* By J Price Brown, M D, L R C P Edin, &c In the review of this text book under the heading "Library Table" in THE LANCET of Feb 8th, 1902, page 381, it was incorrectly stated that the price of the work is 7*s* 6*d* The price should have been notified is 16*s* net —*The Healing of Nerves* By C A Ballance, F R C S, and Purves Stewart, M A, M D In the review of this work delay in publication was attributed to Mr Ballance's absence at the war It was Dr Stewart who was serving in South Africa

# New Inventions.

## THE CALLIANO BELT FOR THE PREVENTION OF SEA SICKNESS

MESSRS ARMAND CLICQUOT AND CO, of 19, St Dunstan's-hill, London, E C, have submitted to us two specimens of a belt for the prevention of sea-sickness which is the invention of Dr Calliano, an Italian medical man The belt is made of jean or some similar substance, stiffened in places with "bones" In fact, it is like an ordinary waistbelt, and is about six inches in depth The novel feature of the belt is a heart shaped pad affixed to the middle of the belt The method of use is as follows The belt is buckled round the chest next to the innermost garment, the apex of the pad being uppermost and fitting into the apex of the costal angle The centre of the pad thus presses on the epigastrium, and pressure can be regulated to any extent by means of a screw. An abdominal belt of some kind has long been known as a good thing for sea sickness and is supposed to act by pressure on the viscera In Dr. Calliano's belt the pressure is more particularly directed to the cœliac plexus We submitted two belts for trial to two travellers In one instance, however, the belt did not get a fair test as the Channel was crossed in a dead calm The other traveller who kindly consented to try the belt for us was a lady going by sea to Tangier She started from Southampton and crossed the Bay of Biscay in very rough weather We give her experience in her own words "I buckled it on the first morning and found it most uncomfortable I had to wear it without stays and I cannot say it was anything but disfiguring and I felt qualms all day and after dinner was very sick, so next day I did not wear the belt as I thought I might as well be sick in comfort" Of course, it is impossible to judge of the value of this appliance from one instance and it is only fair to say that Dr. Calliano says that the belt does no good in the nervous form of sea sickness. Also plenty of people have apparently testified that the use of the belt has prevented them from being sea-sick But that there is any one cure for sea sickness we do not believe We fear that the disfigurement alluded to by our "tryer" will be fatal to the extensive use of the belt by the female sex. If a woman is sick in her cabin no one need see her, but if she is seen in an unbecoming belt and is not sick she will probably be more uncomfortable than if she were ill and unseen But for the mere man we think it very likely that in certain cases Dr Calliano's belt will prove very useful a great part in causing the spread of tuberculosis, and a part perhaps as important as the inhalation of the bacillus of Koch. The book was written to show what means have been adopted for the prevention of the disease and to supply the evidence necessary to appraise these at their proper value. After a preliminary chapter on the etiology of tuberculosis in its social aspects the author gives an account of pulmonary tuberculosis in its relations to the conditions of work in England. He then describes the German "sanatoriums," the way in which the money is provided for their support, and the manner in which they are managed. In the last chapter he insists on the necessity from a national point of view of the establishment of sanatoriums in France. Amongst the appendices there is a rather curious document called a "catechism against tuberculosis" which has been drawn up by one of the local sections of the "Ligue Nationale Belge contre la Tuberculose." This catechism teaches as articles of obligation that 90 per cent. of the total number of cases of tuberculosis are derived from infected sputa and that tuberculosis is curable, but that the cure is difficult and can only be carried out under special conditions, that neither the rich nor the poor can carry out these conditions at home—that the cure can only be effected at "special establishments." The case for sanatoriums does not need, and will be prejudiced by, such statements

The book itself is well written, the facts are clearly stated, and the arguments founded on them are logical. It should be read by everyone interested in the subject—and it is a subject of universal concern.

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*Handbook of Bacteriological Diagnosis for Practitioners, including Instructions for the Clinical Examination of the Blood.* By W. D'ESTE EMERY, M.D., B.Sc. Lond., Lecturer on Pathology and Bacteriology in the University of Birmingham. London: H. K. Lewis. 1902. Pp 215 with two plates. Price 5*s*. 6*d*.

FOR this excellent book, one of "Lewis's Practical Series," we have nothing but praise. It is eminently practical, concise, and accurate. To instruct the practitioner how to make his own bacteriological diagnosis, or, if this be not possible owing to lack of appliances, to teach him how to collect and to send material so that it may reach the expert in such a condition that it may be satisfactorily examined and a trustworthy report furnished, is the perfectly definite aim of the author, and he does not allow himself to stray from the direct path to his object. How often material is not properly collected and sent the expert knows only too well. With the author's opinion that a bacteriological examination which is made by one person and interpreted by another, or which is made on material which has passed through more hands than one, loses much of its value, we thoroughly agree.

The book is divided into three parts, treating respectively of Apparatus and Processes, the Diagnosis of certain Diseases, and the Collection and Examination of certain Morbid Materials. The instructions in the first part are clear and accurate and are evidently written by a practical worker and teacher. Of course, opinions differ as to the relative value of methods and the details of their execution; thus we see no advantages in the method described for the inoculation of tubes over the old plan and should reverse the advice as to the form of pipette (p. 42) to be chosen for the collection of blood for Widal's reaction and for cultural examinations respectively. In describing spore staining in anthrax (p. 67) a confusion of two methods has crept in; dilute sulphuric acid is used to decolourise the bacillus, but in the next sentence the decolourising agent is spoken of twice as spirit. The second part is also very good both in the restraint the author shows in the selection of materials to be examined and the methods to be employed as well as in the sobriety and common sense of the interpretations of the results. The only exception we take is to the implied medico-legal value of the microscopical examination for the gonococcus. There is a mistake in the reference on p. 57 to the figure of the tetanus bacillus. The diagnosis of enteric fever is carefully described and the successive steps of the method should be easily followed. Stress is rightly laid upon obtaining sufficient blood for the examination; it is a common complaint that too scanty a supply is sent. The test does not require much blood and the amount can usually be easily obtained in a pipette drawn out at each end without employing suction. The examination of hairs for the ringworm fungi is well described. The third part concerns the collection of morbid materials. Throughout this portion, as indeed throughout the whole book, there is an appreciation of the difficulties met with by the practitioner cut off from laboratory appliances and there are many excellent practical hints for meeting these difficulties. The methods for the collection of spinal fluid by lumbar puncture and for obtaining blood are fully given. The book ends with a description of methods for cutting and staining sections. We would strongly recommend this book to practitioners.

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*Selected Researches in Pathology.* By A. GUNN AULD, M.D. Glasg., M.R.C.P. Lond. With Illustrations. London: J. & A. Churchill. 1901. Pp. 160. Price 6*s*.

THIS volume contains a selection from Dr. Auld's investigations in various branches of pathology. Most of the results have from time to time been brought before some of the medical societies and subsequently published in Transactions and medical journals. The essay on Emphysema and that on Bright's Disease appeared in our own columns; in the volume now under consideration the remarks on the latter condition have been re-written and new observations are incorporated.

Perhaps the most interesting chapters in the book are those on Pneumonia. The subject-matter relates entirely to the pneumococcus, or diplococcus lanceolatus of Fraenkel, its chemical pathology, and the action of its toxins in rabbits. The pneumococcus is a difficult organism to work with, owing mainly to the fact that its virulence quickly dies out. Dr. Auld finds, however, that when preserved in blood the organism will retain its virulence for months. The method which he employs is to take up the blood from the heart directly with a small specially made pipette. The ends of the pipette have each a constriction near the bulb (in its centre). The bulb being filled, or nearly so, with the blood, the constrictions are sealed by heat. Preserved in this fashion the organisms remain active for months.

Dr. Auld's experiments relating to the methods devised for raising the strength of pneumococcus toxin and the effects produced by the injection of the toxins into rabbits in connexion with the process of immunising are rather difficult to follow; he himself admits that the research is "only fragmentary," nevertheless certain interesting results were arrived at. It is known that some individuals suffer more than once from an attack of pneumonia. Dr. Auld shows that the action of the toxin of pneumonia is injurious, and that this action is of very long duration, far outliving the presence of the immunising "anti-bodies." To this prolonged action he ascribes the susceptibility to future attacks.

Other chapters in the book deal with hæmatogenous jaundice, Addison's disease, atheroma, and aneurysm, the chapters on the two last-named conditions being the joint production of the late Professor Coats and Dr. Auld.

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## LIBRARY TABLE.

*The War in South Africa: its Cause and Conduct.* By A. CONAN DOYLE. London: Smith, Elder, and Co. Supplied through George Newnes, Limited. 1902. Pp. 156. Price 6*d*.—This unpretending little book should be read by everybody ost prevalent. Probably in no part of the world is scess of the liver more frequently met with than in India, d therefore a discussion between officers of the Indian edical Service on the Surgical Treatment of Hepatic bscess must be of interest for surgeons all over the world.

paper on this subject was read recently by Lieutenant-olonel J. MAITLAND, I.M.S., before the South Indian ranch of the British Medical Association, and in the scussion which followed many other surgeons joined, and e lessons to be learned from their remarks may well be corded. For abscess of the liver, though rarely seen in is country, is not unknown. We have now practically andoned the etiological distinction between the solitary scess of the liver and the multiple abscess, the former ing considered the type of the tropical abscess and the tter the form met with in temperate zones; though is recognised that in the multiple variety the bacterial fection is probably different. It cannot now be doubted at in both forms of hepatic abscess intestinal ulceration the starting-point of the disease and that dysentery is e most common form of ulceration of the bowel which ives rise to abscess of the liver.

The opinions maintained in this recent discussion at adras may be set forth as follows. That the pus should e evacuated as soon as it is diagnosed all surgeons agree, ut the diagnosis of the presence of pus is intimately ssociated with the treatment. Sometimes the symptoms nd the local signs are very distinctive so that there can e no room for doubt as to the existence of an abscess, specially when the abscess is very large or very near the rface of the liver. If, however, the suppuration should e deeply seated the diagnosis becomes much more difficult nd it is in these cases that many surgeons are inclined to avour an exploratory puncture with a hollow needle for the urpose of diagnosis; but this view found no favour at e Madras discussion. That by this method the presence f pus may be ascertained is obvious, but against the ractice there are many and weighty objections on hich Lieutenant-Colonel MAITLAND laid much stress. In he first place there is great risk of hæmorrhage. It as been said that the chief danger of bleeding rises from a possible wound of the inferior vena cava nd, therefore, it has been recommended that the eedle should not be allowed to penetrate more than four nches, for then the vena cava could not be injured. This dvice would be sound if the hæmorrhage could come only rom this vessel, but it cannot be doubted that the liver ubstance may bleed, even to a fatal issue, although no essel of any great magnitude has been wounded, and Lieutenant-Colonel MAITLAND in his paper quoted a ase in which he had seen this unfortunate result ccur. Great as is the danger from hæmorrhage, greater still is the risk from infection of the peritoneum. It is quite exceptional for the peritoneal surfaces over the abscess to be adherent, and, therefore, if the exploring needle has met with pus, it is almost inevitable that as the needle is withdrawn a drop or two of pus will be left in the peritoneal cavity, though if the operation for evacuation of the pus follows immediately on the exploratory puncture the danger of setting up a general peritonitis will be much lessened. Moreover, as Captain W. J. NIBLOCK, I.M.S., pointed out, it may happen that great difficulty may be experienced in finding the abscess at the second operation, although the exploring needle had previously shown the presence of pus. Therefore, it may be laid down with certainty that if any exploratory puncture be made the operation of emptying the abscess should follow immediately. Since in most cases of hepatic abscess the right lobe is implicated the transthoracic operation is generally required. A hollow needle is first introduced and when pus has been found an incision close to the needle, with or without resection of a portion of a rib, lays open the pleura, the two surfaces of which are stitched together around the wound. The diaphragm is next divided, with its subjacent peritoneum. The two peritoneal surfaces may then be stitched together or gauze packing may be used. The pus is best evacuated, not by any form of aspiration, but by incision. There is no real danger of hæmorrhage from the substance of the liver when the wound is visible, for packing with gauze will always restrain it. The further stages of the operation are simple—the abscess cavity is irrigated and drained and treated in accordance with ordinary surgical principles. The results are eminently satisfactory, the general rate of mortality being very low.

Such may be looked upon as the most modern method in India of treating the solitary abscess of the liver and the most experienced surgeons in Europe would not suggest any more than unimportant modifications of this operation. In this country we hear too little of the very extensive, arduous, and important work which is done by our colleagues in distant dependencies of the British Crown. With the unrivalled opportunities they possess for the diagnosis and treatment of the diseases prevalent in tropical and subtropical climates, their conclusions and methods of practice should prove of the greatest value to surgeons in all parts of the empire, and the record of their work will always be received with full appreciation in this country.

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## Surgical Operation for Mitral Stenosis.

A NOTE by Sir LAUDER BRUNTON published in our columns last week contains a sufficiently heroic therapeutic suggestion. It calls attention to the grave effects of stenosis of the mitral valve and to the possibility that relief might be obtained by a surgical division of the diseased valve. With an ambition to bring relief to these patients Sir LAUDER BRUNTON obtained a licence and certificates a year ago to enable him to test on animals the validity of his suggestion. We gather that he has proceeded no further than the table of the dead-house in making his investigation, and having many other claims upon his time he now publishes the suggestion in the hope that others will complete what he has begun. This is a somewhat unusual course to pursue and we think that Sir LAUDER BRUNTON would have been better advised to have himself completed his experiments, even at considerable inconvenience, rather than to incite others to pursue a path into the unknown which must be beset with very grave difficulties and responsibility. The experiments on animals which he advocates require considerable delicacy

THE LANCET.

*LONDON: SATURDAY, FEBRUARY 15, 1902*

## Panics and Publicity.

IN the dark days of 1899, when untoward events in South Africa cast a heavy gloom over all men's minds and were filling their mouths with bitter reproaches or hopeless anticipations, there were not wanting, especially among the older members of the community, those who deplored the amount and facility of news. Little reverses, they said, were placarded, published, and talked about till they assumed the size of real disasters; and a loss of men which in the days of WELLINGTON, for instance, would have gone unknown for months, and would have been disregarded when realised, set people nowadays in a perfect fever of alarm and apprehension. Like a story repeated from mouth to mouth, a piece of news lavishly printed becomes wildly exaggerated. A slight reverse, well headlined, placarded at every street corner and discussed in every club, assumes the proportions of a great defeat. A little space of time shows the true proportion of things, and by to-day people are ashamed of the fears that they allowed to possess them in the early times of the South African Campaign. We deeply sympathise with the apprehensions of those who have relatives and dear friends at the war, but they, in common with the rest of the public, have learned that sensational and inaccurate word-pictures save no lives and allay no fears, but serve rather to depress the *morale* of the country.

Yet the lesson has not been so well learned but that a small epidemic of small-pox in London is able to create what almost amounts to a panic in the minds of people all over the United Kingdom. The fear to which the present attack of small-pox has given rise in some breasts would be ludicrous were it not that such terrors, however ill justified, have a serious effect upon the business of the nation and the prosperity of London. It is hardly credible that an epidemic like the present—a little epidemic in which, roughly speaking, one person in 7000 has been attacked—should give rise to anything approaching panic anywhere. Yet such is in reality the case. There is definite evidence, not only that private individuals shrink from visiting London in the usual way, but that business is interfered with by a dread of the epidemic, and that even the rents of houses for viewing the Coronation procession months hence have fallen enormously. Such a state of alarm is unreasonable and ill-advised, and is, we feel sure, merely an unintended effect of that general newspaper publicity to which allusion has already been made. A man reads of 30 fresh cases in large type, thinks the times of pestilence are here again, and fears that London is unsafe. The next day he learns that the fresh cases amount to 90 and that in the opinion of a leader writer the local authorities are supine, or the London County Council is inept, or the medical profession is ignorant—or all three. He is thus confirmed in his uneasiness. Much more rightly he should reflect that with vaccination and revaccination and ordinarily healthy surroundings he is practically rendered immune, so far as small-pox is concerned. He has no excuse in the lack of good example. Always of sound judgment and correct action where medical matters are concerned, HIS MAJESTY THE KING has never pointed the proper course with an apter hand than he is doing at the present time as regards London and the small-pox. The entire Royal Household having been submitted to revaccination the Royal Family stay largely in London and frequent public places with the most conspicuous freedom. Whether such action is or is not taken with the direct intention of restoring confidence that may be shaken in the absolute safety of London, at any rate it should make timid citizens ashamed not to follow the footsteps of the KING when the path of wisdom that he treads is as open to the lowest commoner as it is to Royalty itself. Vaccination, revaccination and cleanliness are available for every inhabitant of this country. Let men and women avail themselves of the aid which medical science puts before them and lay aside fear, one of infection's closest allies, and they need not hesitate to dwell in London or anywhere else where an outbreak of small-pox is all that terrifies them. This advice is certain to be given by our readers. We wish that our brother journalists who appeal to the great public would take the same line. It is really important that the country at large should know that London is not a city of death, to be avoided by the business man and the pleasure-seeker alike, for the welfare of the whole empire is inextricably bound up with the fortunes of the capital.

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## The Surgical Treatment of Hepatic Abscess.

WHEN we seek to discover the latest teaching as to the treatment of any disease it is but natural that we should turn to those countries where the disease in question is most prevalent. Probably in no part of the world is abscess of the liver more frequently met with than in India, and therefore a discussion between officers of the Indian Medical Service on the Surgical Treatment of Hepatic Abscess must be of interest for surgeons all over the world. A paper on this subject was read recently by Lieutenant-Colonel J. MAITLAND, I.M.S., before the South Indian Branch of the British Medical Association, and in the discussion which followed many other surgeons joined, and the lessons to be learned from their remarks may well be recorded. For abscess of the liver, though rarely seen in this country, is not unknown. We have now practically abandoned the etiological distinction between the solitary abscess of the liver and the multiple abscess, the former being considered the type of the tropical abscess and the latter the form met with in temperate zones; though it is recognised that in the multiple variety the bacterial infection is probably different. It cannot now be doubted that in both forms of hepatic abscess intestinal ulceration is the starting-point of the disease and that dysentery is the most common form of ulceration of the bowel which gives rise to abscess of the liver.

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rate, there is certainly a relationship between character and climate.

## SMALL-POX IN LONDON.

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Having taken this preliminary objection to the form in which the proposal has been published, let us consider the proposal itself. As it is only a suggestion and the operation has never been performed we can only fall back upon *a priori* arguments. And we are all aware how fallacious such arguments are. How many of the great advances which have raised surgery to its present exalted position have been ruthlessly condemned on *a priori* grounds? The surgery of the brain, the stomach, the spleen, the liver, and the uterus has all been advanced and almost perfected in spite of weighty *a priori* reasons against the procedures which are now known to be useful. So that, as a general rule, we deprecate such a line of reasoning. Experiment and observation are the "weapons of our warfare," and the only ones in which we have much confidence. But Sir LAUDER BRUNTON'S proposal challenges criticism in two directions—the difficulty of the operation and the doubt as to its efficacy, even if successfully carried out. On a dead and motionless heart the division of the mitral valve through a fine puncture in the ventricle is a difficult and very delicate step. But when the operation is complicated by the rapid movements of the auricle and ventricle and the respiratory movements of the chest it is plain that the operation is beset with very grave difficulties—difficulties that only the boldest surgeons, with the best-balanced sense of the limitations of their science, could for a moment face. We think that these difficulties have been under-estimated and that the very technique of the operation will prove fatal to its adoption. The introduction of a fine knife through the ventricular wall would have to be done rapidly, and then the manipulation of the knife into the orifice between the deformed cusps of the mitral valve and the section of the valve would also have to be accomplished very rapidly; and all this in conditions most embarrassing and most destructive of that entire self-control which is the chief secret of success in rapid and exact surgical manœuvres. But were this difficulty overcome and the safety and feasibility of the operation established, a further doubt arises in our mind. If the narrowed valve is divided what hope is there that the incision in the valve will heal without renewing the contraction? The incision in such a valve would show a great tendency to unite directly and the state of the valve would then be worse than before. It has been clearly established in the surgical treatment of stricture of the urethra or rectum that simple division of the contracted fibrous tissue is of little good unless it is followed up by the frequent passage of suitable instruments to keep the mucous canals quite free and open, and so to prevent the direct union of the edges of the wound. Now this cannot be done in the valvular orifices of the heart. If it is urged that the force with which the blood is driven through from the auricle is sufficient to keep open the passage, it must be replied that this force proved in the first place, wholly inadequate to prevent the contraction of the valve, and, therefore, that there is little reason to hope that it would prove efficient in resisting a still stronger contracting force. It has also to be borne in mind that the operation might convert the valvular lesion from a mitral stenosis into a mitral regurgitation with very doubtful benefit to the patient. For the difficulties of the procedure must be enormous.

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rate, there is certainly a relationship between character and climate.

## SMALL-POX IN LONDON.

THE small-pox returns for the past week show the following figures. On Saturday, Feb. 8th, there were 32 fresh cases notified and removed; on Sunday, the 9th, there were 23 fresh cases; on Monday, the 10th, there were 48 fresh cases; on Tuesday, the 11th, there were 58 fresh cases; and on Wednesday, the 12th, there were 58 fresh cases. With regard to the question to which we referred last week of the vaccination or revaccination of the employés of large firms, Messrs Bradbury and Wilkinson in a letter to the *Times* of the 10th, stated that although they had made arrangements for offering vaccination to their employés, the operation could not be carried out because the public vaccinator was unable to vaccinate any person living outside his own district. Messrs. Octavius H. Smith and Co., in a letter to the *Times* of the 11th, also stated that the public vaccinator for their district pointed out this difficulty. Messrs. Smith, however, thereupon wrote to the Local Government Board who granted the public vaccinator special leave to vaccinate any of Messrs. Smith's employés although they did not reside in his district.

## THE METROPOLITAN WATER-SUPPLY.

THE report on the condition of the metropolitan water-supply during the month of December, 1901, has recently been issued by the Local Government Board. The Water Examiner states that the water of the Thames was in good condition at Hampton, Molesey, and Sunbury from the 1st to the 12th and from the 19th to the 24th days of the month under review. The engineer to the Chelsea Waterworks Company reports that on the 13th, 18th, and 25th days of the month the water at West Molesey was of "indifferent" character, and that from the 14th to the 17th and from the 26th to the 31st the state of the water was "bad." During the whole of the period at which the water was bad the intake of the Chelsea Company was closed. In the case of the Southwark and Vauxhall Company the river intake to the filters at Hampton was open from the 1st to the 30th of the month. On Dec. 30th Dr. T. E. Thorpe, the analyst to the Local Government Board, found that taking the average amount of organic impurity in a given volume of the Kent Company's water during the nine years ending December, 1876, as unity, the proportional amount in an equal volume of the Southwark Company's water amounted to no less than 3·6. On the same day the water supplied by the Lambeth Company showed an even greater amount of organic impurity (5·3) as judged by the same standard, but the worst water of all was that supplied by the Grand Junction Company on Dec. 31st, which gave a comparative result represented by the figures 5·4. On Dec. 30th the Lambeth Company's water was very faintly opalescent. The Thames at its highest point during the month was one foot three inches above, and at its lowest one foot below, the average summer level. The rainfall during the month at West Molesey was 3·05 inches. The average total daily amount of water distributed by the companies was 197,577,154 gallons for a population estimated at 6,307,230, and this represents a daily consumption per head of 31·33 gallons for all purposes. The company which is stated to supply the largest daily amount per head is the Grand Junction, and the one which supplies the smallest amount is the East London, the figures given being respectively 42·06 gallons and 25·87 gallons. With the exception of the Lambeth Company all the metropolitan companies supplied less water per head during the month than that given in December, 1900 The companies which now profess to give a constant water-service to their customers are the Chelsea, the East London, the Grand Junction, and the West Middlesex. Of the other companies the Kent, the New River, and the Southwark and Vauxhall supply respectively 95·9, 95·7, and 93·0 per cent., as compared with 92·3, 95·0, and 93·2 per cent. in December, 1900. The Lambeth Company professes to give constant service to no more than 77·5 per cent. of its customers. The proportions of brown tint observed in a two-foot tube varied very greatly in the different samples examined; it ranged from two to 30 degrees of the standard in use. The brown tint which is due to the presence of foreign matter or dirt is well marked in the water supplied by those companies which have a deficient storage capacity or an insufficient filtration area at those periods at which turbid water is taken from the Thames for immediate use. The water of the Lambeth Company exhibited the deepest average tint of brown. Dr. Thorpe says of a specimen of the Southwark Company's water that it "was good for the time of year"—a statement which seems to require elucidation. All the samples taken of the water supplied by the Kent Company were of their usual excellent quality

## FOREIGN MEDICAL PRACTITIONERS IN LONDON: SOME INTERESTING FIGURES.

ACCORDING to the recently issued census returns there are 4801 "physicians, surgeons, and general practitioners" in London, of whom 92 are females. There are no less than 169 male and six female foreign physicians, surgeons, and general practitioners located in London. Of these, there are nine male and one female who are Russians; one male Russian Pole; seven male, three female, Swedes; two male Norwegians; three male Danes; four male Dutch; one male Belgian; 12 male French; 32 male, one female, Germans; three male Austrians; eight male Swiss; three male Spaniards; one male Portuguese; 12 male, one female, Italians; two male Greeks; three male Turks; two male Japanese; one male Asiatic; and 63 male Americans. 16,107 persons living in London are returned as "sick nurses, invalid attendants," of whom 15,844 are females; three of the latter are stated to be blind. 266 "midwives" are also returned in London. There are 62 female dentists in London

## POISONING BY CUTANEOUS ABSORPTION OF ANILINE.

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## LAPSES OF MEMORY IN RAILWAY EMPLOYÉS.

IN the course of a discussion at a meeting of American railway surgeons held in Chicago and recently reported in the *Railway Surgeon*, Dr. A. F. Jonas of Omaha, Nebraska, said that as with many other persons so with railroad men there was now and then a mental blank when a man did not think or his mind did not operate. This was the only explanation for the fact that some men ran into an obstruction in broad daylight when it was plainly visible. He then quoted an instance of this kind. Dr. A. T. Eskridge of Denver, Colorado, the next speaker, said that these cases of amnesia were of not infrequent occurrence on railroads and were usually due to definite causes. The greatest cause was alcoholism, not in the sense of drunkenness at the time, but of drunkenness a day or two before. The brain was then in an automatic state in which it could not adapt itself to new conditions. Dr. D. S. Fairchild of Clinton, Iowa, the president of the meeting, said that the observations made by Dr. Eskridge struck him very forcibly and in his opinion accounted satisfactorily for certain inexplicable accidents. He then related a case in which through a switch being turned the wrong way one of the most important trains on a certain railway left the main line and went off on a branch line. The main line was a double track and crossed a bridge, and the branch line was single and passed through a cutting, but the engine was allowed to run for eight miles before the driver discovered his mistake. Fortunately, no accident occurred. The driver when off duty drank freely and occasionally got drunk, but he was always sober when he went on the engine.

## SMALL-POX AND ISOLATION.

AS we surmised the statements made about the Small-pox Hospital at South Mimms before the Barnet Rural District Council on Jan. 23rd were in some cases exaggerated and in others apparently simply untrue. It appears that the same statements have been made previously by various people, and the secretary of the hospital has forwarded to us letters and copies of his answers which deal with the points upon which we commented. From these documents and letters we learn: 1. That *the staff all* reside on the premises, with one exception only. She resides at Clare Hall, *an old house in the grounds*. She never goes to the hospital, and always changes her clothes and has a disinfectant bath before leaving. 2. As to convalescents leaving the grounds and going to the public-house this has not occurred What did happen was that some patients after discharge went to the public-house. 3. With regard to convalescents and the fence, the fence on the east side is an oak one more than six feet high. Convalescent patients are only allowed *in certain parts of* the ground and an unclimbable iron fence is being erected to keep them away from the highway altogether. A further fence is being erected on the northern side which will be five feet six inches high. When this fence is erected there will be a double barrier. 4. As to the workmen, neither the hospital authorities nor anyone else can compel workmen to be vaccinated or to remain within the hospital grounds. Notices are, however, posted forbidding them to have any communication with the convalescents and offering to vaccinate them gratuitously and to disinfect their clothing. Contractors are now requested to get their workmen to comply with these conditions. So far, then, as we can see the statements upon which we commented seem to be, if not without foundation, grossly exaggerated, with the single exception that possibly convalescents may have been able to approach too near to the highway A small-pox hospital is, of course, a necessary evil, but we earnestly advise all the dwellers in the neighbourhood to get vaccinated without delay. They will then be practically free from all danger; and it is only fair that if the hospital authorities take precautions the local inhabitants should do so too.

## CALEDONIAN MEDICAL SOCIETY.

THE awards of the Gunning Celtic prizes offered by the Caledonian Medical Society for original work on Medico-Celtic subjects have just been made public. The adjudicators, Principal Rhys of Oxford and Professor Mackinnon of Edinburgh, have awarded the first prize of £20 to Dr. H. Cameron Gillies of Hampstead for his paper on a Gaelic Medical MS. of 1563. This manuscript, which the author discovered in the British Museum, belonged to the famous Beaton family who were hereditary physicians to the Kings of Scotland from the beginning of the fourteenth century. The second prize of £10 has been awarded to Mrs. K. Whyte Grant, New Zealand, for an essay on the Influence of Scenery and Climate on the Poetry and Music of the Highlands. The papers will be published in the *Caledonian Medical Journal*.

## THE STEREOTYPED ATTITUDES AND POSTURES OF THE INSANE IN REGARD TO DIAGNOSIS AND PROGNOSIS.

DR. ALBERT CAHEN has contributed to the December number of *Archives de Neurologie* a minute study of the "stereotyped attitudes and postures" characteristic of many forms of insanity, a subject to which much popular clinical interest has been accorded, but which has been little studied as regards diagnostic and prognostic value At the outset such conditions as *tics*, spasms, choreiform movements, and impulsive acts were excluded from the present research, which was limited to stereotyped movements and attitudes in the strict sense—i.e , such as were marked by automatism, long duration and persistence of attitude, and by being repeated frequently and in the same way. Such acts were, moreover, stamped by a "professional" appearance in some cases and had the semblance of being voluntary and intentional. They included attitudes, peculiarities of language, gestures, and modes of walking. The following were illustrative instances attitudes of crouching like a beast without moving, standing or sitting in fixed poses which had an insane or delusional significance, automatic buttoning and unbuttoning of the clothes, modes of stamping the floor and of walking a few paces forwards and then backwards, lispings and utterings of sounds and words which the patient held to have a spiritual or mystic meaning (neologisms), and mutism When a patient exhibiting any of the above peculiarities was examined at the onset of his illness inquiry generally revealed that the cause of his actions was a delusion of grandiose, mystic, hypochondriacal, or persecutory nature, provoking reactions and attitudes of a defensive character—*the attitudes, acts,* and postures in question. The patient who acted thus in the early stages of his disorder acted consciously, but later, owing to repetition, the reaction became automatic and stereotyped and the delusion became fixed and organised in the brain, so that the circuit which caused the mischief were said to smell like Indian or China ink; they were blackened with a composition containing a large proportion (90 per cent.) of ordinary aniline, which served as a vehicle for the black colouring agent. Dr. Landouzy and Dr. Brouardel found that aniline applied to the shaved skin of guinea-pigs and rabbits kept in a warm place produced illness in from three to four hours and death in from 24 to 36 hours.

## "CHRISTIAN SCIENCE" IN GERMANY.

THE German Emperor is stated to have no intention of allowing the mischievous and crack-brained disciples of Mrs. Eddy to have an opportunity of spreading their doctrines in the Fatherland. It will be interesting to see what steps the German authorities will be able to take in the matter, for while it is the duty of a Government to watch over the health of the people it cannot possibly be the province of any Government to decide what is and what is not correct medical treatment. It may be said that such a manifest absurdity as the theory of Christian science cannot possibly pretend to be a system of therapeutics; but, unfortunately, that is just what it does pretend to be. The German Emperor will earn the gratitude of English and American legislators if he can devise a plan which will stop these silly persons from playing with the lives of their fellow-creatures and which will at the same time give no chance to refractory persons to say that the freedom of the individual is being unduly curtailed.

## A BILL FOR THE BETTER PROTECTION OF CHILDREN.

WE are informed that a Bill to amend the Act for the Prevention of Cruelty to Children will shortly be introduced into the House of Lords. It proposes to restrict the working hours of children employed in domestic work and to prevent their being brought up as tramps. It would also make it illegal to endanger the lives of young children by overlying, by leaving them alone in rooms with an unprotected fire, and by having them carried about by drunken persons, and would seek to protect their moral character by prohibiting promiscuous sleeping arrangements. It may be said that much of the ground occupied by these amendments is covered by the general term "neglect" for which provision is made by the original Act. There can be no reasonable doubt that such is the case with regard to many so-called accidents due to burning and to overlying. Nor is the case of a child committed to the arms of an incapable drunkard essentially different. It is from our point of view hardly conceivable that a magistrate should be able under these circumstances to interpret the implied neglect as other than a punishable offence. Nevertheless, we should be most unwilling to lose any force derivable from detailed and exact definition which may be needful to strengthen the hands of magistrates in dealing with such occurrences. As regards the regulation of domestic arrangements we are of opinion that makers of law should walk warily. Questions arising in this connexion are best settled out of court as far as may be possible. When there is proof of oppression, or cruelty, or a public nuisance, we naturally look to the law for justice and reparation. Where we have to do with errors of judgment in respect of such matters as household occupations or decency we cannot shut our eyes to the help which can be derived from education or from the more delicate, subtle, and powerful influence of religion. It will be for those who have to discuss and to vote upon this Bill to say how far the evils with which it deals are real and how much they are to allow to one or the other or to all of these forces in seeking their removal. There is a related subject which we greatly desire to see taken up by the legislature with more energy than it has been—that of infant insurance. The history of this system as it is read by the critical onlooker is marked by a degree of mortality which is, at least, suggestive of widely prevalent abuse. Here, if anywhere, we would say, is a point at which legislation should intervene in a manner that it has not done. We have never been able to understand what pecuniary interest a poor parent can be considered to possess in the death of his young child apart from the cost of burial expenses. As a matter of fact, the sum insured is often far in excess of this moderate sum, so far that it bears a dangerous likeness to a premium on mortality. It is to be feared that it is not infrequently so regarded by parents who have more children than they care for and that a child's life has repeatedly gone in exchange for the insurance money. We believe that the necessity for this kind of insurance even among the poor has been overestimated. We are of opinion that it would be fairer to the child, fairer to the parents, and of greater public benefit, that instead of insurance being made for a payment of money it should be limited to providing decent burial in the event of death.

## LOCALISATION OF THE BACILLUS TYPHOID AT THE SITES OF INJURIES DURING RECEIVED TYPHOID FEVER AND AT THE SITES OF PREVIOUSLY EXISTING LESIONS.

WE have recently referred to the fact that typhoid bacilli are usually present in the blood in cases of typhoid fever and to the value of examination of the blood for them as a means of early diagnosis.[1] Some cases described at the meetings of the Société Médicale des Hôpitaux of Paris illustrate the ubiquity of the bacilli in cases of typhoid fever in a novel and interesting manner. At the meeting on Jan. 17th M. F. Widal and M. L. Le Sourd jointly described the case of a young woman, aged 24 years, in whom during convalescence from a long attack of typhoid fever an abscess and three "oily" subcutaneous collections developed in the positions of punctures made in injecting hypodermically caffeine and normal saline solution. In the pus of the abscess which was beneath the skin of the abdomen and in the oily collections which were situated on the left thigh the typhoid bacillus was found. This fact is analogous to the observation of several writers who have found pneumococcic abscesses at the sites at which subcutaneous injections of caffeine had been made in cases of pneumonia. In the abscess the typhoid bacillus and the staphylococcus aureus were found. In the oily collections the typhoid bacillus was found in pure culture. Histological examination showed polynuclear cells mixed with some lymphocytes. In this case the slight injury produced by the needle of the hypodermic syringe evidently localised the typhoid bacillus which must have been present in the blood. At the meeting of the Société Médicale des Hôpitaux on Jan. 24th M. Widal and M. Ravaut gave examples of the localisation of the typhoid bacillus in the sites of lesions existing before the occurrence of the typhoid fever. A young woman had chronic submaxillary tuberculous adenitis. During convalescence from typhoid fever one of the tuberculous glands enlarged and became red and fluctuating. On incision pus was obtained containing the typhoid bacillus in pure culture. Cicatrisation rapidly occurred. A woman, aged 34 years, had typical typhoid fever which ran the ordinary course until the twentieth day, but there was abdominal pain, especially on the right side. On the twenty-first day vomiting occurred and the abdomen became tympanitic and more painful. The febrile symptoms persisted for three weeks. At the end of this time the abdominal pains returned in a violent form, greenish matter was vomited, and the abdominal facies—pinched nose, hollow eyes, and leaden out, should go a long way towards effecting a changed condition of things. Obviously no pains should be spared to encourage medical officers in their purely professional work and, as far as possible, to enable them to maintain a high order of scientific merit. There is, too, the question of what should be done in future wars in regard to everything appertaining to practical field sanitation and the organisation of a sanitary corps. This is a subject which we have already fully discussed in the series of articles that appeared in THE LANCET during the past year and we were very glad to see that it did not escape the attention of Professor A. Ogston who gave it the first place in his addendum to the report of Mr. Brodrick's Committee. The approval and coöperation of the Indian Government in the new warrant will, of course, have to be secured seeing that so large a number of officers of the Royal Army Medical Corps are employed with the British troops serving in India.

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[1] THE LANCET, Feb. 8th, 1901, p. 390

## THE DISTRIBUTION OF PLAGUE.

DURING the week ending Feb. 2nd 22 cases of plague and 16 deaths from the disease have been reported throughout Egypt. 18 cases and 14 deaths occurred at Tantah, 9 of the latter occurring out of hospital; 1 Greek died from the disease in hospital; the remainder of the cases and deaths occurred among the native population. 5 cases and 4 deaths occurred in one house, 2 cases in another, and 1 case in a third at Tantah where cases had a few days previously been found after death; this points to the great necessity of the people at once notifying all cases of sickness to the sanitary authorities, as in all probability if the first cases of plague had been at once isolated and properly treated no further cases would have occurred in the same houses. 2 cases and 1 death were announced from Abousir in the Mehalla district of Gharbieh, 1 death out of hospital at the village of Kafr Euan near to Zifteh, and 1 case in the village of Koum-El-Nour near to Mit Ghamr. All these cases were from among the native population.

## DECLARED ADULTERATION NO OFFENCE.

As is well known practically the Food and Drugs Act can be evaded by the seller adopting the expedient of declaring the adulteration of the article that he sells. This practice of declaration is steadily extending and is threatening to reduce the Act to a dead letter. At one time it was only the publican who announced in his shop that in order to comply with the requirements (*sic*) of the Food and Drugs Act the articles which he sold were diluted. Now some grocers on a similar principle post a notice to the effect that the butter which they sell contains a certain proportion of milk—the addition of milk amounts to the butter being watered—and many restaurant proprietors, and especially those who cater at railway-stations, intimate to the public that they cannot guarantee to supply milk with its full complement of cream. It may be noted that the railway restaurant is often the traveller's only opportunity of obtaining food and drink, and yet by this system of notification he has no means of securing genuine articles. Something ought to be done to stop this practice which, if it grows as it appears to be doing, is calculated to defeat the objects of the Act—namely, to maintain the quality of the food-supply. No legislation which aims at a high standard of food-supply can be too strict. Yet legislation in the instances which we have quoted is admittedly defeated—a most deplorable state of things. An expedient that protects the seller and not the consumer is opposed to sound principles. It is difficult to suggest how this practice can be effectually checked unless the law is made to demand the sale of foods strictly in accordance with a prescribed standard. It should, at any rate, be insisted upon that when the adulteration of an article of food is declared it should be done in the plainest possible terms. The statements should be strongly positive, and not negative, intimating what is sold and not what is not sold. The publican should state, "I sell watered spirits"; the grocer, "I sell watered butter" or "I sell starch glucose and not golden syrup"; and the restaurant proprietor, "I sell skimmed milk." It might be possible to base legislative action on the price charged for such watered goods. There is a wide difference between the price of water and that of genuine butter or milk, or that of undiluted brandy, gin, or whisky.

## CRIME IN ITS FUTURE DEVELOPMENTS.

IN a brief summary of the progress and future of crime in European countries and in America from the pen of Professor Lombroso which appeared in the *Medical News* of New York of Jan. 11th the following main conclusions are arrived at. Assassination has diminished by one-half and so has incendiarism during the latter half of the nineteenth century. A certain group of crimes of blood and theft still remain, because the degeneration which accompanies, or is favoured by, civilisation, although it finds an outlet in suicide and insanity, will always furnish a quota, however scarce, of crimes. In England a survey of judicial and criminal statistics shows that habitual criminals have increased during the period from 1863 to 1898 by about 10 per cent. over and above the rate of increase of population, and this statement does not include suicides and epileptic criminals. Suicide has increased to an appalling extent in the most civilised countries, while crimes committed by epileptics seem to show a considerable increase. "In conclusion," says Professor Lombroso, "it appears probable that crime will not wholly disappear in the world, no matter what cure we may apply to it, though most crimes will decrease in brutality and in number with the exception of those against woman." In time to come civilised man will consider crime as a strange and monstrous product to be regarded with compassion mixed with abhorrence and disgust. The outlook for the future as regards the progress of crime is thus not altogether pessimistic, for it is evident from Professor Lombroso's observations that on the whole the tendency is for a diminution in the frequency and brutality of crime with the progress of time.

## CLINICAL INSTRUCTION IN SMALL-POX.

AT the meeting of the Metropolitan Asylums Board held on Feb. 8th the Hospitals Committee submitted draft regulations relative to clinical instruction in small-pox, together with a recommendation that the Local Government Board should be requested to modify the terms of its Order of Oct. 30th, 1893, so as to remove the obligation of residence at present imposed on students at the small-pox hospitals and to enable qualified medical men to attend special demonstrations to be given from time to time thereat. The principal points of the draft regulations are as follows: (1) no student shall be admitted to study at the hospital until he has completed the third year of his medical education, has held the offices of clinical clerk and dresser, and has obtained from his medical school sanction to his attendance at the hospital; (2) the ordinary course of study at the hospital shall consist of 12 demonstrations and no student shall receive a certificate who has not attended at eight of them; (3) the fee shall be four guineas; (4) the means of conveyance to and from the small-pox hospitals shall be by the Board's steamboats to and from its London wharf; (5) every student will be required to wear, as long from mental delusion to motor reaction was organically complete. Such stereotyped acts were present in cases of dementia præcox, catatonia, dementia secondary to the maniacal-melancholic group of insanities, paranoia, *délire de négation*, and secondary mental enfeeblement generally, and hence they might also be observed in the early and middle stages of general paralysis. The insanity of obsessions (morbid doubts and fears) might also provoke characteristic attitudes of passion, doubt, religiosity, and fear which from recurrence might become fixed and stereotyped. Dr. Cahen points out that it is sometimes difficult to distinguish the stereotyped attitudes and actions of the insane from those which occur in hystero-epilepsy and hysteria major, but that such phenomena were of bad prognosis as being indicative of a permanent degree of mental enfeeblement—that is to say, of chronicity and incurability as regards the mental life. The prognosis, however, as regards bodily life need not be, and often was not, grave.

## THE UNQUALIFIED ASSISTANT ON HIS OWN ACCOUNT.

THE unqualified assistant of the medical practitioner is now limited in his duties by the General Medical Council. How great a source of danger to the public he is when he begins to consider himself competent to do a little in the way of unqualified practice on his own account we all know. A good example of this kind of unqualified practice was brought to light the other day by an inquest at Hackney. The deceased had been attended for 18 months by a person whom her husband knew as "Dr." Edwards, but who apparently had been dispenser to one or two medical men practising in the district. Edwards seems to have begun by treating the family of his lodging-house keeper for small ailments, and, being recommended by them or others, to have come to treat the deceased woman as to whose death the inquiry was held. He was paid for his attendance upon her; a bottle was produced which was said to have contained medicine prescribed by him, but which bore no label or directions. The husband had no knowledge that Edwards was not a fully qualified practitioner. Evidence was given that the patient died from syncope due to fatty degeneration of the heart, and a verdict of "Death from natural causes" was returned, accompanied by a rider censuring Edwards. Edwards, it would seem, is not in any way amenable to the law, for the law does not forbid unqualified practice. When a patient dies under the care of an unqualified person, and the affair becomes known, because the unqualified person cannot give a certificate, the public awake to the danger. But in a very short time vigilance relapses and the unqualified practitioner continues his dangerous career.

## SUSPECTED POISONING BY ARSENIC IN BEER AT HALIFAX.

IN our issue of Feb. 8th (p. 385) we referred in a leading article to an inquest held upon the body of an old man who died from cardiac failure and bronchitis. There is, of course, nothing remarkable about these two causes of death, but on his admission to the Halifax Workhouse Hospital the patient showed marked symptoms of arsenical poisoning such as were observed during the recent outbreak at Manchester. Dr. J. F. Hodgson, the resident medical officer, therefore reported the case so that an inquest might be held. On Feb. 7th another inquest was held by Mr. E. H. Hills upon the body of a man named Thomas Lee, aged 54 years, who died on Feb. 5th in the Halifax Workhouse Hospital. Evidence was given that Lee during life was a heavy drinker. He would drink "rum, whiskey, ale, or anything." Mr. J. F. Woodyatt, visiting physician to the hospital, gave evidence that Lee on admission presented all the symptoms of so-called arsenical beer-poisoning. The cause of death was croupous pneumonia. While under treatment Lee eliminated arsenic daily. He also had old pleurisy and morbus cordis. Dr. Hodgson confirmed Mr. Woodyatt's statements as to the arsenical poisoning symptoms. He did not agree that Lee died from croupous pneumonia; the primary cause of the man's death was arsenical poisoning. The condition of the lungs was secondary to the condition of the heart. The coroner pointed out that everyone agreed that Lee did suffer from arsenical poisoning. As to where he got his arsenic from that was rather a matter for the sanitary authorities than for them. The jury returned a unanimous verdict of "Death from pneumonia accelerated by arsenical poisoning." The coroner said, after the verdict had been given, that a gentleman had called on him and had told him how to conduct the inquiry. He, the coroner, would not mention his name, but he was connected with the brewery interest. As far as we can judge from the evidence given there would seem to be no doubt about the arsenic having a large share in the death of Lee. But a man who had old pleuritic adhesions, morbus cordis, bronchitis or pneumonia, or both, and who was in addition a confirmed drinker, carried about with him a "body of death" quite enough to kill him in a variety of ways. There need not be so much arsenic taken to set up severe symptoms, if it be taken in an organic form, or when associated with other things, or after it has been exposed to some process of fermentation. Arsenic, as is well known, was a favourite poison in mediæval times, and it was said to be far more efficacious if prepared by first administering it in a fatal dose to a pig or some animal. The body was then allowed to putrefy and the arsenical fluids distilled or otherwise extracted from the putrid mass were found to be of great potency. We are repeating the teachings of mediæval practice without guaranteeing their accuracy. But, possibly, the fermented compounds of arsenic nowadays may be far more virulent than any simple salt of the metal. It is difficult to see how arsenic could get into rum or whisky, two of Lee's favourite beverages, but in ale there are two possible sources—namely, invert sugar and malt. If brewing sugars are, since the Manchester epidemic of arsenical poisoning, generally pure we suppose the guilty substance must be the malt. We have taken our notes of the inquest from the *Halifax Courier* of Feb. 8th, which gives a full report, and is to be congratulated upon having done so.

## THE ARMY MEDICAL SERVICE.

ANY day now may see the appearance of the new Royal Warrant for the Royal Army Medical Corps; meanwhile a good deal of natural curiosity exists to know whether the warrant will fulfil all the reasonable expectations that have been raised in regard to it. Apart from all the questions that have arisen and have been keenly discussed in connexion with the report of Mr. Brodrick's Committee there are several matters calling for settlement on the part of the authorities. Professor T. Clifford Allbutt has very pointedly called attention to the unscientific, or even anti-scientific, tone of the service as one of its evils and as exercising a deterrent effect on medical candidates of a superior class: and he illustrates this by quoting the experience of a medical officer as to the deficiencies that exist in the supply of scientific, medical, and surgical appliances, and the lack of any sympathetic and appreciative spirit on the part of many of the senior medical officers of the service in encouraging their juniors to prosecute scientific researches and to keep abreast with the results of professional progress. How far these allegations are well founded at the present time we have not the means of knowing. The system of promotion by selection for the higher ranks, if honestly and properly carried this special type under the designation of 'feeble minded' I am still firmly convinced that this term should not be used in this restricted sense, but generally, and should embrace all classes and types of congenitally mentally deficient persons and that our imbecile institutions should as is done in America call themselves 'schools for the feeble minded', by this means many parents who from one reason or other refuse to have their children branded as idiots would no longer hesitate to take the advantages which our institutions so ably afford During the year 65 patients were discharged as relieved "It is very gratifying to be able to report that some of these were much benefited by their period of residence three being to a large extent self supporting and one earning 25*s* per week' The deaths during the year amounted to 15—viz, 11 males and four females, or 2 8 per cent of the average number resident Of the deaths four each were due to epilepsy and phthisis two to valvular disease of the heart, two to spinal caries and one each to 'scrofula tuberculosis, and diarrhœa' There had been no infectious disease with the exception of a few cases of chicken pox Important alterations and improvements have been made in the heating, lighting, ventilation, and sanitation of the building The board of management states in its report that the work in progress for the above alterations and improvements will involve an expenditure of nearly £15 000 Among the donations received is a sum of £1000 from an anonymous donor Various legacies have also been received during the year A conference was held by the invitation of the Duchess of Sutherland, at Stafford House on June 27th 1901 of the chairmen superintendents and secretaries of the four following voluntary asylums for idiots and imbeciles the institutions represented being Earlswood Asylum and the idiot asylums of Lancaster Colchester, and Starcross (Exeter) The object of the conference was "to consider how far cooperation between institutions for imbeciles and the National Association for Promoting the Welfare of the Feeble minded is practicable and desirable.' Unfortunately the conference ended without any practical results as to the object desired

*Roxburgh Berwick and Selkirk District Asylum, Melrose* (*Report for the year ending May 15th 1901*) —The average number of patients resident during the year was 307 comprising 142 males and 165 females The admissions during the year amounted to 58—viz, 30 males and 28 females Of these 42 were first admissions Dr J Carlyle Johnstone, the medical superintendent states in his report that the ordinary rate of board charged for private patients is £40 a year but that patients in straitened circumstances are received at lower rates when the board of management is furnished with satisfactory proof that the full rate cannot be paid Owing to want of accommodation however admission continues to be refused to all private patients except such as cannot possibly be provided for in other asylums or elsewhere' Hereditary predisposition to mental disorder was ascertained to exist in 34 of the patients admitted, or 58 per cent In 28 cases (48 per cent) suicidal tendencies were present and of these patients six had made serious attempts to terminate their lives before entering the asylum The physical condition of the patients admitted was good or average in nine cases bad in 45 cases and very bad in four cases In about 50 per cent of the admissions the patients suffered from some form or other of serious bodily disease "As usual there was a large proportion of aged congenital and chronic or relapsed cases, and in only a small percentage could ultimate recovery be expected while from the nature of their bodily and mental infirmities many of the cases were such as to require skilled nursing and hospital treatment The number of patients discharged as recovered during the year amounted to 15—viz, nine males and six females—or 4 8 per cent of the average number resident. The deaths during the year amounted to 16—viz 10 males and six females—or 5 per cent, as calculated on the same basis Of the deaths one was due to aneurysm of the aorta, two to senile decay four to pulmonary tuberculosis, five to general paralysis and the rest to other causes In 12 out of the 16 cases the cause of death was verified by post mortem examination The general health of the institution was good and there was no epidemic disorder 'The overcrowding of the male side continues says Dr Johnstone 'to increase. The arrangements afforded by the old wards for the treatment of recent and curable cases, the nursing of the sick, and the safeguarding of dangerous and anxious cases, are quite inadequate and unsuitable The male patients do not, in fact, receive that quality of care and treatment which can only be provided for them in an institution thoroughly equipped in accordance with those principles of science and humanity which govern the modern treatment of the insane Plans and specifications for the erection of a hospital block for male patients of a similar description to the female hospital (which serves its purpose admirably) are now receiving the consideration of the board The Commissioner in Lunacy states in his report that the general condition of the patients was highly satisfactory that the medical case books and records of necropsies were well kept, and that evidences of able and careful administration were everywhere apparent

*Northumberland County Asylum* (*Report for the year ending March 31st 1901*) —The average number of patients resident during the year was 634 and comprised 357 males and 277 females The admissions during the year amounted to 181—viz 90 males and 91 females Of these 151 were first admissions Dr T W McDowall, the medical superintendent states in his report that the admission rate remains high and that many unfavourable cases continue to be received The average number resident was the highest since the opening of the asylum This continued increase of male patients causes much overcrowding" For some years the work of the medical staff has been growing unduly heavy, and at the beginning of the year it was decided to appoint a female assistant medical officer for the female wards and the appointment was made shortly afterwards The number of patients discharged as recovered during the year amounted to 75—viz, 39 males and 36 females—or 11 8 per cent of the average number resident The deaths during the year amounted to 68 or 10 7 per cent., as calculated on the same basis Of the deaths four were due to senile decay, five to melancholia six to cardiac disease, 13 to general paralysis of the insane 15 to phthisis and other forms of tuberculosis and the rest to other causes The Commissioners in Lunacy state in their report that the wards were clean and well furnished the beds and dormitories in proper condition, the patients quiet and orderly and neatly clothed and the medical records fully and intelligently kept The committee of management state in its report that plans and estimates have been prepared for the erection of an isolation hospital. The rate of maintenance of pauper patients remains unchanged at 10*s* 6*d* per head per week

# ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH

A QUARTERLY meeting of the Royal College of Physicians of Edinburgh was held on Feb 4th Dr T R Fraser, the President being in the chair —Dr D J Graham was introduced and took his seat as a Fellow of the College —Dr F J Tresilian and Dr J R Gilmour were admitted by ballot to the Fellowship of the College —On a ballot three candidates were admitted to the Membership of the College after examination —The Registrar reported that since the last quarterly meeting 33 persons had obtained the Licence of the College by examination —The Secretary reported that the Council had resolved to offer the Parkin Prize for competition during the current year the subject to be in terms of the bequest, On the Curative Effects of Carbonic Acid Gas or other Forms of Carbon in Cholera for Different Forms of Fever and Other Diseases Essays will be received by the Secretary up to Dec. 31st, 1902.—Intimation was made that the Council had determined to defer the award of the Freeland Barbour Fellowship from February to May biennially —The President announced that the Council had nominated the President and Vice President for the time being to be delegates to the Fourteenth International Medical Congress at Madrid —The Secretary read a statement which had been prepared by the Council and transmitted to the Secretary for War and the Secretary for Scotland protesting against the proposed representation of Scotland on the Advisory Board of the Royal Army Medical Corps as not calculated to give the medical profession of Scotland from whose medical schools a large percentage of successful candidates for the Royal Army Medical Corps is annually supplied, the confidence that is desirable in the work of the Board The conviction was expressed that the proposed appointment would lead to widespread dissatisfaction

# THE SANITARY INSTITUTE.

## DISCUSSION ON THE PREVENTION OF SMALL-POX IN LONDON.

AT a sessional meeting of the Sanitary Institute held in the Parkes Museum on Feb. 12th, under the chairmanship of Sir JAMES CRICHTON-BROWNE, Mr. A. WYNTER BLYTH opened a discussion on the Prevention of Small-pox in the Metropolis.

Mr. WYNTER BLYTH (medical officer of health of St. Marylebone) said that the various plagues which fell on man and beast occurred with a certain periodicity—that is to say, there were seasons of activity alternating with seasons of quiescence. In the latter periods inflammable material accumulated awaiting only a spark to flare up and be in part consumed. With regard to immunity from small-pox one attack of that disease usually immunised throughout life, but he had seen a man, aged 65 years, who was badly pitted from small-pox contracted when he was 20 years of age die from the confluent form of that malady. Vaccination inoculated a something so much akin to small-pox that it conferred the same kind of immunity but since a man might have small-pox twice it was foolish to expect a life-long immunity from a vaccination in childhood, for no one contended that vaccination protected longer or more efficiently than small-pox itself. Crude statistics threw unmerited discredit on revaccination. In the Sheffield epidemic there were 830 soldiers all of whom had been revaccinated some time or other. 12 of those men caught small-pox, but it was elicited that the revaccination in no one of the 12 had taken. Such a fact, to his mind, only showed that the operation ought to have been repeated and that it had not been properly performed. If one of the great scientific "magi" were to discover some wonderful fluid which would protect children from scarlet fever it would probably render scarlet fever no longer mainly a disease of children and the age-period most prone to the infection would be that from 15 to 25 years. The malady itself would also become rare from the lessened amount of infection. What he had pictured as possible with regard to scarlet fever had actually happened with regard to small-pox. The wonderful fluid that prevented small-pox had been discovered, but its influence as age advanced got weaker and weaker. He quoted statistics to show that as vaccination increased the incidence of the disease decreased in childhood but increased in adolescence. From preliminary statistics recently published by the Asylums Board he drew the conclusion that owing to the protection of vaccine lasting from five to 15 years the main incidence of small-pox was on adults, the least incidence being on children. This incidence, the effect of primary vaccination protecting children, was manifested in various local epidemics during past years. He contrasted the immunity of the revaccinated nurses in the small-pox hospitals with the rapidity with which small-pox spread in a partially protected community when the slightest chance contact bore fruit and from one single case 10 or even 20 others might have been directly derived. Discussing the influence of sanitary conditions on small-pox Mr. Blyth contended that no connexion had been established between insanitary conditions and the spread of small-pox in any epidemic. The one single condition that predominated over all sanitary conditions was the immunity acquired either from a previous attack of small-pox or from efficient vaccination. One of the most marked illustrations of this great truth was furnished by an incident which occurred in the Leicester epidemic The small-pox hospital staff there consisted of 40 persons. Of these 34 were more or less immune either from a previous revaccination or a previous attack of small-pox. One of these protected persons, whose revaccination was 10 years old, suffered from a mild attack of small-pox. Of the remaining six nurses who refused revaccination five out of the six contracted small-pox and one died from the disease The whole 40 persons were exposed to precisely the same sanitary conditions, and yet the malady selected the only group which medical opinion would have selected as insufficiently protected. Concerning the question whether the season of the year afforded grounds for what may be called a natural subsidence of the epidemic Mr. Blyth declared that so far as seasonal distribution could be judged the malady was likely, unless the efforts of the local authorities were aided by the public, to increase up to May and not decline until the first or second week in June. It was perfectly possible to arrest the epidemic in a single week. Beyond all disinfecting sprinklings, all cleansing of sewers, drains, and even persons, even beyond all hospital isolation, revaccination and vaccination formed the only potent preventive. In the romance of Samuel Butler entitled "Erewhon," a land was fabled in which illness of any kind was treated as criminal. However far-fetched such a notion with regard to maladies not arising from personal filth, immorality, or dissipation was, it was not so with regard to diseases which could be avoided by individual effort and which were dangerous to the public and seriously interfered with trade; such neglect was in its nature criminal and the time might come when it would be consistently treated as such. After isolation in hospital of a patient suffering from small-pox and after the usual disinfection and cleansing the question remained as to what should be done with those persons who had been in contact with the infectious sick and especially in regard to a class of persons homeless, generally very poor, and not a few amongst them indescribably filthy. The London County Council bribed such waifs to submit to virtual imprisonment to undergo quarantine. That at present was voluntary, but legislative enactment dealing with the matter was urgently needed.

Sir JAMES CRICHTON-BROWNE said that the perfect unanimity of opinion on the part of the medical profession in connexion with the prevention of small-pox was very striking and ought in itself powerfully to impress public opinion.

Dr. J. F. J. SYKES (medical officer of health of St. Pancras) detailed the beneficial effects following the appointment of medical referees for diagnosis in doubtful cases of small-pox.

Dr. J. G. GLOVER said that he wished to ventilate the question as to the inadequacy of the existing machinery for public vaccination. He called to their remembrance that it had been shown that the lymph supplied by the Government had no absolute monopoly of security. Some two years ago an investigation into the quality of the lymph supplied by Government and by private firms was made by THE LANCET, and it came out most distinctly that there were seven or eight lymphs as pure as the Government lymph. They knew that in Great Britain it did not do to trust everything to the Government. He agreed, however, that there should be some public standard to secure the purity of lymph. Dr. Glover also pointed out that the fact of rich people sending to the public vaccinator to be vaccinated prevented that officer from spending his time in vaccinating the poor. He recalled the fact that Glasgow had stopped its epidemic of small-pox by house-to-house visitation for the purpose of vaccination.

Dr. P. C. SMITH (medical officer of health of Wandsworth) recommended compulsory vaccination for every "contact" they came across.

Mr. SHIRLEY F. MURPHY (medical officer of health of the Administrative County of London), Dr. W. A. BOND (medical officer of health of Holborn), Mr. H. W. G. MACLEOD, and Mr. W. G. KERSHAW also addressed the meeting, which terminated with a hearty vote of thanks to the Chairman.

# ASYLUM REPORTS.

*Earlswood Asylum, Redhill, Surrey (Annual Report for 1900).*—The asylum admits idiots and imbeciles of higher mental grade. The average number of patients resident during the year was 529 and comprised 346 males and 183 females. The number of patients admitted during the year was 47—viz., 32 males and 15 females. Of the admissions six males and five females were over the age of 20 years, while the average age for males was 11·2 years and for females 16·14 years. A considerable proportion of the admissions, amounting to 23·4 per cent., consisted of epileptics—"a high rate for a class of case for which no prospect of permanent improvement can be offered." Dr. Charles Caldecott, the medical superintendent, states in his report that with the exception of epileptics the admissions are of a hopeful type for education and training. High-grade imbecile patients benefit to a great extent by the teaching and training received at the institution. "I regret," says Dr. Caldecott, "that persistent efforts should still be made to legislate for seeds, is admittedly a mixture of alkaloids, the most important of which are the crystalline veratrine and the amorphous veratridine, though several others have been reported—viz., sabadilline, sabatrine, sabadine, and sabadinine. It is important that so potent a drug as veratrine should be prepared in as pure and definite a state as possible; hence it is desirable that a process should be devised for preparing an alkaloid of definite composition. Damiana is reported to contain a bitter substance, resins and volatile oil. As the liquid extract of the leaves is now being extensively used a systematic examination of this drug is wanted. The same is required in the case of *Cereus grandiflorus*, *Citrullus colocynthis*, and *Cassia fistula*; in the case of colocynth the bitter glucoside, colocynthin, residing in the pulp but not in the seeds, is little understood, whilst it is not known to what the laxative properties of cassia pulp are due. The petals of the red poppy (*Papaver rhœas*) come in the same category; they contain a red colouring matter which is said to be due to two acids—viz, rhœdic and papaveric acids. Lastly, senna fruits have come into use in place of the leaves; it is desirable to know whether or not the constituents of the fruits and of the leaves are identical in composition and in amount

### *Chemical Problems.*

There are many problems, in this as well as in the other sections, which belong to the domain of the pharmacist alone—e.g., the improvement of the official process for the preparation of hydrargyri oleas. The subject of standardisation, however, is of direct importance to the medical profession. It is significant that the galenical preparations of most of the potent drugs in the Pharmacopœia still remain unstandardised; thus, aconite, stramonium, strophanthus, calabar bean, and colchicum may be cited. Ergot is another drug of immense importance for which there is no official process of standardisation. The well-known fact that ergot and its preparations do not maintain their potency indefinitely renders it very desirable that the next Pharmacopœia should remedy this deficiency. If it be found in this and in other drugs that chemical processes of assay are unsuitable or untrustworthy, then it is a question worthy of serious consideration whether steps should not be taken to establish trustworthy physiological standards of strength. It is noteworthy that a preparation of *Cannabis indica* which can be depended upon to contain the active principle of the drug is still a desideratum. Another point to be settled is the relative values of the two official senna leaves, the Indian and the Alexandrian. The Pharmacopœia permits them to be used indifferently.

### *Materia Medica.*

Two questions only will be referred to. In the official decoctum aloes compositum the use of saffron has long been a debatable question. As saffron is a costly drug the suggestion has been made that a less expensive flavouring agent should be substituted. It has yet to be proved, however, whether or not saffron is used merely as a flavouring agent. In ancient times it was used externally as well as internally as a medicine; it would scarcely enter into external applications for the sake of its colour and certainly not for its taste. According to Hanbury and Flückiger[3] saffron is of no use as a medicine and it retains a place in the Pharmacopœia solely on the ground of its utility as a colouring agent. Until this drug has been pharmacologically tested and found useless there is no evidence to warrant its exclusion from the Pharmacopœia except the fact that no definite principle obtained from it has been proved to have any particular pharmacological value. Several definite constituents have, however, been obtained from saffron, notably the glucoside crocin, an amorphous red colouring matter; picrocrocin, a colourless bitter principle; and volatile oil. The stimulant, antispasmodic, and emmenagogue properties ascribed to saffron, while lacking proof, are an argument in favour of its retention until the drug shall be proved to be useless. According to Sir Lauder Brunton[4] saffron has but little action. In this connexion it is of literary interest to mention that even from the earliest times saffron has been a costly drug. Thus, both Dioscorides and Pliny refer to the frauds practised on it, the latter remarking: "Adulteratur nihil æque." Lastly, the Research List of the British Pharmaceutical Conference suggests researches into the effects of cultivation, soil, climate, and time of collection on medicinal plants. Pharmaceutical chemists and others have been, and still are, steadily working out problems of this nature, but except in a few instances inquiries into the chemical and physiological characters of the principles of plants have not gone hand in hand. It is very desirable that in the future medical practitioners and pharmaceutical or other chemists should join hands in similar investigations, as has been done notably in the case of aconite by Professor Cash and Professor Wyndham R. Dunstan.

# Looking Back.

FROM

## THE LANCET, *SUNDAY, FEB.* 15, 1824.

### ST. THOMAS'S HOSPITAL.

FEB. 13.

*Case of Ague, cured by the Sulphate of Quinine.*

JOHN L. of Peterborough, æt. 32, was admitted into George's ward of this hospital Feb. 5th, with ague; says that for a fortnight previous to his admission he had been seized with a fit of shivering every second day, about eleven o'clock in the morning, which continued on him for about four hours. The patient was immediately ordered by Dr. ELLIOTSON, under whose care he is, three grains of sulphate of quinine every six hours, dissolved in water, with a minim of diluted sulphuric acid. Since he has taken this medicine, the shivering fit has not returned. Last year this same man had an attack of ague, which continued on him for four months.

*Case of sphacelus of the left foot.*

*Continued from page 158.*

The granulations at the lower part of the left leg appear quite healthy The right leg and foot have been swollen lately, but they have resumed their natural size. The same applications are continued.

*Operations.*—Feb. 13. A child three years old, underwent the operation of lithotomy. Two calculi were removed; the instrument used in dividing the prostate gland was Mr. BLIZARD's knife. The operator was Mr. TYRRELL.

A small cancer scroti, known by the name of the chimney-sweeper's cancer, was this day removed from one of those unfortunate individuals who are subjected to this disease by the nature of their occupation.—The complaint was quite in the incipient stage, the patient having first perceived it towards the latter end of last December. The part affected was not larger over than a sixpence, and it had on its surface a thin scab or incrustation of matter, with hard and slightly elevated edges—it was completely excised—one vessel secured—and a suture applied to the wound, to bring the edges together, and, lastly, strips of adhesive plaster were applied. The part removed was shewn to those present; when cut into, it had a whitish appearance.

A small carcinomatous tumour was also removed from just below the under lid of the left eye, and a little to the outer side.

Both operations were performed by Mr. GREEN.

The only accident worth noticing, is a fracture of the skull, from a kick of a horse, the history of which case we will give at some future time.

The nuisances we complained of last week, viz. the vending of porter, fruit, &c. in the wards of the Borough hospitals have not been stopt, therefore we shall take an early opportunity of showing the evil consequences tha' that is from them, and the degree of culpability attriction was ex- different officers for allowing them to exist, ould lead to wide-as he is within the hospital, a suit of brown holland overalls, consisting of coat, trousers, and cap, which will be provided by the Board; (6) any legally qualified medical man may attend the hospital for purposes of instruction as if he were a student; (7) in order that qualified medical men who have not sufficient leisure to attend a prolonged course of instruction may have opportunities of seeing cases of small-pox demonstrations will be given from time to time, the fees charged being one guinea per demonstration or two guineas for three demonstrations; and (8) the rules as to disinfection and vaccination shall apply equally to medical men and students. The Board will, no doubt, give public intimation of the time when the foregoing scheme may become operative. At the same meeting of the Board a letter was read from Dr. T. O. Dudfield, medical officer of health of the borough of Kensington, suggesting that experts appointed by the Board should assist practitioners in the diagnosis of doubtful cases of small-pox before the removal of the patients from their homes. This might be useful in some degree; but, on the other hand, during an epidemic a considerable staff of experts might be required and delay in the removal of genuine cases of small-pox might be occasioned. The suggestion was therefore not adopted. As is generally known, all cases of presumed small-pox are examined by a medical officer at the Board's wharves before the journey in the steamer down the river to the hospital.

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[3] Pharmacographia, p 663.

[4] Pharmacology, Therapeutics, and Materia Medica, p. 1039.

## THE SOCIETY OF PUBLIC ANALYSTS.

THE twenty-seventh annual dinner of the Society of Public Analysts was held on Wednesday evening last, Feb. 12th, at the Hotel Cecil. Dr. J. Augustus Voelcker, President of the Society, was in the chair, and was well supported by the leading members of the Society. The guests included Mr. T. H. Elliott, C.B., the Secretary to the Board of Agriculture; Sir Ernest Clarke, Secretary to the Royal Agricultural Society; Professor T. E. Thorpe, C.B., director of the Government Laboratories; Professor H. E. Armstrong, Professor of Chemistry at the City and Guilds of London Central Institute; and Mr. W. R. Bousfield, K.C., M.P. Eloquent testimony to the sound value of the work done by the Society of Public Analysts was forthcoming in the speeches of Mr. Elliott and Professor Thorpe replying to the toast of "The Public Departments," and in that of Professor W. A. Tilden, who submitted the toast of the evening: "The Work of the Society." Dr. Voelcker, replying to Professor Tilden, gave an excellent exposition of the work and aims of the Society of Public Analysts, interspersed with humorous anecdotes as to the public conception in days not long gone by of what was implied by the title of "chemist." Sir Ernest Clarke was witty and Professor Armstrong was commendably brief in replying to the toast of "The Guests." Altogether the gathering was a thoroughly pleasant and successful one and fulfilled the object of such annual dinners very completely, for on all sides testimony to the value of the work of the society was elicited.

## UNIVERSITY OF LONDON FACULTY OF MEDICINE.

A MEETING of the faculty of medicine of the University of London will be held at the University buildings at 5 P.M. on Feb. 21st. The business will be the further consideration of the question of the concentration of intermediate and preliminary medical studies. In view of the recent large accession of new members, who have not been able to take part in the former discussions on this subject, Mr. H. T. Butlin, the dean of the faculty, will make a short statement as to the work of the faculty in connexion with "concentration" during the past year.

THE anniversary dinner of the Medical Society of London will be held at the Whitehall Rooms of the Hôtel Métropole on Saturday, March 8th, at 7.30 P.M. Communications should be addressed to the honorary secretaries, Dr. Arthur F. Voelcker and Mr. Jonathan Hutchinson, jun., at 11, Chandos-street, W.

THE President of the Republic of Venezuela has conferred upon Dr. Oscar Jennings of Paris the Order of Commander of the Bolivar (Busto del Libertador).

# Pharmacological Notes.

### ON SOME UNSOLVED PROBLEMS AS TO THE CHEMISTRY OF DRUGS.

NOT the least important portion of the work of the British Pharmaceutical Conference consists in the encouragement of research. In a list published under the auspices of the conference hints are given as to various problems connected with the analysis of plants, chemistry, materia medica, and pharmacy that await investigation.

*Problems in the Analysis of Plants.*

There are quite a number of important drugs of which the active principles are as yet either unknown or imperfectly understood. Thus, the bark of cascara sagrada is known to contain certain resins, one of which is said to have a bitter taste, but their chemical nature is not known.[1] The rhizome of *Cimicifuga racemosa* has an acrid, bitter taste which has been attributed to a crystalline substance, racemonin, but it is not known to what constituent or constituents the activity of the rhizome is due. There are many other drugs of which our knowledge is incomplete and brief reference will be made to some of them. *Euphorbia pilulifera:* Investigations have so far failed to isolate any particular constituent. The chemical constitution of the acrid principle of mezereon bark, named "mezerein," is required; it has sternutatory properties and has been described as a greenish-brown amorphous resin. The flowers and root of *Arnica montana* have been found to contain a bitter principle, arnicin, consisting of minute yellow deliquescent crystals, but its constitution has not been decided, nor is it known whether the flowers contain, as has been stated, more arnicin than does the root. Of the bitter principle of chamomile flowers, termed "anthemic acid," little that is definite is known. The same applies to the purgative principle of the castor-oil seed; as the fixed oil possesses well-known mild purgative properties it is probable that at least some of this principle is extracted from the seeds with the oil. The latter consists of the glycerides of ricinoleic and ricin-isoleic acids, but whether these glycerides in their pure state or the fatty acids themselves are purgative or not is undecided. The cake that is left after the expression of the oil is more violent in its action than the whole seeds or the oil itself. From this cake a purgative substance, ricinone, has been isolated, as well as an extremely poisonous principle, ricin; the latter body belongs apparently to the class of albumoses; it produces inflammatory symptoms and is not purgative.[2] Little appears to be known definitely regarding the active principle of taraxacum root. It is desirable to know to what constituents its cholagogue and diuretic properties are due. A small quantity of a crystalline bitter substance, taraxacin, has been obtained from the root, also an acrid principle, neither of which, however, has been closely examined. The former constituent appears to be susceptible of decomposition, as the extract prepared from the fresh root is often almost devoid of bitterness. The medicinal virtues of the bladderwrack (*Fucus vesiculosus*) have been attributed solely to the presence of iodine and bromine. It is not improbable that this seaweed may also contain some organic constituent of importance. According to Eschle the iodine exists in the form of an organic compound similar in its nature to the iodine compound found in thyroid glands. A gelatin-like substance, algin, has also been obtained from this drug. It remains to be proved what is the most important constituent. Veratrine, as obtained from cevadilla this special type under the designation of 'feeble-minded.' I am still firmly convinced that this term should not be used n this restricted sense, but generally, and should embrace all classes and types of congenitally mentally deficient persons ...... and that our imbecile institutions should, as is done in America, call themselves 'schools for the feeble-minded'; by this means many parents who from one reason or other refuse to have their children branded as idiots would no longer hesitate to take the advantages which our institutions so ably afford." During the year 65 patients were discharged as relieved. "It is very gratifying to be able to report that some of these were much benefited by their period of residence, three being to a large extent self-supporting and one earning 25*s.* per week." The deaths during the year amounted to 15—viz., 11 males and four females, or 2·8 per cent. of the average number resident. Of the deaths, four each were due to epilepsy and phthisis, two to valvular disease of the heart, two to spinal caries, and one each to "scrofula, tuberculosis, and diarrhœa." There had been no infectious disease, with the exception of a few cases of chicken-pox. Important alterations and improvements have been made in the heating, lighting, ventilation, and sanitation of the building. The board of management states in its report that the work in progress for the above alterations and improvements will involve an expenditure of nearly £15,000. Among the donations received is a sum of £1000 from an anonymous donor. Various legacies have also been received during the year. A conference was held, by the invitation of the Duchess of Sutherland, at Stafford House on June 27th, 1901, of the chairmen, superintendents, and secretaries of the four following voluntary asylums for idiots and imbeciles, the institutions represented being Earlswood Asylum and the idiot asylums of Lancaster, Colchester, and Starcross (Exeter). The object of the conference was "to consider how far coöperation between institutions for imbeciles and the National Association for Promoting the Welfare of the Feeble-minded is practicable and desirable." Unfortunately, the conference ended without any practical results as to the object desired.

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[1] Compare Greenish's Materia Medica, to which reference has been made in this and other cases cited.

[2] Ibid., p. 160.

*Roxburgh, Berwick, and Selkirk District Asylum, Melrose* (*Report for the year ending May 15th, 1901*).—The average number of patients resident during the year was 307, comprising 142 males and 165 females. The admissions during the year amounted to 58—viz., 30 males and 28 females. Of these 42 were first admissions. Dr. J. Carlyle Johnstone, the medical superintendent, states in his report that the ordinary rate of board charged for private patients is £40 a year, but that patients in straitened circumstances are received at lower rates when the board of management is furnished with satisfactory proof that the full rate cannot be paid. "Owing to want of accommodation, however, admission continues to be refused to all private patients except such as cannot possibly be provided for in other asylums or elsewhere." Hereditary predisposition to mental disorder was ascertained to exist in 34 of the patients admitted, or 58 per cent. In 28 cases (48 per cent.) suicidal tendencies were present and of these patients six had made serious attempts to terminate their lives before entering the asylum. The physical condition of the patients admitted was good or average in nine cases, bad in 45 cases, and very bad in four cases. In about 50 per cent. of the admissions the patients suffered from some form or other of serious bodily disease. "As usual, there was a large proportion of aged, congenital and chronic, or relapsed cases, and in only a small percentage could ultimate recovery be expected, while from the nature of their bodily and mental infirmities many of the cases were such as to require skilled nursing and hospital treatment." The number of patients discharged as recovered during the year amounted to 15—viz., nine males and six females—or 4 8 per cent. of the average number resident. The deaths during the year amounted to 16—viz., 10 males and six females—or 5· per cent., as calculated on the same basis. Of the deaths one was due to aneurysm of the aorta, two to senile decay, four to pulmonary tuberculosis, five to general paralysis, and the rest to other causes. In 12 out of the 16 cases the cause of death was verified by post-mortem examination. The general health of the institution was good and there was no epidemic disorder. "The overcrowding of the male side continues," says Dr. Johnstone, "to increase. The arrangements afforded by the old wards for the treatment of recent and curable cases, the nursing of the sick, and the safeguarding of dangerous and anxious cases, are quite inadequate and unsuitable. The male patients do not, in fact, receive that quality of care and treatment ...... which can only be provided for them in an institution thoroughly equipped in accordance with those principles of science and humanity which govern the modern treatment of the insane. ...... Plans and specifications for the erection of a hospital block for male patients, of a similar description to the female hospital (which serves its purpose admirably), are now receiving the consideration of the board." The Commissioner in Lunacy states in his report that the general condition of the patients was highly satisfactory, that the medical case-books and records of necropsies were well kept, and that evidences of able and careful administration were everywhere apparent.

*Northumberland County Asylum* (*Report for the year ending March 31st, 1901*).—The average number of patients resident during the year was 634 and comprised 357 males and 277 females. The admissions during the year amounted to 181—viz., 90 males and 91 females. Of these 151 were first admissions. Dr. T. W. McDowall, the medical superintendent, states in his report that the admission-rate remains high and that many unfavourable cases continue to be received. "The average number resident was the highest since the opening of the asylum. This continued increase of male patients causes much overcrowding." For some years the work of the medical staff has been growing unduly heavy, and at the beginning of the year it was decided to appoint a female assistant medical officer for the female wards, and the appointment was made shortly afterwards. The number of patients discharged as recovered during the year amounted to 75—viz., 39 males and 36 females—or 11·8 per cent. of the average number resident. The deaths during the year amounted to 68, or 10·7 per cent., as calculated on the same basis. Of the deaths four were due to senile decay, five to melancholia, six to cardiac disease, 13 to general paralysis of the insane, 15 to phthisis and other forms of tuberculosis, and the rest to other causes. The Commissioners in Lunacy state in their report that the wards were clean and well furnished, the beds and dormitories in proper condition, the patients quiet and orderly and neatly clothed, and the medical records fully and intelligently kept. The committee of management state in its report that plans and estimates have been prepared for the erection of an isolation hospital. The rate of maintenance of pauper patients remains unchanged at 10*s.* 6*d.* per head per week.

## ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

A QUARTERLY meeting of the Royal College of Physicians of Edinburgh was held on Feb. 4th, Dr. T. R. Fraser, the President, being in the chair.—Dr. D. J. Graham was introduced and took his seat as a Fellow of the College.—Dr. F. J. Tresilian and Dr. J. R. Gilmour were admitted by ballot to the Fellowship of the College.—On a ballot three candidates were admitted to the Membership of the College, after examination.—The Registrar reported that since the last quarterly meeting 33 persons had obtained the Licence of the College by examination.—The Secretary reported that the Council had resolved to offer the Parkin Prize for competition during the current year, the subject to be, in terms of the bequest, "On the Curative Effects of Carbonic Acid Gas or other Forms of Carbon in Cholera, for Different Forms of Fever and Other Diseases." Essays will be received by the Secretary up to Dec. 31st, 1902.—Intimation was made that the Council had determined to defer the award of the Freeland Barbour Fellowship from February to May biennially.—The President announced that the Council had nominated the President and Vice-President for the time being to be delegates to the Fourteenth International Medical Congress at Madrid.—The Secretary read a statement which had been prepared by the Council and transmitted to the Secretary for War and the Secretary for Scotland, protesting against the proposed representation of Scotland on the Advisory Board of the Royal Army Medical Corps as not calculated to give the medical profession of Scotland, from whose medical schools a large percentage of successful candidates for the Royal Army Medical Corps is annually supplied, the confidence that is desirable in the work of the Board. The conviction was expressed that the proposed appointment would lead to widespread dissatisfaction.

# THE SANITARY INSTITUTE.

## DISCUSSION ON THE PREVENTION OF SMALL-POX IN LONDON.

AT a sessional meeting of the Sanitary Institute held in the Parkes Museum on Feb. 12th, under the chairmanship of Sir JAMES CRICHTON-BROWNE, Mr. A. WYNTER BLYTH opened a discussion on the Prevention of Small-pox in the Metropolis.

Mr. WYNTER BLYTH (medical officer of health of St. Marylebone) said that the various plagues which fell on man and beast occurred with a certain periodicity—that is to say, there were seasons of activity alternating with seasons of quiescence. In the latter periods inflammable material accumulated awaiting only a spark to flare up and be in part consumed. With regard to immunity from small-pox one attack of that disease usually immunised throughout life, but he had seen a man, aged 65 years, who was badly pitted from small-pox contracted when he was 20 years of age die from the confluent form of that malady. Vaccination inoculated a something so much akin to small-pox that it conferred the same kind of immunity but since a man might have small-pox twice it was foolish to expect a life-long immunity from a vaccination in childhood, for no one contended that vaccination protected longer or more efficiently than small-pox itself. Crude statistics threw unmerited discredit on revaccination. In the Sheffield epidemic there were 830 soldiers all of whom had been revaccinated some time or other. 12 of those men caught small-pox, but it was elicited that the revaccination in no one of the 12 had taken. Such a fact, to his mind, only showed that the operation ought to have been repeated and that it had not been properly performed. If one of the great scientific "magi" were to discover some wonderful fluid which would protect children from scarlet fever it would probably render scarlet fever no longer mainly a disease of children and the age-period most prone to the infection would be that from 15 to 25 years. The malady itself would also become rare from the lessened amount of infection. What he had pictured as possible with regard to scarlet fever had actually happened with regard to small-pox. The wonderful fluid that prevented small-pox had been discovered, but its influence as age advanced got weaker and weaker. He quoted statistics to show that as vaccination increased the incidence of the disease decreased in childhood but increased in adolescence. From preliminary statistics recently published by the Asylums Board he drew the conclusion that owing to the protection of vaccine lasting from five to 15 years the main incidence of small-pox was on adults, the least incidence being on children. This incidence, the effect of primary vaccination protecting children, was manifested in various local epidemics during past years. He contrasted the immunity of the revaccinated nurses in the small-pox hospitals with the rapidity with which small-pox spread in a partially protected community when the slightest chance contact bore fruit and from one single case 10 or even 20 others might have been directly derived. Discussing the influence of sanitary conditions on small-pox Mr. Blyth contended that no connexion had been established between insanitary conditions and the spread of small-pox in any epidemic. The one single condition that predominated over all sanitary ditions was the immunity acquired either from a previous of small-pox or from efficient vaccination. One of marked illustrations of this great truth was y an incident which occurred in the Leicester he small-pox hospital staff there consisted of ese 34 were more or less immune either from tion or a previous attack of small-pox. d persons, whose revaccination was n a mild attack of small-pox. Of ho refused revaccination five out pox and one died from the were exposed to precisely the he malady selected the only have selected as insuffi- uestion whether the what may be called Mr. Blyth declared ld be judged the orts of the local authorities to increase up to May and not decline until the first or second week in June. It was perfectly possible to arrest the epidemic in a single week. Beyond all disinfecting sprinklings, all cleansing of sewers, drains, and even persons, even beyond all hospital isolation, revaccination and vaccination formed the only potent preventive. In the romance of Samuel Butler entitled "Erewhon," a land was fabled in which illness of any kind was treated as criminal. However far-fetched such a notion with regard to maladies not arising from personal filth, immorality, or dissipation was, it was not so with regard to diseases which could be avoided by individual effort and which were dangerous to the public and seriously interfered with trade; such neglect was in its nature criminal and the time might come when it would be consistently treated as such. After isolation in hospital of a patient suffering from small-pox and after the usual disinfection and cleansing the question remained as to what should be done with those persons who had been in contact with the infectious sick and especially in regard to a class of persons homeless, generally very poor, and not a few amongst them indescribably filthy. The London County Council bribed such waifs to submit to virtual imprisonment to undergo quarantine. That at present was voluntary, but legislative enactment dealing with the matter was urgently needed.

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Sir JAMES CRICHTON-BROWNE said that the perfect unanimity of opinion on the part of the medical profession in connexion with the prevention of small-pox was very striking and ought in itself powerfully to impress public opinion.

Dr. J. F. J. SYKES (medical officer of health of St. Pancras) detailed the beneficial effects following the appointment of medical referees for diagnosis in doubtful cases of small-pox.

Dr. J. G. GLOVER said that he wished to ventilate the question as to the inadequacy of the existing machinery for public vaccination. He called to their remembrance that it had been shown that the lymph supplied by the Government had no absolute monopoly of security. Some two years ago an investigation into the quality of the lymph supplied by Government and by private firms was made by THE LANCET, and it came out most distinctly that there were seven or eight lymphs as pure as the Government lymph. They knew that in Great Britain it did not do to trust everything to the Government. He agreed, however, that there should be some public standard to secure the purity of lymph. Dr. Glover also pointed out that the fact of rich people sending to the public vaccinator to be vaccinated prevented that officer from spending his time in vaccinating the poor. He recalled the fact that Glasgow had stopped its epidemic of small-pox by house-to-house visitation for the purpose of vaccination.

Dr. P. C. SMITH (medical officer of health of Wandsworth) recommended compulsory vaccination for every "contact" they came across.

Mr. SHIRLEY F. MURPHY (medical officer of health of the Administrative County of London), Dr. W. A. BOND (medical officer of health of Holborn), Mr. H. W. G. MACLEOD, and Mr. W. G. KERSHAW also addressed the meeting, which terminated with a hearty vote of thanks to the Chairman

# ASYLUM REPORTS.

*Earlswood Asylum, Redhill, Surrey (Annual Report for 1900).*—The asylum admits idiots and imbeciles of higher mental grade. The average number of patients resident during the year was 529 and comprised 346 males and 183 females. The number of patients admitted during the year was 47—viz., 32 males and 15 females. Of the admissions six males and five females were over the age of 20 years, while the average age for males was 11·2 years and for females 16·14 years. A considerable proportion of the admissions, amounting to 23·4 per cent., consisted of epileptics—"a high rate for a class of case for which no prospect of permanent improvement can be offered." Dr. Charles Caldecott, the medical superintendent, states in his report that with the exception of epileptics the admissions are of a hopeful type for education and training. High-grade imbecile patients benefit to a great extent by the teaching and training received at the institution. "I regret," says Dr. Caldecott, "that persistent efforts should still be made to legislate for

# VITAL STATISTICS.

## HEALTH OF ENGLISH TOWNS.

In 76 of the largest English towns 9045 births and 5875 deaths were registered during the week ending Feb. 8th. The annual rate of mortality in these towns, which had been 17·7, 17·7, and 17·9 per 1000 in the three preceding weeks, further rose to 20·6 per 1000 last week. In London the death-rate was 22·5 per 1000, while it averaged 19·8 in the 75 other large towns. The lowest death-rates in these towns were 8·8 in Coventry, 9·6 in West Hartlepool, 12·5 in Derby, 12·9 in Grimsby, 13·1 in Hornsey, and 13·5 in East Ham; the highest rates were 26·0 in Burnley, 26·1 in Rotherham, 26·3 in Rhondda, 26·8 in Sunderland, 28 0 in Wigan and Preston, and 28 8 in Merthyr Tydfil. The 5875 deaths in these towns last week included 583 which were referred to the principal zymotic diseases, against 534 and 512 in the two preceding weeks; of these 583 deaths 129 resulted from whooping-cough, 127 from measles, 102 from diphtheria, 77 from small-pox, 60 from scarlet fever, 49 from "fever" (principally enteric), and 39 from diarrhœa. No death from any of these diseases was recorded in Hastings, Burton-on-Trent, Handsworth, Smethwick, Grimsby, Derby, Wallasey, Tynemouth, or Newport (Mon.); in the other towns the highest zymotic mortality occurred in East Ham, Bournemouth, Aston Manor, Rotherham, Stockton-on-Tees, and Rhondda. The greatest proportional mortality from measles was recorded in Rotherham, Stockton-on-Tees, and Merthyr Tydfil; from "fever" in South Shields and Gateshead; from diphtheria in Willesden, Portsmouth, Bournemouth, Hanley, and Cardiff; from whooping-cough in East Ham, Plymouth, Aston Manor, Liverpool, Stockton-on-Tees, and Rhondda; and from "fever" in Walsall and West Hartlepool. 64 deaths from small-pox of persons belonging to London were registered last week, seven of persons belonging to West Ham, three to Tottenham, and one each to Walthamstôw, Reading, and Swansea, but not one to any other of the 76 large towns. There were 1102 small-pox patients under treatment in the Metropolitan Asylums hospitals on Saturday, Feb. 8th, against 877, 870, and 1135 at the end of the three preceding weeks; 287 new cases were admitted during the week, against 213, 204, and 499 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 2500, against numbers decreasing from 3137 to 2554 on the six preceding Saturdays; 227 new cases were admitted during the week, against 288, 299, and 226 in the three preceding weeks. The deaths in London referred to diseases of the respiratory organs, which had been 307, 357, and 375 in the three preceding weeks, further rose last week to 486, and were 32 above the corrected average. Influenza was certified as the primary cause of 40 deaths in London last week, against 23, 18, and 26 in the three preceding weeks. The causes of 81, or 1·4 per cent., of the deaths in the 76 towns last week were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bolton, Salford, Newcastle, Cardiff, and 32 other smaller towns; the largest proportions of uncertified deaths were registered in Portsmouth, Birmingham, Liverpool, St. Helens, Warrington, Preston, Sheffield, and South Shields.

## HEALTH OF SCOTCH TOWNS.

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## ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING THE YEAR 1901.

*(Specially compiled for* THE LANCET.)

| CITIES AND BOROUGHS. | Estimated population in the middle of 1901. | NOTIFIED CASES OF INFECTIOUS DISEASE. | | | | | | | | | | | DEATHS FROM PRINCIPAL INFECTIOUS DISEASES. | | | | | | | | | | | Deaths from all causes | Death rate per 1000 living. | Deaths of infants under one year to 1000 births |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Small pox. | Scarlet fever. | Diphtheria * | Typhus fever. | Enteric fever. | Other continued fevers | Puerperal fever. | Erysipelas. | Cholera. | Total. | Annual rate per 1000 persons living. | Small pox. | Measles. | Scarlet fever. | Diphtheria * | Whooping-cough. | Typhus fever. | Enteric fever. | Other continued fevers | Diarrhœal diseases | Total. | Annual rate per 1000 persons living. | | | |
| LONDON... | 4,543,757 | 1702 | 18,390 | 12,154 | 20 | 3195 | 43 | 251 | 4606 | 3 | 40,369 | 8·9 | 229 | 1952 | 584 | 1330 | 1604 | 4 | 497 | 7 | 3900 | 10,107 | 2·22 | 77,663 | 17·1 | 148 |
| *West Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Paddington | 144,154 | 21 | 506 | 340 | — | 92 | — | 13 | 141 | — | 1113 | 7·7 | — | 9 | 11 | 46 | 52 | — | 15 | — | 116 | 249 | 1·72 | 2060 | 14·3 | 136 |
| Kensington | 176,787 | 15 | 476 | 251 | 2 | 99 | 8 | 10 | 171 | — | 1032 | 5·9 | 1 | 76 | 15 | 38 | 62 | 1 | 11 | — | 117 | 321 | 1·83 | 2675 | 15·2 | 163 |
| Hammersmith | 112,619 | 45 | 346 | 226 | — | 77 | 2 | 3 | 116 | — | 815 | 7·3 | 15 | 47 | 14 | 36 | 80 | — | 16 | — | 115 | 323 | 2·86 | 1914 | 17·0 | 168 |
| Fulham | 138,426 | 16 | 600 | 644 | — | 133 | 1 | 7 | 132 | 1 | 1534 | 11·1 | 3 | 38 | 20 | 48 | 77 | — | 20 | 2 | 181 | 389 | 2·81 | 2181 | 15·8 | 152 |
| Chelsea | 73,879 | 5 | 190 | 107 | — | 41 | — | 4 | 47 | — | 394 | 5·3 | 1 | 9 | 5 | 9 | 29 | — | 6 | — | 38 | 97 | 1·31 | 1223 | 16·6 | 138 |
| City of Westminster | 182,502 | 100 | 478 | 255 | — | 105 | 2 | 6 | 117 | — | 1063 | 5·8 | 16 | 59 | 11 | 21 | 48 | — | 20 | — | 70 | 245 | 1·34 | 2906 | 16·0 | 135 |
| *North Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| St. Marylebone | 133 060 | 79 | 397 | 259 | — | 82 | — | 4 | 183 | — | 1004 | 7·6 | 7 | 9 | 18 | 33 | 40 | — | 8 | — | 104 | 219 | 1·65 | 2207 | 16·6 | 107 |
| Hampstead | 82,287 | 7 | 219 | 153 | — | 50 | 1 | 5 | 48 | — | 483 | 5·9 | 2 | 1 | 4 | 20 | 24 | — | 7 | — | 26 | 84 | 1·02 | 874 | 10·7 | 104 |
| St. Pancras | 235,297 | 256 | 991 | 942 | — | 186 | 2 | 13 | 253 | — | 2643 | 11·3 | 41 | 68 | 33 | 109 | 87 | — | 30 | — | 195 | 563 | 2·39 | 4291 | 18·3 | 154 |
| Islington | 335,325 | 62 | 1291 | 913 | 2 | 281 | 4 | 33 | 286 | — | 2572 | 8·6 | 8 | 157 | 30 | 132 | 90 | — | 47 | — | 198 | 662 | 1·97 | 5364 | 16·0 | 140 |
| Stoke Newington | 51,328 | 19 | 172 | 144 | — | 26 | — | 4 | 41 | — | 406 | 7·9 | 3 | 8 | 4 | 14 | 6 | — | 5 | — | 25 | 65 | 1·28 | 674 | 13·2 | 115 |
| Hackney | 219,780 | 41 | 933 | 978 | 1 | 192 | 1 | 16 | 327 | 1 | 2490 | 11·4 | 5 | 94 | 26 | 97 | 50 | — | 20 | — | 179 | 471 | 2·15 | 3455 | 15·8 | 125 |
| *Central Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Holborn | 59,205 | 216 | 258 | 167 | 1 | 39 | — | 2 | 89 | — | 772 | 13·1 | 30 | 23 | 3 | 15 | 10 | — | 12 | — | 42 | 135 | 2·28 | 1186 | 20·1 | 124 |
| Finsbury | 101,253 | 93 | 502 | 297 | — | 63 | 1 | 5 | 135 | — | 1101 | 10·9 | 7 | 48 | 18 | 36 | 38 | — | 11 | — | 121 | 279 | 2·78 | 2166 | 21·4 | 142 |
| City of London | 26,627 | 8 | 110 | 67 | — | 21 | — | 1 | 13 | — | 220 | 8·3 | 2 | 1 | 4 | 8 | 2 | — | 3 | — | 8 | 28 | 1·06 | 534 | 20·1 | 175 |
| *East Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Shoreditch | 118,554 | 18 | 557 | 326 | — | 97 | 10 | 6 | 142 | — | 1156 | 9·8 | 5 | 75 | 20 | 29 | 60 | — | 10 | — | 155 | 354 | 2·99 | 2591 | 21·9 | 197 |
| Bethnal Green | 129,700 | 32 | 841 | 463 | 1 | 103 | 2 | 8 | 211 | — | 1666 | 12·9 | 2 | 88 | 44 | 63 | 38 | — | 19 | 1 | 117 | 372 | 2·88 | 2628 | 20·3 | 153 |
| Stepney | 298,884 | 161 | 1177 | 845 | 2 | 267 | — | 16 | 372 | — | 2840 | 9·5 | 22 | 180 | 42 | 76 | 93 | 1 | 44 | — | 298 | 761 | 2·54 | 6218 | 20·9 | 163 |
| Poplar | 168,887 | 71 | 561 | 619 | — | 173 | — | 6 | 187 | — | 1617 | 9·6 | 10 | 89 | 14 | 83 | 79 | — | 26 | — | 213 | 514 | 3·04 | 3364 | 20·0 | 165 |
| *South Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Southwark | 206,219 | 89 | 1301 | 558 | — | 135 | — | 5 | 242 | — | 2330 | 11·3 | 14 | 161 | 54 | 53 | 98 | — | 18 | — | 222 | 620 | 3·02 | 4416 | 21·5 | 168 |
| Bermondsey | 130,348 | 107 | 932 | 330 | 1 | 150 | — | 5 | 155 | — | 1680 | 12·9 | 14 | 81 | 44 | 37 | 57 | — | 22 | — | 122 | 377 | 2·90 | 2718 | 20·9 | 169 |
| Lambeth | 302,460 | 51 | 1039 | 527 | — | 144 | 6 | 14 | 239 | 1 | 2021 | 6·7 | 4 | 122 | 38 | 51 | 115 | — | 23 | 3 | 293 | 649 | 2·15 | 5204 | 17·3 | 139 |
| Battersea | 169,364 | 53 | 602 | 267 | — | 91 | — | 8 | 126 | — | 1147 | 6·8 | 2 | 132 | 10 | 20 | 81 | — | 18 | — | 202 | 465 | 2·76 | 2773 | 16·4 | 163 |
| Wandsworth | 233,943 | 32 | 689 | 478 | — | 99 | 1 | 14 | 225 | — | 1538 | 6·6 | 3 | 65 | 17 | 41 | 62 | — | 16 | 1 | 157 | 362 | 1·55 | 3118 | 13·4 | 132 |
| Camberwell | 259,897 | 54 | 1474 | 867 | — | 155 | 1 | 19 | 228 | — | 2793 | 10·8 | 7 | 152 | 47 | 112 | 84 | — | 25 | — | 204 | 631 | 2·44 | 4268 | 16·5 | 142 |
| Deptford | 110,732 | 4 | 549 | 427 | 9 | 63 | 2 | 2 | 111 | — | 1167 | 10·6 | 1 | 53 | 17 | 37 | 50 | 2 | 10 | — | 104 | 274 | 2·48 | 1818 | 16·5 | 146 |
| Greenwich | 96,183 | 11 | 419 | 188 | — | 68 | — | 6 | 110 | — | 802 | 8·4 | 3 | 55 | 5 | 22 | 39 | — | 10 | — | 75 | 209 | 2·17 | 1463 | 15·3 | 130 |
| Lewisham | 123,423 | 12 | 465 | 299 | 1 | 61 | 1 | 8 | 86 | — | 933 | 7·3 | — | 31 | 11 | 24 | 28 | — | 13 | — | 104 | 211 | 1·65 | 1065 | 13·0 | 129 |
| Woolwich | 117,619 | 23 | 310 | 217 | — | 69 | 1 | 8 | 70 | — | 698 | 6·0 | 1 | 21 | 5 | 20 | 20 | — | 12 | — | 99 | 178 | 1·51 | 1709 | 14·6 | 129 |
| Port of London | — | 1 | 5 | — | — | 23 | 2 | — | 3 | — | 34 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

* Including membranous croup.

of scarlet fever during the year under notice was considerably greater than in the preceding year; the number of new cases notified being 18,390, against 16,894, 18,094, and 13,809 in the three preceding years. Among the various metropolitan boroughs scarlet fever was proportionately most prevalent in Finsbury, Shoreditch, Bethnal Green, Southwark, Bermondsey, Camberwell, and Deptford. During last year 14,959 scarlet fever patients were admitted into the Metropolitan Asylums Hospitals, against 12,480, 13,641, and 10,734 in the three preceding years; the number of cases under treatment, which had been 2883, 2797, and 2460 at the end of the three preceding years, had risen again to 3080 on Saturday, Dec. 28th, 1901. The prevalence of diphtheria during last year showed a slight increase over that recorded in the preceding year, 12,154 new cases being notified, against 13,692 and 11,994 in the two preceding years. The greatest proportional prevalence of this disease occurred in Fulham, St. Pancras, Hackney, Bethnal Green, Poplar, Camberwell, and Deptford. The Metropolitan Asylums Hospitals contained 1369 diphtheria patients at the end of the year, against 1674 and 1343 at the end of the two preceding years; the new cases admitted, which had numbered 8777 in the preceding year, rose to 9090 during 1901. Enteric fever showed a considerably diminished prevalence last year, only 3195 cases being notified, against 4456 and 4306 respectively in the two preceding years; among the various metropolitan boroughs this disease was proportionally most prevalent in Fulham, Hackney, Bethnal Green, Stepney, Poplar, and Bermondsey. The number of enteric fever patients admitted into the Metropolitan Asylums Hospitals during 1901 was 1480, against 1116, 1835, and 2074 in the three preceding years; 195 es remained under treatment at the end of December gainst 406 and 403 at the end of the two preceding Erysipelas showed the highest proportional prevalence last year in Hackney, Holborn, Finsbury, Bethnal , Stepney, Southwark, and Bermondsey. The 251 fied cases of puerperal fever showed an increase of 14 er the number recorded during 1900; 33 cases belonged to slington, 19 to Camberwell, 16 to Hackney, 16 to Stepney, 14 to Lambeth, 14 to Wandsworth, 13 to Paddington, and 13 to St. Pancras.

During the year under notice the deaths of 77,663 persons belonging to London were registered, equal to an annual rate of 17·1 per 1000, against 18·5, 19·6, and 18·7 in the three preceding years, 1898, 1899, and 1900; the average rate in the 10 years 1891–1900 being 19·2 per 1000. In the various metropolitan boroughs the lowest death-rates were 10·7 in Hampstead, 13·0 in Lewisham, 13·2 in Stoke Newington, 13·4 in Wandsworth, 14·3 in Paddington, and 14·6 in Woolwich; and the highest rates 20·3 in Bethnal Green, 20·9 in Stepney and in Bermondsey, 21·4 in Finsbury, 21·5 in Southwark, and 21·9 in Shoreditch. Taking the five groups of boroughs the rates of mortality during 1901 were 15·7 in the west, 16·0 in the north, 16·7 in the south, 20·7 in the east, and 20·8 in the central. To the principal zymotic diseases 10,107 deaths were attributed during the year; of these, 3900 resulted from diarrhœal diseases, 1952 from measles, 1604 from whooping-cough, 1330 from diphtheria, 584 from scarlet fever, 508 from different forms of "fever" (including four from typhus, 497 from enteric fever, and seven from simple continued fever), and 229 from small-pox. These 10,107 deaths were equal to an annual rate of 2·22 per 1000, against 2·84, 2·52, and 2·24 in the three preceding years. Among the various metropolitan boroughs the zymotic death-rates ranged from 1·02 in Hampstead, 1·06 in the City of London, 1·28 in Stoke Newington, 1·31 in Chelsea, 1·34 in City of Westminster, 1·51 in Woolwich, and 1·55 in Wandsworth, to 2·86 in Hammersmith, 2·88 in Bethnal Green, 2·90 in Bermondsey, 2·99 in Shoreditch, 3·02 in Southwark, and 3·04 in Poplar. The 229 fatal cases of small-pox showed an excess of 186 over the corrected average number in the 10 preceding years; the greatest proportional mortality from this disease occurred in Hammersmith, City of Westminster, St. Pancras, Holborn, Stepney, Southwark, and Bermondsey. The 1952 deaths referred to measles were 707 below the average number in the 10 preceding years; among the various metropolitan boroughs the disease was proportionally most fatal in Shoreditch, Bethnal Green, Stepney, Southwark, Bermondsey, and Battersea. The 584 fatal cases of scarlet fever showed a decline of 275 from the corrected decennial average, the highest death-rates from this disease being recorded in Finsbury, Shoreditch, Bethnal Green, Southwark, Bermondsey, and Camberwell. The 1330 deaths referred to diphtheria were 918 below the average number in the 10 preceding years; among the various metropolitan boroughs this disease was proportionately most fatal in St. Pancras, Islington, Hackney, Bethnal Green, Poplar, and Camberwell. The 1604 fatal cases of whooping-cough showed a decline of 679 from the corrected average number; this disease showed the highest proportional fatality in Hammersmith, Fulham, Shoreditch, Poplar, Southwark, and Battersea. The 508 deaths referred to different forms of "fever" were 120 below the average number in the 10 preceding years; among the various metropolitan boroughs the fever death-rate was highest in Fulham, Holborn, Bethnal Green, Stepney, Poplar, and Bermondsey. The 3900 deaths from diarrhœal diseases exceeded the average number by nearly 400; the greatest proportional mortality from these diseases occurred in Fulham, Finsbury, Shoreditch, Poplar, Southwark, and Battersea. In conclusion, it may be stated that the mortality in London during 1901 from the zymotic diseases in the aggregate was 17·1 per cent. below the average.

Infant mortality in London last year, measured by the proportion of deaths under one year of age to registered births, was equal to 148 per 1000, against 166, 166, and 158 in the three preceding years. The rates of infant mortality in the various metropolitan boroughs ranged from 104 in Hampstead, 107 in St. Marylebone, 115 in Stoke Newington, 124 in Holborn, and 129 in Lewisham and in Woolwich; the highest rates were 165 in Poplar, 168 in Hammersmith and in Southwark, 169 in Bermondsey, 175 in the City of London, and 197 in Shoreditch.

## THE SERVICES.

### ARMY MEDICAL SERVICE.

Surgeon-General Henry S. Muir, C.B., is placed on retired pay. Dated Jan. 1st, 1902.

### ROYAL ARMY MEDICAL CORPS.

Captain J. Grech will shortly re-embark for South Africa.

Lieutenant J. H. Robinson is appointed to the charge of the Station Hospital at Fort Attock.

Lieutenant-Colonel Christopher William Moore Keys is placed on retired pay. Dated Dec. 26th, 1901.

The undermentioned Captains to be Majors (dated Feb. 1st, 1902:—William Thomas Mould, Alfred William Bewley, Charles Alfred Stone, Herbert Edmond Winter, and Lewis Way.

The undermentioned Lieutenants to be Captains (dated Jan. 28th, 1902): Harold Percy Waller Barrow, John Edward Hodgson, Alec Lauriston Scott, Lionel Edmund Longworth Parker, James Geoffrey Gill, Matthew Henry Gregson Fell, Gerald Hamilton Goddard, William Bertram Winkfield, Thomas Campion Lauder, Jonas William Leake, John William Hobart Houghton, Duncan Edward Curme, Herbert Stockley Taylor, George Mills Goldsmith, Richard Harte Lloyd, David Harvey, John Macfarl Sloan, Henry Evered Haymes, Francis John Brakenrid George Constantine Phipps, Nathaniel John Crawford tterford, Gilbert John Anthony Ormsby, Harry Dixo Packer, Lawrence Humphrey, Robert Stuart Rodger, William Watson Scarlett, Horace Kemp Palmer, Arthur O Bird Wroughton, and Frank Ashe.

Lieutenant Joseph R. Welland is seconded f service in Somaliland. Dated Jan. 3rd, 1902.

### VOLUNTEER CORPS.

*Rifle*: 1st Volunteer Battalion the North berland Fusiliers: Surgeon-Lieutenant H. Dickie to be Surgeon-Captain. 4th Volunteer Battalion the East Surr Regiment: Surgeon-Lieutenant C. J. Martin to be Surgeon-Captain. 1st Nottinghamshire (Robin Hood): Surgeon-Lieutenant R. H. Cordeux to be Surgeon-Captain. 1st (Inverness-shire Highland) Volunteer Battalion the Queen's Own Cameron Highlanders: Brigade-Surgeon-Lieutenant-Colonel O. Grant is seconded whilst serving on the staff of a Volunteer Infantry Brigade.

### ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

The London Companies: Captain F. J. L. Warwick is appointed Transport Officer to the Division.

## ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING THE YEAR 1901.

(*Specially compiled for* THE LANCET.)

| CITIES AND BOROUGHS. | Estimated population in the middle of 1901. | NOTIFIED CASES OF INFECTIOUS DISEASE. | | | | | | | | | | | DEATHS FROM PRINCIPAL INFECTIOUS DISEASES. | | | | | | | | | | | Deaths from all causes | Death rate per 1000 living. | Deaths of infants under one year to 1000 births. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Small pox. | Scarlet fever. | Diphtheria * | Typhus fever. | Enteric fever. | Other continued fevers | Puerperal fever. | Erysipelas. | Cholera. | Total. | Annual rate per 1000 persons living | Small pox. | Measles. | Scarlet fever. | Diphtheria * | Whooping-cough. | Typhus fever. | Enteric fever. | Other continued fevers. | Diarrhœal diseases | Total. | Annual rate per 1000 persons living. | | | |
| LONDON... ... ... ... ... ... ... | 4,543,757 | 1702 | 18,390 | 12,154 | 20 | 3195 | 43 | 251 | 4606 | 3 | 40,369 | 8·9 | 229 | 1952 | 584 | 1330 | 1604 | 4 | 497 | 7 | 3900 | 10,107 | 2·22 | 77,663 | 17·1 | 148 |
| *West Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Paddington ... ... ... ... ... ... | 144,154 | 21 | 506 | 340 | — | 92 | — | 13 | 141 | — | 1113 | 7·7 | — | 9 | 11 | 46 | 52 | — | 15 | — | 116 | 249 | 1·72 | 2060 | 14·3 | 136 |
| Kensington ... ... ... ... ... ... | 176,787 | 15 | 476 | 251 | 2 | 99 | 8 | 10 | 171 | — | 1032 | 5·9 | 1 | 76 | 15 | 38 | 62 | 1 | 11 | — | 117 | 321 | 1·83 | 2675 | 15·2 | 163 |
| Hammersmith ... ... ... ... ... | 112,619 | 45 | 346 | 226 | — | 77 | 2 | 3 | 116 | — | 815 | 7·3 | 15 | 47 | 14 | 36 | 80 | — | 16 | — | 115 | 323 | 2·86 | 1914 | 17·0 | 168 |
| Fulham ... ... ... ... ... ... ... | 138,426 | 16 | 600 | 644 | — | 133 | 1 | 7 | 132 | 1 | 1534 | 11·1 | 3 | 38 | 20 | 48 | 77 | — | 20 | 2 | 181 | 389 | 2·81 | 2181 | 15·8 | 152 |
| Chelsea ... ... ... ... ... ... ... | 73,879 | 5 | 190 | 107 | — | 41 | — | 4 | 47 | — | 394 | 5·3 | 1 | 9 | 5 | 9 | 29 | — | 6 | — | 38 | 97 | 1·31 | 1223 | 16·6 | 138 |
| City of Westminster ... ... ... ... | 182,502 | 100 | 478 | 255 | — | 105 | 2 | 6 | 117 | — | 1063 | 5·8 | 16 | 59 | 11 | 21 | 48 | — | 20 | — | 70 | 245 | 1·34 | 2906 | 16·0 | 135 |
| *North Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| St. Marylebone ... ... ... ... ... | 133,060 | 79 | 397 | 259 | — | 82 | — | 4 | 183 | — | 1004 | 7·6 | 7 | 9 | 18 | 33 | 40 | — | 8 | — | 104 | 219 | 1·65 | 2207 | 16·6 | 107 |
| Hampstead ... ... ... ... ... ... | 82,287 | 7 | 219 | 153 | — | 50 | 1 | 5 | 48 | — | 483 | 5·9 | 2 | 1 | 4 | 20 | 24 | — | 7 | — | 26 | 84 | 1·02 | 874 | 10·7 | 104 |
| St. Pancras ... ... ... ... ... ... | 235,297 | 256 | 991 | 942 | — | 186 | 2 | 13 | 253 | — | 2643 | 11·3 | 41 | 68 | 33 | 109 | 87 | — | 30 | — | 195 | 563 | 2·39 | 4291 | 18·3 | 154 |
| Islington ... ... ... ... ... ... | 335,325 | 62 | 1291 | 913 | 2 | 281 | 4 | 33 | 286 | — | 2572 | 8·6 | 8 | 157 | 30 | 132 | 90 | — | 47 | — | 198 | 662 | 1·97 | 5364 | 16·0 | 140 |
| Stoke Newington ... ... ... ... ... | 51,328 | 19 | 172 | 144 | — | 26 | — | 4 | 41 | — | 406 | 7·9 | 3 | 8 | 4 | 14 | 6 | — | 5 | — | 25 | 65 | 1·28 | 674 | 13·2 | 115 |
| Hackney ... ... ... ... ... ... ... | 219,780 | 41 | 933 | 978 | 1 | 192 | 1 | 16 | 327 | 1 | 2490 | 11·4 | 5 | 94 | 26 | 97 | 50 | — | 20 | — | 179 | 471 | 2·15 | 3455 | 15·8 | 135 |
| *Central Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Holborn ... ... ... ... ... ... ... | 69,205 | 216 | 258 | 167 | 1 | 39 | — | 2 | 89 | — | 772 | 13·1 | 30 | 23 | 3 | 15 | 10 | — | 12 | — | 42 | 135 | 2·28 | 1186 | 20·1 | 124 |
| Finsbury ... ... ... ... ... ... ... | 101,233 | 93 | 502 | 297 | — | 68 | 1 | 5 | 135 | — | 1101 | 10·9 | 7 | 48 | 18 | 36 | 38 | — | 11 | — | 121 | 279 | 2·78 | 2166 | 21·4 | 142 |
| City of London ... ... ... ... ... | 26,627 | 8 | 110 | 67 | — | 21 | — | 1 | 13 | — | 220 | 8·3 | 2 | 1 | 4 | 8 | 2 | — | 3 | — | 8 | 28 | 1·06 | 534 | 20·1 | 175 |
| *East Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Shoreditch ... ... ... ... ... ... | 118,554 | 18 | 557 | 326 | — | 97 | 10 | 6 | 142 | — | 1156 | 9·8 | 5 | 75 | 20 | 29 | 60 | — | 10 | — | 155 | 354 | 2·99 | 2591 | 21·9 | 197 |
| Bethnal Green ... ... ... ... ... | 129,700 | 32 | 841 | 463 | 1 | 103 | 2 | 8 | 211 | — | 1666 | 12·9 | 2 | 88 | 44 | 63 | 38 | — | 19 | 1 | 117 | 372 | 2·88 | 2628 | 20·3 | 153 |
| Stepney ... ... ... ... ... ... ... | 298,884 | 161 | 1177 | 845 | 2 | 267 | — | 16 | 372 | — | 2840 | 9·5 | 22 | 180 | 42 | 76 | 93 | 1 | 44 | — | 298 | 761 | 2·54 | 6218 | 20·9 | 163 |
| Poplar ... ... ... ... ... ... ... | 168,887 | 71 | 561 | 619 | — | 173 | — | 6 | 187 | — | 1617 | 9·6 | 10 | 89 | 14 | 83 | 79 | — | 26 | — | 213 | 514 | 3·04 | 3364 | 20·0 | 165 |
| *South Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Southwark ... ... ... ... ... ... | 206,219 | 89 | 1301 | 558 | — | 135 | — | 5 | 242 | — | 2330 | 11·3 | 14 | 161 | 54 | 53 | 93 | — | 18 | — | 222 | 620 | 3·02 | 4416 | 21·5 | 168 |
| Bermondsey ... ... ... ... ... ... | 130,348 | 107 | 932 | 330 | 1 | 150 | — | 5 | 155 | — | 1680 | 12·9 | 14 | 81 | 44 | 37 | 57 | — | 22 | — | 122 | 377 | 2·90 | 2718 | 20·9 | 169 |
| Lambeth ... ... ... ... ... ... ... | 302,460 | 51 | 1039 | 527 | — | 144 | 6 | 14 | 239 | 1 | 2021 | 6·7 | 4 | 122 | 38 | 51 | 115 | — | 23 | 3 | 293 | 649 | 2·15 | 5204 | 17·3 | 139 |
| Battersea ... ... ... ... ... ... ... | 169,364 | 53 | 602 | 267 | — | 91 | — | 8 | 126 | — | 1147 | 6·8 | 2 | 132 | 10 | 20 | 81 | — | 18 | — | 202 | 465 | 2·76 | 2773 | 16·4 | 163 |
| Wandsworth ... ... ... ... ... ... | 233,943 | 32 | 689 | 473 | — | 99 | 1 | 14 | 225 | — | 1538 | 6·6 | 3 | 65 | 17 | 41 | 62 | — | 16 | 1 | 157 | 362 | 1·55 | 3118 | 13·4 | 132 |
| Camberwell ... ... ... ... ... ... | 259,897 | 54 | 1474 | 867 | — | 155 | 1 | 19 | 228 | — | 2798 | 10·8 | 7 | 152 | 47 | 112 | 84 | — | 25 | — | 204 | 631 | 2·44 | 4268 | 16·5 | 142 |
| Deptford ... ... ... ... ... ... ... | 110,732 | 4 | 549 | 427 | 9 | 63 | 2 | 2 | 111 | — | 1167 | 10·6 | 1 | 53 | 17 | 37 | 50 | 2 | 10 | — | 104 | 274 | 2·48 | 1818 | 16·5 | 146 |
| Greenwich ... ... ... ... ... ... | 96,183 | 11 | 419 | 188 | — | 68 | — | 6 | 110 | — | 802 | 8·4 | 3 | 65 | 5 | 22 | 39 | — | 10 | — | 75 | 209 | 2·17 | 1463 | 15·3 | 130 |
| Lewisham ... ... ... ... ... ... | 128,423 | 12 | 465 | 299 | 1 | 61 | 1 | 8 | 86 | — | 933 | 7·3 | — | 31 | 11 | 24 | 28 | — | 13 | — | 104 | 211 | 1·65 | 1665 | 13·0 | 129 |
| Woolwich... ... ... ... ... ... ... | 117,619 | 23 | 310 | 217 | — | 69 | 1 | 8 | 70 | — | 698 | 6·0 | 1 | 21 | 5 | 20 | 20 | — | 12 | — | 99 | 178 | 1·51 | 1709 | 14·6 | 129 |
| Port of London ... ... ... ... ... | — | 1 | 5 | — | — | 23 | 2 | — | 3 | — | 34 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

* Including membranous croup

Again, from the patient's point of view it is much less distress to have the chest-piece of a binaural lightly on one's tender chest than to have a man pressing at the end of a wooden instrument. In this I can speak from experience of the chest end of the stethoscope. I am sorry Dr. Syers's criticisms are so belated; 20 years ago they would have been almost in time to have influenced perhaps a few men to avoid these "new-fangled toys," but, alas, the times move, and the obvious thing to do is to teach students to diagnose with such imperfect instruments as we have nowadays.

I am, Sirs, yours faithfully,
Feb. 10th, 1902. A. CHARPENTIER, M.D. Durh., D.P.H.

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## SUPERANNUATION OF POOR-LAW OFFICERS.

*To the Editors of* THE LANCET.

SIRS,—The actuarial report on the Poor Law Superannuation Bill (Ireland) has now been made public. It is based to a considerable extent on assumptions. First, that the salaries of poor-law officials are subject, as a matter of course, to a periodical and substantial increase. The past history of salary increments shows that they are rarely increased, and therefore the claims upon the pension fund would fall much below the sum named by the actuary. Secondly, that poor-law officials do not resign or otherwise cease to hold office, or that they do not die before reaching the pensionable age of 65 years. Probably Dr. Howell had no data upon which to base a reliable report in this respect. They are facts nevertheless, and must have an important bearing on the average payments from the fund. The percentage deductions in the English Act of 1896 embodied in the present Bill were based upon the percentages adopted by large public bodies in England for the superannuation of their officers—e.g., the Corporation of London, the Liverpool Corporation, the North-Western Railway, the North-Eastern railway, the School Boards, the Metropolitan Board of Works, and the London County Council. It was not expected that the fund created by the deductions from income would at first be sufficient to meet all claims. There was, however, reason to believe, from the experience of other similar funds under the management of the public bodies mentioned, that the percentages would be found sufficient more than to cover the proportion of the superannuation fund which Poor-law officers should be asked to bear; more particularly so having regard to the equitable claim already possessed by some of these officers under existing Acts. The actuarial report further states that in the event of the Bill becoming law it was absolutely necessary that the fund should be a national and not a union fund. This would be a most advisable arrangement, inasmuch as Clause 4 of the proposed Bill provides that all service, whether continuous or not, shall be aggregated.

I am, Sirs, yours faithfully,
Irish Medical Association, Feb. 8th, 1902. THOMAS GICK.

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## FUNERALS IN INCLEMENT WEATHER.

*To the Editors of* THE LANCET.

SIRS,—In inclement weather might not all the Funeral Service, except the words of committal and the grace, be said in the church or cemetery chapel?

I am, Sirs, yours faithfully,
F. LAWRENCE,
Honorary Secretary, Funeral Reform Association.
Westow Vicarage, York, Feb. 10th, 1902.

## PROPOSED WATER BOARD FOR LONDON.

*To the Editors of* THE LANCET.

SIRS,—The very important remarks contained in the leading article on "The Metropolitan Water-supply," in THE LANCET of Feb. 8th, p. 384, cannot but prove valuable to all concerned. It appears to me, therefore, that now is the time that the present position and condition of the mains and service pipes now used in carrying the water from the various companies' reservoirs to the users (especially in central London) should be seriously considered, because (beyond the question of loss by leakage underground from unsound pipes, joints, valves, connexions, &c.) there cannot be much doubt that if an absolutely pure sterile water should ultimately be turned into the present system of distributing mains and service pipes it would be rendered far more unwholesome and unfit for dietetic use than the worst of the present waters used in the metropolis. Provision should be made for a new system of mains and services for wholesome waters, carried in properly constructed and well-ventilated subways, and thus safe from the filthy surroundings in which all the present mains and services are buried.

Should the new water-supply be separated in the manner I propose not only would an enormous amount of underground loss be saved, but also a very large amount of inconvenience.

I am, Sirs, yours faithfully,
*Ebury-street, S.W., Feb. 8th, 1902.* D. T. BOSTEL, Sen.

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## TWO CASES OF SOLID ABDOMINAL TUMOUR WITH ASCITES.

*To the Editors of* THE LANCET.

SIRS,—Dr. T. W. Eden in his clinical lecture on "Two Cases of Solid Abdominal Tumour with Ascites," published in THE LANCET of Feb. 8th, p. 349, mentions that "an extended search in text-books and monographs and in the transactions of obstetrical societies has only revealed one such case, recorded by Thomas Keith." Dr. Eden possibly has overlooked a case reported by me in the *British Medical Journal*, Dec. 21st, 1900, p. 1773: "Notes on a Case of Profuse Hydroperitoneum complicating Uterine Fibroids." I am, Sirs, yours faithfully,
A. C. BUTLER-SMYTHE, F.R.C.S. Edin.
Brook-street, W., Feb. 12th, 1902.

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## DIFFICULTIES UNDER THE INFECTIOUS DISEASES (NOTIFICATION) ACT.

*To the Editors of* THE LANCET.

SIRS,—Some days ago I, as medical officer of health, received a notification from a medical practitioner notifying that E. R. was suffering from diphtheria. On the form, at foot, was written, "This child is suffering from scarlatina as well as diphtheria, see next form." The next form inclosed with the other was a notification that E. R. was suffering from diphtheria. Would you be good enough to let me know whether the notifier is entitled to two fees? Am I to make a double entry as regards the child? If so, I have apparently two cases, instead of one, ill at the same time.

I am, Sirs, yours faithfully,
Jan. 30th, 1902. H. W.

⁂ The practitioner notifying is entitled to a fee for each disease notified, albeit the two diseases here in question existed simultaneously in the same individual. Had, say, a month elapsed between the two notifications "H. W." would have had no hesitation as to his line of action, and there is no time-limit laid down by the statutes. Possibly, the present law in this particular may eventually be modified, seeing that the control of the patient is the chief object to be attained by notification; but as the law now stands two fees can be claimed. We assume, of course, that "H. W." has no reason to question the *bonâ fide* nature of the notifications. A double entry should be made and an explanatory note appended. We suppose that the second form was a notification of scarlet fever, and not, as the letter reads, of diphtheria.—ED. L.

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## LABELS AND LIABILITIES.

*To the Editors of* THE LANCET.

SIRS,—So far as the law is concerned little doubt can be raised in the matter which you discussed last week under this heading (p. 387). Certain articles are scheduled as poisons and these may only be handed to the public on certain conditions. Moreover, they may only be so handed either by qualified medical practitioners or by chemists registered under the Pharmacy Act. For one set of poisons these conditions are that the person wishing to obtain the drug in question shall be either personally known to the person dispensing the drug or

### VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

Surgeon-General Taylor, C.B., will present medals to the members of this school who served in the Rhodesian Field Hospital at the London Scottish headquarters, Buckingham-gate, S.W., at 9 P.M. on Monday, Feb. 17th.

### VOLUNTEER MEDICAL STAFF CORPS.

The annual distribution of prizes to members of the Volunteer Medical Staff Corps will take place at the headquarters, 51, Calthorpe-street, London, W.C., on Saturday, March 1st, at 8 P.M., when Surgeon-General Taylor, C.B., will preside. A dance will follow the distribution of prizes.

### SOUTH AFRICAN WAR NOTES.

Lieutenant A. O. B. Wroughton, R.A.M.C., is reported progressing favourably and out of danger at Queenstown (Feb. 9th).

Civil Surgeon Bensusan is reported out of danger (Feb. 7th).

Civil Surgeon Fort is reported slightly worse (Feb. 7th).

### AFFAIRS IN SOUTH AFRICA.

The purely military news from South Africa during the past week is somewhat mixed but is indicative of increased activity on both sides with the balance of advantage, on the whole, on the side of the British. The "wearing down" process as regards the Boer forces has been going on, and still seems to be going on at an accelerated pace, and that appears to sum up the situation. The main object of the carefully designed operations for surrounding and capturing that redoubtable tactician De Wet and his force in the Heilbron and Kroonstadt district distinctly failed. De Wet, taking advantage of a dark night, stampeded a herd of cattle against a part of the blockhouse line, broke through it, and made his escape. The War Office return of casualties reported since the beginning of the war up to and including last month shows that the total reduction of the military forces in South Africa, including deaths from all causes, missing, prisoners, and invalids who have been discharged from the service as unfit, amounts to 25,305, counting officers, non-commissioned officers, and men. As regards the forces now in the field it will be seen by the published sick returns that there is still a good deal of enteric fever, but that the health of the troops, speaking generally, is satisfactory.

### THE MILITIA AND VOLUNTEER MEDICAL STAFF CORPS: CHANGES IN DESIGNATION.

The King, in consideration of the valuable services rendered by the Militia Medical Staff Corps and Volunteer Medical Staff Corps during the war in South Africa, has approved the following changes in the designation of the corps and in the titles of the officers:—The Militia Medical Staff Corps will be known as the Royal Army Medical Corps (Militia), and the Volunteer Medical Staff Corps as the Royal Army Medical Corps (Volunteers). The titles of the officers will be altered from Honorary Commandant and Honorary Surgeon-Colonel to Honorary-Colonel; Honorary Surgeon-Lieutenant-Colonel Commandant to Honorary Lieutenant-Colonel Commandant; Surgeon Lieutenant-Colonel to Lieutenant-Colonel; Surgeon-Major to Major; Surgeon-Captain to Captain; and Surgeon-Lieutenant to Lieutenant.

### THE VICTORIA CROSS.

The King has signified his intention to confer the decoration of the Victoria Cross on the undermentioned officer for conspicuous bravery in South Africa:—

Surgeon-Captain T. J. Crean, 1st Imperial Light Horse.

During the action with De Wet at Tygerskloof, on Dec. 18th, 1901, this officer continued to attend to the wounded in the firing line, under a heavy fire at only 150 yards range, after he had himself been wounded, and only desisted when he was hit a second time and, as it was at first thought, mortally wounded.

### SOLDIER CHIROPODISTS.

The issue of the Army order about the appointment of soldier chiropodists has been followed, we understand, by the publication of an official "Manual of Chiropody," which we have not yet seen. Such a manual, giving plain advice on the causes, nature, and treatment of the common ailments of the feet to which soldiers are exposed, should be very serviceable. The Americans, during their big war of rebellion, were the first, we believe, to employ chiropodists in the army.

## Correspondence.

"Audi alteram partem."

### "WHAT'S WHAT."

*To the Editors of* THE LANCET.

SIRS,—In a recent publication called "What's What" there is, I understand, a paragraph indicating various medical men by name as consultants, with my name among the number. I should have thought that it was quite unnecessary for me to say that I had nothing whatever to do with such a paragraph and was, indeed, quite ignorant of its existence until the other day. To my surprise, however, a paper called the *Medical Times and Hospital Gazette*, of the existence of which I was also unaware, was sent to me last week containing a most offensive paragraph which insinuates very pointedly that it is by no means certain that those whose names are mentioned in "What's What" are quite innocent in the matter. I wrote to the editor of "What's What" asking him to withdraw my name from his paragraph, and I inclose my letter and his reply and also a letter which I sent to the *Medical Times and Hospital Gazette.*

I am, Sirs, yours faithfully,

Feb. 11th, 1902. W. WATSON CHEYNE.

[INCLOSURES.]

*To the Editor of "What's What."*

Feb. 9th, 1902.

DEAR SIR,—My attention has been called to a paragraph in "What's What" in which a list of medical men is given containing, among others, my name. I feel sure that you did not at all realise how such a paragraph would affect those whose names are mentioned, otherwise you would not have inserted it. I presume your object in introducing it was that just as you tell elsewhere what people should do or see so you want to guide them if they are ill. If that was your object it would entirely fail, because patients, if they are wise, ask their family medical man whom they should consult and would not be at all guided by a paragraph in a book or newspaper. On the other hand, those whose names are mentioned in this way may suffer irreparable damage as the result. While the better class practitioners would, of course, assume that such a paragraph was inserted entirely without our knowledge or consent and would know that we would not have anything to do with such an advertisement, there are, I am sorry to say, men in our profession, as in every other, with jealous and dirty minds who would assume that we were not innocent in the matter, and would employ this occurrence to blacken our characters in every way possible. I need only refer you to an article in yesterday's issue of the *Medical Times and Hospital Gazette* as an example of this. For these reasons I would strongly advise you to suppress this paragraph, and in any case I would beg of you to cut my name out of the list.

Yours faithfully,

W. WATSON CHEYNE.

*Reply from the Editor of "What's What."*

MY DEAR MR. WATSON CHEYNE,—With much that your letter contains I heartily agree, and I will gladly do as you ask with regard to your own name and in all probability with regard to the whole paragraph. I cannot, however, agree with you as to its being so great a crime to inform the public on these matters—nor that one's "family medical man" is in all cases the most fitting person to advise. How about the cases also where one has no "family medical man"? What is to happen then? The intention and the limitations of my paragraph in the appendix are very clearly stated and nobody in their senses could read it and not see that its origin was in personal opinion and experience and not in the desire to advertise anybody. In this troublous and troubling world, however, the best motives are liable to misrepresentation, and breaches of etiquette even by a layman are apparently "the unforgivable sin." I shall not again hurl myself so wantonly against the 'footstool of justice" to serve the public; in this case they will have to look elsewhere for "what's what."

Meanwhile I could wish that all who differ from me would express themselves with your courtesy and moderation.

I have not seen the paragraph to which you allude in the *Medical Times*, but I can guess its tenor.

Very truly yours,

Feb. 10th, 1902 HARRY QUILTER.

*To the Editor of the "Medical Times and Hospital Gazette."*

Feb. 9th, 1902.

SIR,—With reference to your paragraph on p. 85 in your issue of yesterday I do not know which is most offensive—viz., the original paragraph or the one in your issue. Whatever the object of the editor of "What's What" may have been what he has done has, I am sure, been in ignorance In your paragraph, however, you imply the possibility on our part of some knowledge of, or complicity in, this publication, an insinuation which is most offensive and absolutely unwarrantable. It surely might have occurred to you that men in the position of those whose names are mentioned would not lower themselves to such an extent as to have either directly or indirectly incited such a statement or that they had any knowledge of it beforehand. If you can indicate how such occurrences can be avoided or how the matter can be remedied I shall be most grateful to you, but I resent most strongly that you should have in the faintest degree implied that I have anything whatever to do with the matter. I am not aware that I have ever done anything which should make you think that that was at all possible.

Yours faithfully,

W. WATSON CHEYNE.

reduction this week in the number of deaths throughout India. The figures, however, are still very high, being 9204 for the whole of India—a reduction on the total of the previous week of 1164. In the Bombay Presidency the deaths have fallen from 4797 to 3510, and in the Punjab there has been a slight reduction also—viz., from 2662 to 2379. On the other hand, there has been a further increase in the North-West Provinces and in Bengal, and there is a decided rise in the mortality both in the cities of Bombay and Calcutta. For the latter city there are recorded 50 deaths, against only 22 for a fortnight ago, and rats are reported to be found dead and dying in various parts. In Bombay city there were 250 deaths from plague. There is little doubt therefore that the two chief cities of India are threatened with fresh outbreaks. With reference to the Punjab it is unfortunate to notice that the Tahsils of Nawashahr and Gaishaukar in the Jullunder and Hoshiapur districts, which were thoroughly inoculated in 1899–1900, show no less than 5373 cases and 2427 deaths during the last three months. Orders have been issued for the resumption at Simla of the plague precautionary measures that were in force during last summer. Disinfecting gangs are to be re-formed and surveillance over new arrivals is to be re-established by the immediate reopening of the road and medical inspection posts at Kalka, Tara, Devi, and Taur.

India is still oppressed by the famine which is again increasing. The total number of persons receiving relief [illegible] now 181,651. The Bombay Presidency is the chief sufferer, but 6430 persons have had to be relieved in Rajputana.

No announcement has yet been made regarding an increase in the cadre of the Indian Medical Service, which is understood to have been under discussion for some years back, but it may be noted that the Secretary of State for India has been asked to admit three more candidates, making 20 in all, to the next examination for the Indian Medical Service.

I understand that Sir Francis Lovell, K.C.M.G., who is visiting India on behalf of the London School of Tropical Medicine, has been very successful in obtaining subscriptions, and that some £10,000 have been already remitted. Bombay has answered the appeal with great warmth but very little has been got from Calcutta.

Jan. 24th.

## MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

### *Manchester and Salford Hospital for Diseases of the Skin: the Finsen Light Process.*

THE Lord Mayor presided at the annual meeting of the friends of the Manchester and Salford Hospital for Diseases of the Skin on Feb 4th Among the 33,356 attendances of patients 6633 were for the "light" treatment Many came from neighbouring towns and a few serious cases were treated as in-patients. It is satisfactory to learn that in consequence of inquiries as to the position and means of patients "there had been a considerable falling off in the attendance of unsuitable persons as patients." The committee reported a great need for an increase of beds, at least 20 or 25 being required The medical report made special reference to the treatment of lupus, for which primarily the Finsen light and Roentgen ray department was started last year. The cases now being treated include not only lupus and the other tuberculous affections, but also forms of cancerous and rebellious ulceration. The report states that though it is too early to judge of the final results, the improvement in cases hitherto rebellious to all treatment has been so encouraging that thorough and permanent cure may be hoped for. Being almost painless the patients now coöperate in the treatment as they never have done before. Dr. H. A. G. Brooke hoped that they would soon have apparatus which would expedite the Finsen process and Dr. R. B. Wild stated that very promising results had been obtained by the Roentgen rays "in cases that were practically forms of cancer." Dr. J. Dreschfeld, in moving a vote of thanks to the chairman, said that there was no large town with so little accommodation for skin diseases. There was an immediate demand for 20 beds, and he thought that 50 should be provided.

### *School Ventilation and Lamp Accidents.*

The committee of the Manchester and Salford Sanitary Association has been in communication with the Education Department as regards the ventilation of schools and, on the invitation of Sir John Gorst, has submitted the draft of a circular for issue to managers and inspectors of schools. In addition to suggestions as to the ventilation of the schools the circular recommends that instruction should be given to the children on the value of ventilation both at school and in their homes, and that the ventilation should be examined when there is much "school illness" in the classes. At the last meeting of the committee a report was received from Mr. W. Thomson, analytical chemist, on nine lamp explosions investigated between November, 1900, and the end of December, 1901. Seven out of the nine lamps were of a dangerous type. The flash-points of the four samples of oil tested lay between 83° and 90° F. Since these investigations were commenced in 1896 up to the present, "no sample of oil having a flash-point at or above 100° F. had been found to be used in a lamp which exploded."

### *Ventilation of Manchester Sewers.*

In April, 1901, the Paving, Sewering, and Highways Committee of the Manchester City Council, in consequence of several accidents, asked for, and has been furnished with, a comprehensive and detailed report on sewer ventilation. The city surveyor recommended systematic ventilation, consisting of upcast shafts in suitable positions with surface ventilators as inlets for fresh air. He also recommended that the plant used for treating manufacturers' refuse should be open to official inspection at any time, and that where such refuse contained chemicals which would become of an explosive or dangerous character on entering the sewers they should be rigorously excluded. As there are 1700 miles of sewers the committee, of which Dr. Dearden is chairman, at its last meeting appointed a sub-committee of eight to go into the whole matter.

### *"Methods of Barbarism."*

An inquest held yesterday by the City Coroner on the case of a woman in Gorton who died from acute pneumonia throws some light on the methods of agents of cottage property in dealing with those who are behind with their rent. This poor woman, who was tuberculous, took to her bed on Feb. 1st, and remained there till the 4th when the chimney was blocked up by order of the landlord's agent. No fire could be kept in the house, but she stayed there till her death on the 8th. It can be imagined what discomfort and misery this proceeding would cause during the unusually severe weather experienced in this district, and how it would render her poor chance of recovery almost hopeless. No medical man was called in, because the man with whom the woman had lived for three years had no money, and "didn't think" of calling in the parish medical officer. The post-mortem examination showed extensive tubercle in both lungs and pneumonia of the left lung, and in face of this the coroner did not think the jury could bring in a verdict of manslaughter, but he characterised the proceedings of the agent as "most brutal." The verdict was "in accordance with the medical evidence," and the jury thought that the agent, the "property-repairer," and the paramour should be censured, "the latter for not calling in a doctor." Such occurrences as the above should induce those who seem to look only abroad for methods of barbarism to consider whether our processes for the recovery of rent may not be open to improvement.

### *Arsenical Beer Poisoning.*

The dire effects of arsenical beer have not entirely ceased. A middle aged man was admitted on Jan. 15th to hospital at Halifax suffering from arsenical beer poisoning. His illness ended fatally, and at the inquest held on Feb. 8th a verdict was returned of "Death from pneumonia, accelerated by arsenical poisoning."

### *Testing for Arsenic.*

At the meeting of the Manchester section of the Society of Chemical Industry, held on Feb. 8th, Dr. Gerland explained his process for the estimation of minute quantities of arsenic in beer. A solution of bismuth is first added to the beer, and is then precipitated by means of sulphuretted hydrogen. The arsenic is carried down with the precipitate, and is then dissolved out by means of carbonate of ammonia. The solution of bismuth must, of course, be free from arsenic. The separated arsenic is then estimated in the Marsh apparatus. The chairman, Dr. Grossman, said that the Manchester committee appointed to investigate the question of arsenic in beer had done nothing.

Feb. 11th.

shall be introduced by some other person so known. In the majority of instances, of course, this introduction is really represented by the presentation of a prescription signed by a qualified medical man For the other set of poisons, those included under Part II of the section of the Pharmacy Act in question, the condition is that the purchaser on purchasing the drug shall sign a certain form kept by the vendor In a section of the "Act to Amend the Pharmacy Act" particular statement is made that all these conditions do *not* apply to poisons supplied by a qualified medical man provided that he complies with one other condition This other condition justly excited the surprise of your correspondent last week The attention of the General Medical Council was called to the subject recently owing to the revelation of a state of affairs which was apparently very common in Scotland but which does not probably hold good to a large extent in England I refer to the practice of maintaining a "doctor's shop" or surgery, as it was often called from which a man legally qualified neither medically nor as a chemist dispensed all kinds of drugs to the patients of the medical man owning the "shop" Obviously, when the prescription dispensed happened to contain a scheduled poison the dispenser was committing a breach of the law with regard to poisons Whether he fulfilled the conditions to which I have referred above or not he still committed a breach of the law, because in the eye of the law he was from his unqualified state a man not permitted to dispense drugs scheduled as poisons The decision of the General Medical Council in the matter is stated in the formal account of the sitting of Saturday, Nov 30th 1901, in these words —

> Whereas it has come to the notice of the Council that medical practitioners who keep medical halls or open shops in which scheduled poisons or preparations containing scheduled poisons were sold to the public have been accustomed to leave in charge of such halls or shops assistants who are not legally qualified to sell scheduled poisons to the public and have thereby enabled such unqualified assistants to sell scheduled poisons and so to commit breaches of the law the Council hereby give notice that any registered medical practitioner who is proved to have so offended is liable to be judged guilty of ' infamous conduct in a professional respect and to have his name erased from the Medical Register

It seems to me that the Council could have ruled in no other fashion and that so far, the general practitioner, on whose behalf your correspondent writes, has no cause for complaint in the action of the General Medical Council

I am, Sirs, yours faithfully,

M D

Feb 8th

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*To the Editors of* THE LANCET

SIRS,—*Apropos* of the annotation in THE LANCET of Feb 8th, p 387, entitled "Labels and Liabilities," it is now a very common custom among medical men to have their names, degrees (whether medical or otherwise), and the hours at which they are "at home" for consultation printed at the top of their prescription slips

If the law does happen to require exactly the kind of thing to which the General Medical Council would take vigorous objection—viz , that a medical man's name should under certain circumstances be upon the label of the bottle containing his compound—is it more of an advertisement than having his name, qualifications and hours of consultation upon his prescription slips?

As a matter of fact the prescription slip will probably be a more advantageous advertisement, as it will pass through more hands When the patient goes home it will be shown to the relatives and discussed and some popular "Domestic Medicine' will be turned up to see what the various ingredients are being given for It will then be shown to any neighbours and friends who may have looked in to inquire after the suffering one Finally it will reach the chemist, who will explain in popular language the uses and actions of the drugs prescribed

We are so accustomed to these prescription slips that we never regard them as advertisements, but simply think it is convenient for our patients to have a reminder of the most convenient hour at which to consult the busy man, and in their interests we must uncomplainingly bear any reproach which may be laid upon us for what might appear to others not conversant with professional matters to be an advertisement. And, indeed, should a patient be impressed with the skill of the practitioner it is also convenient for him, or her (females are most strongly recommended by the writer for this game), to be able to mention the respective hours when his, or her, physician is at home," if he, or she, happens to recommend him to a friend perhaps a dissatisfied patient of another practitioner

For my own part, I cannot see why a dispensing practitioner should not add his consultation hours to his labels also keep me right if I go wrong—but there seems little difference Presumably a dispensing practitioner does not have prescription slips and it seems, at first sight at all events, unfair that his non dispensing *confrère* should alone be able to let the general public know his hours "at home" The exigencies of the case might possibly be met, and the General Medical Council not over flurried, by the dispensing practitioner using prescription slips to wrap his medicine bottles up in

The whole subject is terribly distasteful to

Feb 10th 1902 AN UNCOMPLAINING BUSY MAN

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# NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT )

*The Spread of the Plague —Increase of the Famine —The Malaria Convention —The St John Ambulance Association in Calcutta*

THE deaths from plague throughout India last week reached the total of 10,368 This is 502 more than in the previous week and compares very unfavourably with the small total of 2839 for the corresponding week of last year The Bombay Presidency returns 4797 deaths, the Punjab 2662 the Madras Presidency 586, the Bengal Presidency 462, the North West Provinces and Oudh 685, Mysore State 636, Hyderabad State 50, and Kashmir 192 In the cities the deaths were Bombay, 234 , Calcutta 36 , and Karachi, 70 Poona city is not reported but local reports show that plague is developing rapidly and the deaths there are over 50 a day The present features of the epidemic are its steady extension in the Madras Presidency, where at this time last year only 25 deaths from plague occurred, and the serious headway which it is making in the Punjab, where three months ago only 90 cases were returned , it is also increasing in Bengal There is a decided jump in the figures for Calcutta An outbreak has occurred at Lahore for the first time but active steps are being taken and inoculation is being pushed vigorously In Jullunder city also an indigenous case has occurred To compensate for increase elsewhere the disease is declining in virulence in the Bombay districts, although it is developing again in Bombay city

The famine is again worse and 17,000 people have been added to those receiving relief who now amount to 158 000, the figures being Bombay and Said, 94,500 , Baroda State, 33 000 , Bombay Native States 22,000 , and the Punjab, 3000 This has been largely due to the abnormal rainfall , for India generally the average is about 40 inches, but it varies from 10 inches in the North West Provinces to 100 inches in Assam The west of India received much less than its normal amount of rain this year, Karachi, Mooltan, Hyderabad, Quetta, and Mount Abu getting only about half their average

The Malaria Convention at Nagpur has been a great success, not only in attendance but in the interest of the papers read The chief of these were on the Classification of Anopheles, by Captain Glen Liston , on the Endemicity of Malaria, by Dr Christopher, who also contributed a paper on the Prevalence of Anopheles , on the Examination of the Blood by Captain Rogers , and on the Means of Preventing Malaria by Captain G I Birdwood

The St John Ambulance movement seems to be making headway in India Classes are being held among natives as well as among Europeans in several cities and instruction is being given by civil surgeons to the police A successful distribution of over 200 certificates recently took place in Calcutta where 13 classes have been already held and amongst them three large classes of Mahomedan students There seems to be a difficulty in exciting interest among the Hindoos which is apparently due to the influence of caste There appears to be a general opinion that while classes might be got together it is very doubtful whether the instruction would ever be put in practice Those who have lived in India will understand the inhibiting influence of caste as much in this matter as in others

Jan 18th

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*The Plague Epidemic —Further Increase of the Famine —Increase of the Indian Medical Service —Subscriptions for the London School of Tropical Medicine*

IN consequence of the decline of the epidemic of plague in parts of the Bombay Presidency there has been a

In medicine, Dr. James A. Lindsay (Belfast) and Dr. J. F. O'Carroll (Dublin); in ophthalmology, Dr. A. W. Sandford (Cork) and Dr. Louis Werner (Dublin); in midwifery, Dr. John W. Byers (Belfast) and Dr. A. J. Smith (Dublin); in medical jurisprudence, Dr. Charles Y. Pearson (Cork) and Mr. Antony Roche (Dublin); in materia medica, Dr. Martin Dempsey (Dublin) and Professor W. Whitla (Belfast); in physiology, Dr. W. H. Thompson (Belfast); in pathology, Dr. E. J. McWeeney (Dublin) and Dr. J. Lorrain Smith (Belfast); and in sanitary science, Sir C. A. Cameron (Dublin). It was agreed to postpone the question of appointing extern examiners until the May meeting.

### *The University Question.*

On Feb. 9th the Lenten pastoral of his Eminence Cardinal Logue (the head of the Irish Catholic Church) was read in the Catholic churches in Armagh. Referring to the questions of a Catholic University and of temperance the Cardinal said that if the Catholics of Ireland were to bind themselves together, even for one year, and to enter into a "solemn covenant" to dispense with drink and to pay into a common fund what is usually expended on it, the amount would establish and endow a university which would be the admiration of Europe.

Feb. 11th.

## PARIS.

(FROM OUR OWN CORRESPONDENT.)

### *Preventive Inoculations of Anti-diphtheritic Serum.*

AT the meeting of the Academy of Medicine held on Jan. 28th M. Netter gave some extremely interesting statistics about inoculations of Roux's serum which were given at the Trousseau Hospital not for the object of treating diphtheria but as a preventive. When first the serum began to be used in this manner certain medical men took great exception to the practice. They said that it simply gave diphtheria to those who had none, and sundry unfortunate sequelæ of the use of the imperfect serum of the early period were collected together and exploited by the enemies of serotherapy. Then it was said that the inoculations did no good. The answer to this was that too small a dose was given. As a matter of fact at least five cubic centimetres of serum—i.e., 1000 units—must be given. Sometimes, too, the injection was not given early enough or infection took place before immunisation was well established. To-day, however, the value of the practice is proved and M. Netter has never found preventive inoculations given to children in danger of diphtheria to cause any unpleasant complications. Moreover, a study of comparative statistics enables a calculation to be made of the number of children who would have fallen victims to diphtheria had the preventive action of the serum not intervened. It is possible to foresee the time when inoculation against diphtheria will be practised in schools just as regularly as vaccination is against small-pox. Unfortunately, the duration of the period of immunity obtained by anti-diphtheritic inoculation is far from being as long as that obtained by vaccination. At the Trousseau Hospital M. Netter inoculated 502 children belonging to 200 families with anti-diphtheritic serum. From every family a previous case of diphtheria had been sent to hospital. The average dose of serum was 10 cubic centimetres, and not only did it not give rise to unpleasant sequelæ but it appeared to be remarkably efficacious. Only 13 children were attacked by diphtheria, seven within 24 hours and six after one month. No case occurred between the second and the twenty-eighth day. Bacteriological examinations were made of the throats of 476 children and Löffler's bacillus was found in 150 instances. The utility of these preventive injections is strikingly shown by a comparison with the cases of 491 children not immunised coming from families a member of which had also been sent to hospital with diphtheria. Among these 86 cases occurred, as against 13 in the inoculated. None of the 13 cases was fatal or even severe, while among the 86 cases 18 were fatal and 39 severe. This method, therefore, would appear to give efficacious protection against the spread of diphtheria in families.

### *The Separation of Radica and Doodica.*

The xiphopagous "phenomenon" which has been exhibited this winter in Paris at Barnum's Show under the names of "Radica and Doodica" was surgically divided on Feb. 9th in Dr. Doyen's clinic. The health of the two children has been in an unsatisfactory state for some time past and owing to climatic conditions to which they were not adapted they have lost flesh. Radica, indeed, is obviously suffering from tuberculous peritonitis. Mrs. Coolman, who looked after the children, took them to the Trousseau Hospital, where they were tended with great care in order to get them into a proper state of health for the operation of separation. Professor Kirmisson, who has recently been elected to the chair of infantile surgery, had been chosen to perform the operation by Dr. Guinon, under whose care the children were. All of a sudden, however, Mrs. Coolman took the children out of the hospital and transferred them to Dr. Doyen's clinic. This course of action gave rise to many attacks upon Dr. Doyen in the political journals which are friendly to Professor Kirmisson. It must be remembered, however, that Mrs. Coolman had every right to choose the surgeon whom she preferred and that there is no proof that undue influence was brought to bear upon her by the friends of Dr. Doyen. Certainly, the operation is a grand advertisement for Dr. Doyen, for the daily press has made much of it and Dr. Doyen has not refused to be interviewed. Kinematograph films of the operation were taken. It lasted scarcely 20 minutes and was completely successful. The fleshy band uniting the two sisters was 10 centimetres wide by four centimetres thick. Beneath the skin was some cartilage. The peritoneum lined the interior of the band, which also contained, as was expected, some liver tissue. Vascular communication between the two children had been previously ascertained by giving some methylene blue to one of them which appeared in 10 minutes' time in the urine of the other, when it was drawn off by a catheter. In all similar operations previously performed on this class of monster the difficulty has been to arrest the hæmorrhage from the divided liver tissue. In the present instance, however, this difficulty was effectually met by the application of Dr. Doyen's angiotribe, by which the tissues were compressed until they were no thicker than a sheet of paper and were completely bloodless. They were then ligatured with two catgut ligatures. The peritoneal cavity of Radica, which was tuberculous, was freely washed out and a drain was left in the abdominal wound. The same course was followed in the case of Doodica. The immediate results of the operation were excellent, although the general health of the patients gives rise to fear for the future. However, at the moment of writing, the latest news, which I have personally obtained from Dr. Doyen's clinic, is very good.

Feb. 11th.

## Obituary.

### EDMUND GWYNN, M.D. ST. AND., M.R.C.S. ENG.

WE have to record with deep regret, which is shared by all who knew him, the very sudden death, at the age of 61 years, of Dr. Edmund Gwynn, late medical officer of health of Hampstead. The sad event occurred during a holiday trip in Egypt on Jan. 27th last while travelling up the Nile on a steamer. The cause of death was syncope, and although it now appears that he had premonitions of cardiac weakness he had not mentioned the matter to his family, upon whom the blow fell quite unexpectedly. Dr. Gwynn held the office of medical officer of health of the parish, and latterly of the Borough, of Hampstead for a period of 22 years, resigning his position only last year. During part of his tenure of the post of medical officer of health he also practised in Hampstead, retiring from practice in 1895, and thus for the last six years he was able to give his undivided attention to matters connected with public health.

Dr. Gwynn's work as medical officer of health was appreciated beyond his own borough, his reports were lucid and suggestive, and he was justly proud of the sanitary progress of his district during his term of office as shown by the decline in the death-rate which compared most favourably with that of other communities. He was especially active in suppressing the outbreak of small-pox which visited Hampstead about 18 years ago. His reputation as a health officer was recognised by his election as president of the Society of Medical Officers of Health, in which capacity he justified in every way the good opinion of his colleagues, proving an excellent president. He gave

# SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

### *Death of Dr. Robert Peel Ritchie of Edinburgh.*

BY the death of Dr. R. P. Ritchie on Feb. 10th Edinburgh has lost another of her prominent practitioners. Dr. Ritchie received his medical education in Edinburgh and became a graduate of the University of Edinburgh in 1856. In his early years he had some experience of asylum practice at Bethnall House Asylum, London, but he soon returned to his native city where he spent the rest of his professional life. He was a Fellow of the Royal College of Physicians of Edinburgh and was for a number of years the honorary treasurer of the College, in which capacity he displayed distinct financial ability. At a later date he occupied the post of President for two years, in which position he never failed to uphold the dignity and the interests of his College and of his profession. He thereafter held the post of Vice-President of the College with a seat on the council, and he was ever assiduous in his attention to all matters which came before that body. He held the office of physician to the Royal Hospital for Sick Children, and after his term of office in that capacity had expired he was elected a consulting physician to that institution, a position which he occupied until his death. Dr. Ritchie was a Conservative and an adherent to the Established Church and he was warmly interested in civic affairs. Although he was never a member of the town council he took a keen interest in supporting the candidate for his own ward whom he thought best qualified to do the work of the city. He was a member of the parish council and took a prominent part in the deliberations of that body. Dr. Ritchie did not contribute to any extent to the literature of his profession, but his name will ever be associated with the History of his own College which he published some years ago and which included a history of early medical practice and medical teaching in Edinburgh. On the ethical and moral side he was always an upright, straightforward, and honourable gentleman, with no tendency to devious courses or underground workings. Dr. Ritchie's wife died some years ago, but he is survived by two sons, one of whom is in the navy and the other is a member of the medical profession; he is at present one of the resident physicians in the Edinburgh Royal Infirmary.

### *Nurses' Entertainment in Edinburgh.*

On the evening of Feb 10th the Lord Provost and magistrates of Edinburgh gave a reception, followed by a dance, to the nurses of the City Hospital. Invitations had also been issued to nurses of the Royal Infirmary, of the Royal Hospital for Sick Children, and of other institutions in Edinburgh and its vicinity, some invitations being extended even to Glasgow. The entertainment was held in the Music Hall and Assembly Rooms. Fully 400 nurses were present, as well as a large number of other guests. In the absence of the Lord Provost Bailie Brown welcomed the nurses and explained that a similar entertainment had been planned for last year, but could not be held owing to Queen Victoria's death.

### *Victoria Hospital for Consumption, Edinburgh*

A considerable enlargement of the Victoria Hospital for Consumption, Craigleith, has been arranged and will probably be carried through in the course of the present year. Mr. William Younger, M.P., has intimated his intention of subscribing a sufficient sum to build an annexe to the hospital capable of accommodating eight patients, and the committee of management contemplates the erection of two additional annexes, each capable of accommodating 12 patients The total accommodation will thus be doubled and the hospital will be enabled to undertake a proportionately larger amount of the incalculably useful work which it is doing at present.

### *Aberdeen Royal Infirmary.*

The report of the Aberdeen Royal Infirmary for the past year shows that the total income was £11,224 and that the expenditure was £10,968. On most of the items of income a decrease is shown. The small sum charged against interest explains the saving in the amount expended. Lord Mount Stephen's generous gift of £25,000 removed the debt which had weighed so heavily on the institution since its enlargement. The average daily number of patients was 205·2. The annual cost per occupied bed was £49 13*s.* 2*d.*—a decrease of £1 0*s.* 7*d.* Four beds have been endowed during the past year. The only change in the medical staff to be recorded is the resignation of Mr. John Cromar, one of the dental surgeons, and the appointment of Dr. J. Crombie to the sole charge of the dental department. A special department for the study of diseases of the skin has been formed and is under the guidance of Dr. John F. Christie. Mr. John B. Findlay has been appointed clerk and treasurer.

### *Aberdeen Convalescent Hospital.*

The annual report of the Aberdeen Convalescent Hospital shows that the income was £497 and the expenditure £553, leaving a deficiency of £56, attributable to a falling away in the amount of legacies received. The average daily number of patients resident was 14·7, as against 15·8 in 1900. The average stay of each patient was 21·4 days.

### *Aberdeen Royal Lunatic Asylum.*

The report of the Aberdeen Royal Lunatic Asylum has been issued. It shows that the number of patients continues to increase, there being 929 at the close of 1901, as against 887 in 1900. The income for the year was £33,640, and the expenditure was £30,939, leaving a balance of £2701. The surplus was disposed of as follows:—£2000 to meet depreciation and £701 towards the cost of the reconstruction scheme The directors are of opinion that the reconstruction of the main asylum should not yet be undertaken.

Feb. 11th.

# IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

### *Small-pox in Dublin*

A CASE of small-pox was discovered in Dublin on Feb. 10th, the patient being a young man who had come from Glasgow in search of work. Feeling ill he called at the dispensary in Grand Canal-street. The medical officer there diagnosed small-pox and communicated with the public health authorities who had the patient removed at once to Cork-street Fever Hospital. The chairman of the Public Health Committee of the Corporation (Sir Thomas Pile) on being informed of the matter wrote to the hospital suggesting that the patient should be removed to the convalescent home at Finglas. The inmates of that suburban and isolated institution were at once cleared out and the case of small-pox was placed under treatment there. At the last meeting of the Public Health Committee, which was held on Jan 23rd, a report was presented in reference to the possible appearance of small-pox in Dublin and the hospital accommodation available. It appeared that the Pigeon House site could not be utilised on account of the extensive operations of the corporation in connexion with the new electrical installation for the lighting of the city. It was decided, therefore, that the board of Cork-street Fever Hospital should be approached on the subject; although that seemed a doubtful project. inasmuch as it was well known that on the last occasion when during an epidemic small-pox patients were received there the inhabitants of that crowded neighbourhood suffered more severely from the disease than did those of any other area of Dublin. Some alarm is felt in Dublin, for it is natural to suppose that some of the other 25 lodgers in the crowded house in Townsend-street whence the patient came may by this time have contracted the infection; in fact, the evening papers of Feb. 11th state that one other doubtful case from that place has already been removed to the Finglas establishment.

### *Ulster Medical Society.*

At the meeting of the Ulster Medical Society, held in the Belfast Museum on Feb. 6th, the President, Professor W. Whitla, showed a case of Enlargement of the Spleen, and Dr. W. B. McQuitty showed a case of Aortic Stenosis. Dr J. S. Darling (Lurgan) read a paper on "Epidemic Diarrhœa," and Dr R J. Johnstone described the bacteriology of some of the cases, and Dr. John Campbell read a paper on "Some Forms of Puerperal Sepsis." Interesting discussions followed the reading of these papers.

### *The Royal University of Ireland.*

At a meeting of the Senate, held in Dublin on Feb. 7th, the following examiners were appointed for the year 1902:

**Freemasonry.**—*The Rahere Lodge, No. 2546.*—An ordinary meeting of this Lodge was held at Frascati's Restaurant, W., on Feb. 11th, Bro. P. S. Abraham, M.D., W.M., in the chair. Bro. Walton R. Read was admitted to the third degree. Bros. Harke, Yetts, and Dunn were admitted to the second degree and W. Bro. F. T. Vaisey was elected a joining member. Most of the Worshipful Masters of the other medical lodges in London attended the meeting as honorary members of the Rahere Lodge. A sum of two guineas was voted from the Lodge funds to the Soldiers' and Sailors' Families Association.

**University College (Bristol) Colston Society.**—The annual dinner of this society was held on Feb. 5th at University College, Bristol, under the presidency of Mr. P. J. Worsley, in the absence through illness of Sir F. Wills. Amongst the company were the Bishop of Bristol, the Bishop of Hereford, the Lord Mayor of Bristol, and Mr. R. B. Haldane, K.C., M.P During the evening £400 were collected for the society, and it was announced that two munificent offers had been made by Sir W. H. Wills and Sir F. Wills of £1000 each to University College, Bristol, conditional on three other equal amounts being forthcoming.

**A Long Hospital Record.**—It is seldom that so long a period of 75 years of service on a hospital staff can be recorded in one family. On Jan. 29th, 1902, Mr. Andrew Boutflower completed 31 years' service as honorary surgeon to the Salford Royal Hospital, immediately following a period of 44 years' service performed in the same capacity by his father, the late Mr. John Boutflower. As a memento of this occasion Mr. Boutflower's colleagues at the Salford Royal Hospital presented him on Jan. 29th with an early English silver salver engraved with the family crest and suitably inscribed.

**Chinese Medical Missions.**—At the Torquay Museum, on Feb 5th, Mr. A. T. Kember, F.R.C.S. Edin., of the Church Missionary Society, gave an interesting lecture on medical work in China. Mr. Kember is attached to the Hangchow Hospital, which contains 200 beds and admits about 1000 in-patients annually, 30,000 out-patients being treated in the 12 months. He alluded to the opium habit in China, and said that in some districts 80 per cent. of the men were opium-smokers and 20 per cent. were "opium-sots," while 20 per cent. of the women were also addicted to the habit.

**University of Cambridge.**—Professor Bradbury, Dr D. MacAlister, Professor Woodhead, and Professor S. Delépine of Manchester have been appointed examiners in pharmacology and general pathology for the examination in June, 1902 Schedules for the examination have been issued by the Medical Board.—Professor J. Reynolds Green, Sc.D., F.R.S., has been elected to a Fellowship at Downing College.—Dr. D. MacAlister has been appointed an elector to the Downing Professorship of Medicine; Dr. A. Hill an elector to the Professorship of Anatomy; Professor McKendrick an elector to the Professorship of Physiology; Professor Chiene an elector to the Professorship of Surgery; and Lord Lister an elector to the Professorship of Pathology.

**The Royal Institution.**—An animal recently discovered in Central Africa, and known as the okapi, formed the subject of the Friday evening discourse delivered at the Royal Institution by Professor Ray Lankester on Feb. 7th A stuffed specimen is on view in a glass case in the Natural History Museum at South Kensington. It has been described as a giraffe-like animal, but as regards external conformation the resemblance is by no means close. The body and neck of the specimen are quite free from mottling of any kind and are of a pleasing extremely dark-brown colour. The fore-legs and the hind-legs are nearly of the same length The fore-legs, the hind-legs, and the haunches are marked with horizontal stripes like those of a zebra. In height it seems to be about four feet nine inches, measured over the wither or highest part of the spine above the shoulder; it is therefore of about the same height as a horse of between 14 and 15 hands. It has somewhat large ears, bifid hoofs, and no horns; its neck is like that of a horse much more than that of a giraffe; its coat is smooth, short, and bright. The specimen would easily stand under the belly of a large giraffe which is beside it Professor Lankester said that Sir Harry Johnston found portions of its skin in the possession of dwarfs who inhabited the Semliki forest to the west of Victoria Lake and who eventually obtained for him a skin and two skulls. The skull showed a swelling above the eye, where it was probable that the horn would grow if there was one, but this was not the place where the horn grew in the antelope and giraffe. Evidence of the affinity of the okapi and the giraffe was to be found in the fact that they were the only known animals in which the canine teeth in the lower jaw were bifoliate. The helladotherium, remains of which had been found in Greece, was probably related to the okapi.

**Presentation.**—Mr. Rutherford Harris of Newport (Mon.) was on Feb. 3rd presented by the Conservatives of the Monmouth boroughs with a silver service, weighing 2000 ounces, and an address testifying to the friendship and esteem of his supporters at the last election in Newport, Monmouth, and Usk. The presentation was made by Lord Tredegar.

**Literary Intelligence.**—Messrs. D. C. Heath and Co. have in the press for early issue a book entitled "Introduction to the Study of the Dependent, Defective, and Delinquent Classes and of their Social Treatment." The author is Dr. Henderson, Professor of Sociology at Chicago University.—Messrs. P. S. King and Son, of Orchard House, Westminster, have in the press for publication early in March a practical guide for the use of the inspector of nuisances by Mr. H. Lemmoin-Cannon.

**The late Dr. T. Lewis.**—Dr. Thomas Lewis, consulting physician to the Carmarthenshire Infirmary, died at his residence in Spilman-street, Carmarthen, on Feb. 7th, in his eighty-eighth year. He took the diploma of M.R.C.S. Eng. in 1838 and graduated at London University as M.B. in 1839 and as M.D. in 1859. The deceased had long practised in Carmarthen, where he was much respected, but he had retired from professional work some years ago. Dr. Lewis leaves a widow and six children, two of his sons being members of the medical profession.

**Clifton Dispensary.**—The eighty-ninth annual meeting of the subscribers to the Clifton Dispensary was held on Feb. 4th, under the presidency of the Rev. R. W. Southby. The medical report stated that 3465 patients (including 73 midwifery cases) had been treated during 1901, a against 3668 in 1900. The financial statement showed that the income amounted to £637 and a favourable balance of £196 remained at the end of the year. The chairman alluded in terms of regret to the resignation of Dr. J. G. Swayne, the honorary consulting accoucheur, who had been for upwards of 40 years connected with the institution.

**"Knowledge" and Microscopical Work.**—The editor of *Knowledge*, with the object of making the microscopical section of his journal more extensively serviceable to microscopists, has commenced with the January issue a series of notes dealing with the collection, preparation, and mounting of various objects, and in order to render these thoroughly practical material will from time to time be offered to readers to enable them to follow the instructions given. The first notes dealt with foraminifera and cleaned and uncleaned material is now ready.

**Gifts to Hospitals.**—The Liverpool Hospital for Cancer and Diseases of the Skin has received from Sir Thomas Brocklebank a donation of £1000. This sum, it is felt, will justify the board in carrying out some improvements long considered to be necessary.—At a recent meeting of the management committee of the General Hospital, Birmingham, a letter was read from Sir John C. Holder, Bart., expressing his satisfaction that the committee had determined to erect a laundry for the hospital upon land at Erdington, near the Jaffray Suburban Hospital. He believed it would be a great saving to the institution, and he should have great pleasure, subject to the estimates meeting with his approval, in himself defraying the cost of the building and its equipment.

**The After Care Association** held its annual meeting at Lambeth Palace on Feb. 8th, when the Archbishop of Canterbury presided. The chief objects of this association are to facilitate the re-admission of poor persons discharged recovered from lunatic asylums into social life—(1) by obtaining for them when needful an interval of change of scene and air often so beneficial on recovery from ordinary sickness; (2) by giving them grants of money and clothing; and (3) by assisting them to obtain suitable employment.

a notable presidential address and showed a decided literary bent, and at the close of his term of office as president he was elected vice president and treasurer of this society It was while president of the Society of Medical Officers of Health that he read a valuable paper on Shakespeare and Sanitation at the Stratford on-Avon meeting, another contribution, also on a public health question, was the Jerry Builder in Relation to the Dwellings of the Poor Dr Gwynn was also unanimously elected president of the Hampstead Medical Society two years ago and was president at the time of his death, and in that office he displayed not only intelligent interest in the proceedings but much courtesy and kindly consideration towards the members of the society It is pleasant to record that his medical colleagues in Hampstead showed their appreciation of the good relations which had existed for so long between their medical officer of health and themselves by presenting him in July last with some plate and an illuminated address expressing their goodwill and esteem and we have reason to believe that this presentation and the kind words accompanying it were greatly valued by him Dr Gwynn leaves a widow and daughters to mourn their loss and they have the sympathy of the whole community

He had two sons and here is a sad episode in his life They both died while on the threshold of manhood and full of promise about six or seven years ago and within a year of each other One of them was destined for the medical profession Such a double misfortune might well arrest the energies of a strong man, but the subject of this notice, grieving always but never repining, continued to toil on till his work was accomplished

### WALTER WYKESMITH, L R C P EDIN, L M, M R C S ENG, F R C S EDIN

MR. W WYKESMITH, who died on Feb 3rd at Poole, in Dorsetshire, received his medical education at King's College, London, and also in Paris For many years he was in practice at Wimborne but his health failing he retired from active medical work last year and went to reside at Poole To him Wimborne is mainly indebted for its efficient water supply, the Wimborne Water Company owing its inception to Mr Wykesmith's interest and energy He was a member of the governing body of Wimborne Minster and was a staunch Churchman He also took a very active interest in Freemasonry He joined the St Cuthberga Lodge in 1873 and received provincial rank as assistant director of ceremonies in 1881 He also received the rank of provincial junior warden in the Mark degree Mr Wykesmith, who was approaching his sixtieth year, leaves a daughter and three sons to mourn their loss His wife died in December last

### WILLIAM MARTINDALE, F C S, F L S

PHARMACY has sustained a great loss in the death of Mr William Martindale which took place suddenly at his town residence on Feb 2nd He was well known to most medical men as an authority on pharmaceutical affairs, he being joint author with Dr W Wynn Westcott of the invaluable little book known as 'The Extra Pharmacopœia' How far this book has been appreciated may be gathered from the fact that since the first issue in 1883 no less than 10 editions have been published The first edition was sold out within a fortnight of its issue and the second edition, thoroughly revised, appeared within a few months of the issue of the first edition Mr Martindale devoted a good deal of his time to the improvement of pharmaceutical preparations He knew the difficulties of pharmaceutical study in all its branches Indeed his practical knowledge not only of pharmacy but of the relationship of pharmacy to medicine and to the qualifications of pharmacists and of the laws of the country governing their conduct made him an excellent president of the Pharmaceutical Society. He also had occupied the position of president of the British Pharmaceutical Conference Quite recently he had been devoting much time and study to the important legislative questions now being considered by the Poisons Committee of the Privy Council It is to be regretted that this committee has no longer the advantage of the admittedly valuable services of Mr William Martindale who served upon it as the direct representative of the pharmaceutical profession

## Medical News.

UNIVERSITY OF LONDON.—At the Intermediate Examination in Medicine, held in January, the following candidates were successful —

*Entire Examination.*

*First Division* Athelstan Jasper Blaxland University College, and R H C Gompertz, B Sc, and Yardley Lancelot Holland, King's College

*Second Division* —Henry Catling and Frank Bell Dalgliesh St Thomas's Hospital, Delia Davies London (Royal Free Hospital) School of Medicine for Women, James Ernest Dunbar, London Hospital Richard Felton Guy's Hospital, Wilbert Goodchild, University and Royal College of Surgeons, Edinburgh, Cecil Hugh M Hughes Westminster Hospital and King's College, Frank Percival Hughes and David Isaacs Guy's Hospital, Charles Herbert Farley Johnston Charing-cross Hospital, Thomas Henry Jones, King's College William Neave Kingsbury Middlesex Hospital, George Laurence University College Liverpool, James Littleton Lawry London Hospital, Arnold Leeming Guy's Hospital, Frederick Champ McCombie King's College, John Borland McVail, London Hospital, Sidney Horace Matson St George's Hospital William Norman May, Guy's Hospital, Reginald Henry Miller St Mary's Hospital John McFarlane William Pollard, Guy's Hospital Thomas Pratt, University College Bristol, Philip Meredith Roberts University College, Alfred Martin Roome Guy's Hospital William Mackenzie Sadler, University College Joseph Ludwig Schilling Yorkshire College Gerald Herbert Shortridge University College Cardiff and St Mary's Hospital George Alick Soltau and Leonard Warren, London Hospital and Samuel Zobel University College

*Excluding Physiology*

*First Division* —Frederick William Higgs St George's Hospital, Alexander John Malcolm St Mary's Hospital, and Clifford Sidney White University College

*Second Division* —Charles Harold Berry, University College, Frederick Michael Bishop and Arthur Carnarvon Brown, St Bartholomew's Hospital John Jones Owens College, Sydney Wood Milner, St Bartholomew's Hospital, Harold Frederick Whittall, University College and Lorton Alexander Wilson, Owens College

*Physiology only*

*First Division* —Arthur Douglas Hunt, Yorkshire College and University College Liverpool

*Second Division* —Lacey Bathurst, St Thomas's Hospital, Leonard Hubert Henry Boys Middlesex Hospital, Charles Noel Davis, St Bartholomew's Hospital, William James Edgar, St Thomas's Hospital, Harry Farncombe University College, Florence Erin Gubb London (Royal Free Hospital) School of Medicine for Women Eric Crichton Hood Yorkshire College Henry Arthur Kellond Knight St Bartholomew's Hospital John Tryweryn Lloyd and Daniel Joseph Mulholland University College Liverpool, Evan Williams Parry St Thomas's Hospital John Mackay Plews, St Bartholomew's Hospital, Thomas Phare Puddicombe St Thomas's Hospital Samuel Henry Sweet, University College, Cardiff, Barbara Tchaykovsky, B Sc London (Royal Free Hospital) School of Medicine for Women and Bedford College, Louis Leopold Arthur W Thomson St Mary's Hospital, and Francis Henry Whitehead St Thomas's Hospital

N B —The foregoing list published for the convenience of candidates, is provisional only and is not final until the reports of the examiners shall have been confirmed by the Senate

ROYAL COLLEGE OF PHYSICIANS AND ROYAL COLLEGE OF SURGEONS IN IRELAND —The following candidates have passed the examination for the Conjoint Diploma in Public Health —

Thomas Hennessy F R C S Irel John O Donoghue F R C S Irel, and D M Saunders Major, R A M C

UNFOUNDED CHARGE AGAINST A WORKHOUSE MEDICAL OFFICER —At a recent meeting of a committee of the Liverpool Board of Guardians one of the members stated that a middle aged pedlar, named Richard Williams, had made a complaint to the effect that when he applied for medical advice at the workhouse surgery the medical officer without saying anything threw him on the floor, forcibly administered chloroform, and slapped him several times on the face, when he recovered consciousness The medical officer's report, which was then submitted, stated that Williams was a well-known malingerer whose practice was to drop to the ground at the workhouse gates and to be carried into the house apparently exhausted and dying On the day of the incidents complained of he gained admission by the usual tactics When seen by the medical officer he was trembling violently and was apparently in a state of collapse The ordinary treatment for malingering was then adopted—namely, ammonia on a chloroform mask applied to the face, and a few minutes later he walked out of the workhouse Williams had been subjected to the same treatment only three weeks previously, and on this occasion also he quickly walked out perfectly well The committee was unanimously of opinion that the man had no ground of complaint.

Human Body in the Dissecting-room. By Edmund M. Holmes, A.B., M.D. Second Edition. Price not stated.

PENTLAND, YOUNG J., Edinburgh and London.

The Fish River Bush, South Africa, and its Wild Animals. By W. T. Black, M.R.C.S., L.S.A., Assistant Surgeon, Army Medical Staff. Price not stated.

SHAW AND SONS, Fetter-lane, E.C.

Transactions of the Epidemiological Society of London. New Series. Vol. xx. Session 1900-1901. Price not stated.

SIMPKIN, MARSHALL, HAMILTON, KENT, AND CO., LIMITED, London.

Where to Buy: a Guide to the Professions and Business Houses. By C. M. Knowles. Price 3s. 6d.

## Appointments.

*Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to* THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

ALLAN, G., M.D. Aberd., has been appointed Clinical Assistant to the Medical Department of Prince Alfred Hospital, Sydney.

ANDERSON, D. LECHMERE, L.R.C.P., L.R.C.S. Edin., Medical Officer of Health for Peterhead and Ellon, Scotland, has been appointed Medical Officer of Health for the Borough of Doncaster and the Urban Districts of Balby-with-Hexthorpe and Wheatley.

AWDRY, WALTER ROBERT, M.B. Durh., M.R.C.S., has been appointed Honorary Medical Officer to the Berkeley Cottage Hospital.

BATTEN, RAYNER WINTERBOTHAM, M.D. Lond., F.R.C.P., M.R.C.S., has been appointed Honorary Consulting Physician to the Berkeley Cottage Hospital.

BRUNYATE, T. T., M.A., M.D. Oxon., has been appointed Physician to St. Bartholomew's Hospital, Rochester.

DEANE, EDWARD WILKINSON, M.B. Melb., has been appointed Public Vaccinator for the North-western District, Melbourne, Victoria.

FETHERSTON, RICHARD HERBERT, M.D. Melb., has been appointed Public Vaccinator for the Metropolitan District, Melbourne, Victoria.

FULLERTON, ROBERT JOHN, L.R.C.P. Edin., has been appointed Public Vaccinator for the Northern District, Melbourne, Victoria.

HALLIDAY, J. C., M.B., Ch.M. Syd., has been appointed Clinical Assistant to the Ophthalmic Department of Prince Alfred Hospital, Sydney.

HARKNESS, EDWARD, L.R.C.P. Edin., has been appointed Public Vaccinator for the South-eastern District, Melbourne, Victoria.

JACOBS, J. M. C., L D.S Eng., has been appointed Honorary Dental Surgeon to Queen Adelaide's Dispensary, Pollard-row, Bethnal Green.

KATER, N. W., M B. Syd., has been appointed Clinical Assistant to the Medical Department of Prince Alfred Hospital, Sydney.

MUNRO, A. W., M D. Edin., has been appointed Clinical Assistant to the Gynæcological Department of Prince Alfred Hospital, Sydney.

NOLAN, H. R., M.B., Ch.M. Syd., has been appointed Clinical Assistant to the Throat, Ear, and Nose Department of Prince Alfred Hospital, Sydney.

ORMOND, JAMES SERVICE, M.D. Glasg., has been appointed Medical Officer of Health for the town of Malvern, Victoria.

PADWICK, J. C. M.R.C S., L.R.C P., has been appointed Medical Officer of Health of Bridgnorth Rural District.

PITCAIRN, G. K., M.B., M.S. Edin., has been re-appointed Medical Officer for Littleborough.

POWELL, W. WYNDHAM, F.R.C.S., has been appointed Surgeon to the Westminster General Dispensary.

SHAW, JOHN EDWARD, M.B., C.M. Edin., has been appointed Honorary Physician to the Clifton (Bristol) Dispensary, vice Dr. Fyffe, deceased.

SPENCE, BASIL A., M.B., Ch.B. Edin., has been appointed Dispensary Surgeon to the Bradford Royal Infirmary.

STEVENS, W. MITCHELL, M.D. Lond., L R.C.P. Lond., M.R.C.S., has been appointed Honorary Assistant Physician to the Cardiff Infirmary, vice Dr. Herbert R. Vachell.

TERRY, HEDLEY, M.B., M.Ch. Syd., has been appointed to be Medical Officer to the Aborigines at Kiama, N.S.W.

TURPIN, D. W. M., L.K.Q.C.P., L.R.C.S. Irel., has been appointed District Medical Officer of Shardlow Union.

VACHELL, HERBERT REDWOOD, M.D., C.M. Aberd., M.R.C.S., L.S.A., has been appointed Honorary Physician to the Cardiff Infirmary, vice C. Tanfield Vachell, resigned.

WEARNE, WALTER, M.R.C.S., L S.A., has been re-elected Medical Officer to the Helston (Cornwall) Public Dispensary.

WHEATLEY, JAMES, M.D. Lond., has been appointed Medical Officer of Health to the Shropshire County Council, vice Dr. Porter.

WILLS, ERNEST, M.D. Lond., M.R.C.P., has been appointed County Health Officer and Examiner in Lunacy for Weld County, Colorado, U.S.A.

YOUNG, H. O T., M.D. Glasg., has been appointed Clinical Assistant to the Gynæcological Department of Prince Alfred Hospital, Sydney.

## Vacancies.

*For further information regarding each vacancy reference should be made to the advertisement (see Index).*

ASHTON-UNDER-LYNE DISTRICT INFIRMARY.—House Surgeon. Salary £120 a year and board and lodging.

BELGRAVE HOSPITAL FOR CHILDREN.—Ophthalmic Surgeon; Assistant Physician; Assistant Surgeon; Sanitary Officer.

BIRKENHEAD BOROUGH HOSPITAL.—Junior Male House Surgeon. Salary £80 per annum, with board and washing.

BLACKBURN COUNTY BOROUGH.—Medical Officer of Health. Salary £550 per annum.

BOOTLE BOROUGH HOSPITAL, Liverpool.—Senior Resident. Salary £100 per annum, with board and laundry.

BRADFORD EYE AND EAR HOSPITAL.—Honorary Surgeon.

BRENTFORD UNION INFIRMARY, WORKHOUSE, AND SCHOOLS.—Assistant Medical Superintendent, unmarried. Salary £100 per annum, with apartments, rations, washing, &c.

BRIDGWATER INFIRMARY.—House Surgeon. Salary £80 a year, with board and residence.

BURY INFIRMARY.—Junior House Surgeon. Salary £90, with residence, board, and attendance.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road.—House Surgeon (non-resident). Honorarium at rate of 40 guineas a year.

CITY OF LIVERPOOL INFECTIOUS DISEASES HOSPITAL, Parkhill.—Assistant Resident Medical Officer, unmarried. Salary £120 per annum, with board, washing, and lodging.

DAVID LEWIS NORTHERN HOSPITAL, Liverpool.—Assistant House Surgeon. Salary £70 per annum, with residence and maintenance.

DONCASTER RURAL DISTRICT.—Medical Officer of Health. Salary £300 per annum.

DURHAM COUNTY ASYLUM.—Junior Assistant Medical Officer. Salary £150, rising to £180, with board, apartments, laundry, and attendance.

DURHAM COUNTY HOSPITAL.—House Surgeon; also Junior House Surgeon. Salary of Senior, £100, with board and lodging; of Junior £50, with board and lodging.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—House Surgeon for six months. Honorarium of £2 with board, residence, &c.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—House Physician, unmarried, for six months. Salary £20, washin allowance £2 10s., with board and residence.

INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Two House Surgeons (Senior and Junior). Salaries: Senior, £10 Junior, £75; each with residence, board, and washing.

KENT AND CANTERBURY HOSPITAL.—House Surgeon, unmarri Salary £100 a year, with board and lodging.

LANCASHIRE COUNTY ASYLUM, Winwick, Newton-le-Willows.—Assista Medical Officer, unmarried. Salary £150 per annum, rising to £200, with apartments, board, attendance, and washing.

MANCHESTER SCHOOL BOARD.—Medical Officer. Salary £250 per annum.

MIDDLESEX HOSPITAL, W.—Medical Registrar.

PRESTON ROYAL INFIRMARY.—Assistant House Surgeon. Salary £60 per annum, with board, lodging, washing, &c.

QUEEN'S JUBILEE HOSPITAL, Earl's Court, S.W.—Resident House Surgeon. Salary £50 per annum, with board, &c. Also Physician. Also Gynæcologist.

ROYAL BOSCOMBE AND WEST HANTS HOSPITAL, Bournemouth.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

ROYAL DENTAL HOSPITAL OF LONDON.—Demonstrator. Honorarium £100 per annum.

ROYAL PIMLICO DISPENSARY, 104, Buckingham Palace-road.—Attending Medical Officer.

SHEFFIELD ROYAL HOSPITAL.—Junior Assistant House Surgeon, unmarried. Salary £50 per annum, with board and lodging.

STOCKPORT INFIRMARY.—House Surgeon. Salary £100 per annum, with residence, board, and laundry.

TOTTENHAM URBAN DISTRICT COUNCIL.—Medical Officer of Health. Salary £500 per annum.

WARNEFORD HOSPITAL, Leamington.—House Surgeon. Salary £100 per annum, with board, washing, and apartments.

WESTON-SUPER-MARE HOSPITAL.—House Surgeon. Salary £100 per annum, with board and residence.

## Births, Marriages, and Deaths.

### BIRTHS.

FISHER.—On Feb. 10th, at Sittingbourne, Kent, the wife of H. Holdrich Fisher, M.D. Lond., of a son.

FREDERICK.—On Feb. 4th, at North Woolwich-road, Silvertown, the wife of Edward G. Frederick, M.R.C.S., L.R.C.P. Lond., of a son.

FRERE.—On Feb. 6th, the wife of A. Hanbury Frere, M.B., C.M., of Diss, Norfolk, of a son.

LOTZ.—On Feb. 3rd, at Fremantle, Western Australia, the wife of H. J. Lotz, L.R.C.P. Lond., M.R.C.S., D.P.H., of a son.

RANDALL.—On Feb. 6th, at Queen's-road, Wimbledon, the wife of Surgeon Philip N. Randall, M.B. Lond, Royal Navy, of a daughter.

### MARRIAGES.

ASH—BRATT.—On Feb. 11th, at Christ Church, Mayfair, London, Lieutenant Colonel Robert Vacy Ash, A.M.S., retired, of Fleetwood, Lancashire, to Florence May, daughter of Henry Bratt, J.P.

WADE—DAWES.—On Feb. 6th, at the parish church of St. Mary, Rye, Sussex, Ernest Wentworth Wade, of Harleston, Norfolk, M.D. Dubl., to Elsie Katherine, eldest daughter of Walter Dawes, solicitor, Rye.

WARING—MILVAIN.—On Feb. 10th, at Adwick-le-Street, near Doncaster, Alfred John Waring, M.B. Lond., to Isabel Catherine Milvain, daughter of the late James Milvain, Newcastle-on-Tyne.

### DEATHS.

BLATHERWICK.—On Feb. 6th, at his residence, Queen's Mead-road, Bromley, Kent, Deputy-Surgeon-General Thomas Blatherwick, in his 79th year.

FORT.—On Feb. 10th, at Standerton, of enteric fever, Percy Reginald Fort, L.R.C.P. Lond., aged 28 years.

*N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

This association undoubtedly does very useful work, but, like many other charities, is sadly crippled in its work from want of funds It was stated at the meeting that the number of patients discharged from all the lunatic asylums of the country was about 7000 a year, and of this number but very few were provided for by their friends

PLYMOUTH DENTAL HOSPITAL The annual meeting of the subscribers of this institution was held on Feb 5th, under the presidency of Mr J Elliot Square, F R C S Eng The report stated that 1990 patients had been treated during 1901 The financial statement showed a favourable balance of £4

OPPOSITION TO THE "CONSCIENTIOUS OBJECTION" CLAUSE —At the meeting of the Bodmin Town Council held on Feb 4th, and also at the meeting of the Exmouth District Council held on Feb 5th, it was decided to support a petition for the repeal of the clause in the Vaccination Act of 1898 relative to conscientious objections to vaccination

DR G VIVIAN POORE will occupy the chair on the occasion of the complimentary dinner to be given to Captain E T Inkson, V C , R A M C , by the Union Society of University College and Hospital on Friday, Feb 21st, at the Café Royal, Regent street, W Tickets (6*s* 6*d* each) can be obtained on application to Mr W L Scott, University College, Gower street W C

# Parliamentary Intelligence.

## NOTES ON CURRENT TOPICS

### *The Registration of Plumbers*

THE Bill for the establishment of a national system for the registration of plumbers has been introduced once more this time in the House of Lords Lord Glenesk has charge of the Bill and at a recent sitting of the House of Lords he obtained a second reading for it

### *Medical Acts (Extension) Bill*

Attached to the Medical Acts (Extension) Bill introduced by General Laurie is a memorandum in the following terms—viz 'Since the passing of the Medical Act 1858 very great advance has been made in medical education throughout the empire and especially in the self governing colonies This Bill provides that where the examiners and course of education at the principal colonial schools of medicine are in all respects the same as those practised in the United Kingdom and subject to the supervision of the General Medical Council medical men from Greater Britain should when proved to be properly qualified be admissible to serve the Empire in the naval and military and civil services of the Crown Surgeons of the highest standing in Canada and holding commissions from His Majesty in the militia volunteered for service in South Africa and a complete field hospital was offered by Canada and in both cases the War Office refused to accept such service on the ground that it was contrary to the Medical Act of 1858 to permit a colonially trained surgeon to attend professionally to British troops The object of the amending *Bill* is to remove this disqualification The second reading of the Bill was put down for Wednesday, Feb 12th but other business occupied the House on that day and it had to be postponed

## HOUSE OF COMMONS

### FRIDAY FEB 7TH

### *Inoculation against Enteric Fever*

Mr EUGENE WASON asked the Secretary of State for War whether he could now give any information as to the result of inoculation against enteric fever amongst the troops in South Africa, and what proportion of those who had died from enteric fever were inoculated, and how many were not inoculated —Lord STANLEY replied: The report of a civil surgeon who was specially detailed to collect the information in South Africa has not yet been completed I am not, therefore, in a position to give the information desired

### MONDAY FEB 10TH

### *The Housing of the Working-classes*

Mr LONG in reply to a question with regard to the housing of the working-classes said that he could not at present state when he should be in a position to move for the appointment of the proposed Select Committee to inquire into the period for the repayment of loans raised by local authorities but due notice would be given of the motion He did not propose that the committee should be asked to inquire into other matters in connexion with the housing of the working-classes

### *Suspected Beer Poisoning at Halifax*

Sir CUTHBERT QUILTER asked the President of the Local Government Board whether his attention had been called to the recent cases of suspected beer poisoning in the borough of Halifax, whether any investigation by his department or by any local authority had taken place, and if so with what result?—Mr. LONG replied My attention has been called to the cases referred to in the question and I have ascertained that local investigations are now being made by the Assistant Commissioner of the Royal Commission on Arsenical Poisoning as well as by the medical officer of health of the borough

### *Poor law Medical Officers in Ireland*

Mr J P FARRELL asked the Chief Secretary to the Lord Lieutenant of Ireland having regard to the fact that although medical officers summoned by subpœna to give evidence in criminal cases were paid their fees at professional rates in the cases of dispensary officers absent on such duties the ratepayers were called upon to pay a locum tenent, whether he would consider the advisability of ordering in future that such medical officers must provide their own substitute —Mr WYNDHAM replied The Local Government Board has been advised that a medical officer compelled by subpœna to be absent from his district is temporarily incapacitated from performing his duties within the meaning of the Relief Act and Orders and the board of guardians is bound therefore to make provision for the care of the sick poor during his absence by employing and paying a temporary substitute It is a matter of very rare occurrence for a board of guardians to have to incur expenses such as these

### *The Supply of Vaccine Lymph*

Mr BARTLEY asked the President of the Local Government Board whether seeing the importance of all persons being vaccinated and revaccinated with vaccine lymph of guaranteed quality made in this country and not obtained from abroad or from other sources which were not so guaranteed he would take steps to provide with the *least possible delay an adequate supply of Government lymph* so that every qualified medical practitioner should be able to purchase such Government lymph in such quantities as he might require and at a price just sufficient to pay the cost of its production —Mr LONG replied Having regard to the interest felt in all matters connected with small pox at the present time perhaps I may be allowed to make a short statement in answer to this question The duty undertaken by *the Government in 1898 was to provide for primary* vaccination by public vaccinators and this duty, I may say has been completely fulfilled It has also been the desire of the Government as far as possible to provide public vaccinators with lymph for revaccinations and this has been done to the utmost extent practicable In ordinary times it has been found sufficient to issue from 8000 to 10 000 charges of lymph weekly Since however, the epidemic of small pox began this output has been largely increased and the establishment is now producing some 50 000 charges a week I may explain that there are several difficulties in connexion with the manufacture of glycerinated lymph In the first place, it is not possible to store it to any large extent because the period for which it will keep is so uncertain and I may state that when the demand in consequence of the outbreak of small pox began to increase there was in reserve the full amount which it was thought practicable to retain Further, the lymph takes some weeks to mature especially as it is of importance that all practicable means should be used to test its efficiency and purity before it is issued Moreover, there is great fluctuation in the demand owing to the habit of so many persons to defer vaccination until small pox is imminent Thus in a single fortnight recently the applications for lymph from public vaccinators which had previously risen to four times the normal demand suddenly more than doubled, From the inquiries which I have caused to be made I understand that an ample supply of glycerinated calf lymph can be obtained from unofficial sources and that there is no reason to doubt that it is satisfactory in quality It would, I think, be unfortunate at this moment to enter into competition with private enterprise in this matter, *Looking to the* considerations I have mentioned I do not see my way at the present time to accede to the suggestion of my hon friend —Mr BARTLEY asked whether there was any guarantee as to the efficiency of the lymph —Mr LONG: There is no guarantee in connexion with either official or non-official lymph Two years ago there was an independent inquiry conducted by THE LANCET into the lymph generally supplied On that occasion they found considerable fault with the lymph *supplied* by the Local Government Board and placed it fifth in the list of lymphs arranged in the order of merit It is impossible to guarantee lymph What the Local Government Board does is to secure that the utmost care and trouble are taken in its preparation in the hope that it shall prove pure and efficacious The lymph provided by private commercial firms is I believe at the present moment of excellent quality and as good as we can produce *ourselves —Mr* PEASE *asked whether it was* the fact that large quantities of lymph had been received from the French Government —Mr LONG No sir, I am not aware of any lymph being supplied by the French Government but there is a considerable manufacture of lymph by private firms in France which so far as I know is of a thoroughly satisfactory character

### TUESDAY, FEB 11TH

### *Small pox Accommodation at Aldershot.*

Colonel TUFNELL asked the Secretary of State for War whether he would state by whose authority huts had been erected on Thorn Hill Aldershot specially for the reception of small pox cases, the site being within a stone's throw of the abattoir established for the killing of animals for the troops at that station —Mr BRODRICK replied: This service was carried out by *the general officer commanding the First Army* Corps on his own initiative The site is close to the existing isolation hospital It is 200 yards from the present supply depôt and 400 yards from the new abattoir which is nearly finished

Major RASCH May I ask whether this is the same genius who ordered sewage milk to be served out to the troops?—Mr BRODRICK No sewage milk was ever served out to the troops

Sir WALTER FOSTER: *Is it not an understood thing that these huts* should be at a distance of at least 400 yards? Mr BRODRICK: I have no doubt that the medical authorities were consulted as regards the distance but medical authorities do sometimes disagree upon these points

## BOOKS, ETC , RECEIVED

MACMILLAN AND CO Limited, London and New York.

Atlas of Practical Elementary *Zootomy* (Being a Revised Edition of the Zoological Portion of the Atlas of Practical Elementary Biology ) By G B Howes, LL D F R S With a Preface to the First Edition by the late Right Hon Professor T H Huxley, P C F R S Price 10*s* net

NEW ERA PRINTING COMPANY, Lancaster, Pa., U S.A.

Outlines of Anatomy A Guide to the Methodical Study of the dilating it sufficiently so as to allow the escape of the hooked end. This not being successful, seizing the free end and pulling firmly upon it, he cautiously cut round the pin with a pair of scissors, thus easily extricating it, and without any hæmorrhage, either external or internal, the part healing at once without any further trouble and the patient recovering perfectly.

This case is interesting from its exceptional rarity, and as showing what unaided nature can do, especially in these days when, as Sir Felix Semon has pointed out with reference to another region of surgery, there is such a frantic rush to the stern arbitrament of the knife in all sorts of cases.—I am, Sirs, yours faithfully,

B. STRACHAN, M.B. Glasg.

Sunderland, Jan. 29th, 1902.

### SERO-THERAPY AND GOVERNMENT CONTROL.

AT the conclusion of a lecture at the Royal Institution on Feb. 11th Professor A. Macfadyen urged the desirability of a Government laboratory being established in which the preparation and standardisation of sera and antitoxins should be conducted. It has been for some time strongly recognised that a control laboratary is needed, and the Government ought to add a State biological laboratory to its present equipment, which at present only admits of the control of the Excise and the administration of the Food and Drugs Acts at the chemical laboratories in Clement's-inn. At the present time the need of some official control is particularly felt in regard to lymph for vaccination.

### WANTED—A PRIVATE HOSPITAL.

*To the Editors of* THE LANCET.

SIRS,—Could you or one of your readers tell me of a home or private hospital for a young lad who is suffering from diabetes? I find that in his own house the diet cannot be properly restricted and I wish to put him where this can be strictly attended to.

I am, Sirs, yours faithfully,
SACCHARUM.

Feb. 2nd, 1902.

### A CURE FOR WARTS.

*To the Editors of* THE LANCET.

SIRS,—In answer to the query by "At My Wit's End" in THE LANCET of Feb. 8th, p. 420, in reference to the cure of warts, I would suggest that your correspondent revaccinates his patient. I have reported the effects of revaccination upon warts in THE LANCET of Sept. 22nd, 1900, p. 876.

I am, Sirs, yours faithfully,
J. D. STAPLE, M.R.C.S. Eng., L.S.A.

Bristol, Feb. 8th, 1902.

*To the Editors of* THE LANCET.

SIRS,—In answer to "At My Wit's End" I would recommend him to try oleum terebinthinæ applied many (20) times a day and rapidly dried in before a fire. I know of a case where many remedies had been tried (by a specialist), even excision, unsuccessfully and which yielded to the above treatment.

I am, Sirs, yours faithfully,
HEYWOOD SMITH.

Harley-street, Cavendish-square, W., Feb. 10th, 1902.

*To the Editors of* THE LANCET.

SIRS,—Your correspondent "At My Wit's End" asks for a suggestion for treating warts on the hands of a lady. Has he tried making her wear gloves constantly and keeping the inside of the gloves well dusted with a mixture of equal parts of French chalk and calomel carefully mixed? I find it more useful than anything else. Of course, he must look out for symptoms of mercurial absorption, but I have never had any trouble, and generally the warts go.

I am, Sirs, yours faithfully,
SIMPLE SIMON.

Feb. 8th, 1902.

*To the Editors of* THE LANCET.

SIRS,—I am not in the habit of prescribing for one of the *genus homo*, but if the warts that your correspondent complains of in THE LANCET of Feb. 8th, p. 420, belong to the papillomata he will find that a saturated watery solution of sodium hydroxide will remove them. It will first be necessary to get rid of the acetic acid which his patient has been applying to the growths by a liberal application of soap and-water, otherwise the soda solution will be neutralised by the acid. Then with a glass rod apply and smear over each wart one drop of the caustic soda once a day or oftener for two or three days.

I am, Sirs, yours faithfully,
H. M. SINGLETON, M.R.C.V.S.

Ealing, W., Feb. 7th, 1902.

### THE MORTALITY AFTER OPERATIONS FOR APPENDICITIS.

*To the Editors of* THE LANCET.

SIRS,—I should be glad if some of your readers would be kind enough to give their experience regarding cases of appendicitis occurring in their private practice which have been treated by operation during the acute stage. The number of cases within my ken that have died shortly after the operation represent a very large percentage mortality, and the last week two more have been added to the roll. On the other hand, the few cases I have known which for various reasons have refused to submit to operation have in most instances recovered completely. All I ask for is statistics, and if they prove that the risk of death from general peritonitis is less than the risk of death from collapse and other causes after operations (in private houses), then are we general practitioners to continue to recommend the operation?

I am, Sirs, yours faithfully,
M.B.

Jan. 23rd, 1902.

*Nemo.*—We are not sure that we understand our correspondent's letter. Anyhow, no one can be bound by the conditions of a document which he has not seen. He may be bound because he has given his word, and what he has undertaken to do may afterwards be put upon paper; but he is morally bound by his word and not legally bound by the document unless he has seen it and approved it as recording his promise.

*G. S. M.*—"Surgical Emergencies," by W. P. Swain, F.R.C.S. Eng., now in its fifth edition. London: J. and A. Churchill.

*Medical Student.*—The guide in question is now obsolete.

*K. L. S.*—The article is not of sufficient medical interest.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

# Medical Diary for the ensuing Week.

## OPERATIONS.

### METROPOLITAN HOSPITALS.

**MONDAY (17th).**—London (2 P.M.), St. Bartholomew's (1.30 P.M.) St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.) West London (2.30 P.M.), London Throat (2 P.M.).

**TUESDAY (18th).**—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

**WEDNESDAY (19th).**—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.).

**THURSDAY (20th).**—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

**FRIDAY (21st).**—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.). West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square, (9.30 A.M.), City Orthopædic (2.30 P.M.).

**SATURDAY (22nd).**—Royal Free (9 A.M. and 2 P.M.), London (2 P.M.) Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.), Throat, Golden-square (9.30 A.M.)

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

## SOCIETIES.

**MONDAY (17th).**—MEDICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish square, W.).—9 P.M. Mr. A. Pearce Gould: Lettsomian Lectures on Certain Diseases of the Blood vessels. Lecture I. Varicose Veins:—Nature, Influence of Heredity, Regurgitation from Deep Veins, Importance, the Value of Tredelenburg's Operation.

**TUESDAY (18th).**—CHELSEA CLINICAL SOCIETY (Jenner Institute of Preventive Medicine, Chelsea-gardens, Grosvenor-road, S.W.).—8.30 P.M. Clinical Case:—Dr. W. Ewart and Dr. L. Wilkinson: Relapse of Pernicious Anæmia after Radical Cure of Oral Sepsis by Complete Removal of the Teeth. Papers:—Mr. H. L. Albert: Oral Sepsis, with Bacteriological Demonstration by Prof. R. T. Hewlett.—Dr. J. W. Flanagan: Tuberculosis and the Poor Law.

PATHOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Card Specimens: Mr. H. L. Barnard: (1) Melanotic Sarcoma of Finger Nail; (2) Melanotic Pigmentation around the Anus, Secondary Deposits in Glands.—Mr. R. Johnson: Hernia into Tunica Vaginalis with Invagination of the Neck of the Sac. Prof. R. Muir: The Reactions of the Bone-marrow and other Leucocyte-forming Tissues in Infections. (Lantern Demonstration.)

**WEDNESDAY (19th).**—ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.).—8 P.M. Paper:—Mr. E. M. Nelson: Polarising with the Microscope.

SOCIETY OF ARTS.—8 P.M. Mr. E. S. Bruce: The Use of Balloons in War.

**THURSDAY (20th).**—HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Titchborne-street, Edgware-road, W.).—8.30 P.M. Clinical Cases will be shown by Dr. J. Taylor, Dr. Morison, Dr. Caley, Dr. Eddowes, and others.

# Notes, Short Comments, and Answers to Correspondents.

## CRANIOTOMY IN A LIVING CHILD.

*To the Editors of* THE LANCET.

SIRS,—Is it a fact that there is a definite Papal injunction prohibiting Catholic medical men from sacrificing an unborn infant's life in order to save the mother's life—e.g., when there is hydrocephalus or in a long jammed arm presentation, far advanced, and when the mother is too weak for Cæsarean section? It is a noteworthy fact that in these and analogous cases a medical man is bound to take human life (if a living unborn infant is counted as a life). For if he allows things to take their ordinary course the mother must die By his action he could have saved her life; by his refraining from action he has taken her life in reality; by taking the infant's life he has taken probably (and *probability must be the guide*) a less useful life. But the point is that he is bound to take a life, by action or by refraining from action, and he cannot in doing his duty get out of it, be he Catholic or Protestant.

I am, Sirs, yours faithfully,

Jan. 28th, 1902. INSTES.

⁂ We do not know of any definite Papal injunction to the effect mentioned in our correspondent's letter, but the practice of sacrificing the life of the child to save that of the mother is to the best of our belief not considered lawful by the Roman Catholic Church. The following document is quoted by Capellman, "Medicina Pastoralis," second Latin edition, published at Aix-la-Chapelle in 1891. It is an answer sent by the Holy Office to the Cardinal Archbishop of Lyons.

> "Eminentissime et Reverendissime Domine!
>
> Eminentissimi P.P. mecum Inquisitores Generales in Congregatione Generali habita feria IV, die 28. labentis Maii, ad examen revocarunt dubium ab Eminentia tua propositum: 'An tuto doceri possit in scholis catholicis, licitam esse operationem chirurgicam, quam craniotomiam appellant, quando scilicet ea omissa, mater et filius perituri sint, ea e contra admissa, salvanda sit mater, infante pereunte?' Ac omnibus diu et mature *perpensis, habita quoque ratione eorum, quae hac in re* a peritis catholicis viris conscripta ac ab Eminentia tua huic Congregationi transmissa sunt, respondendum esse duxerunt; *Tuto doceri non posse.* Quam responsionem, cum S. S. D. N. in audientia eiusdem Feriae et Diei plene confirmaverit, Eminentiae tuae communico, tuasque manus humillime deosculor, humillimus ac addictissimus servus verus.
>
> Romae, 21 Mai 1884. R. CARDINALIS MONACO"

—ED. L.

## MEDICAL AID ASSOCIATIONS AND THE GENERAL MEDICAL COUNCIL.

*To the Editors of* THE LANCET.

SIRS,—Among the letters on the above subject no mention has been made of *private* collectors. These men go about canvassing from house to house and are paid either by commission on their collections or by a fixed salary, often with an understanding that if their weekly collections do not increase their salary will be reduced. Now in a small town it soon becomes generally known that the collectors of a certain insurance company have been forbidden to do any canvassing, and, moreover, are not allowed to put on their list any new members whatever. What is the result? Why, the *private* collectors employed by other medical men immediately work upon this to their own advantage. Your correspondent, Mr. John MacCormac, states that medical men are "notoriously unbusinesslike", they would, indeed, be so did they give up an appointment bringing in a good substantial sum a year in order that it might be thrown into the hands of their opponents I would recommend that the 2000 medical men affected by the recent case at Great Yarmouth form a union and demand fair play. The General Medical Council might, with more credit to themselves and a great deal more benefit to general practitioners, turn their attention to the prescribing chemist *On more than one occasion when visiting* patients I have discovered that, instead of taking the medicine they have had from me, they have obtained a bottle from a chemist, still expecting me to go on attending. I have then told them that should the patient die they may as well apply to the chemist for the death certificate.

I am, Sirs, yours faithfully,

Feb. 3rd, 1902. G. P.

## DISINFECTION AND SMALL-POX.

A CORRESPONDENT—a medical man—*writes to us as follows*: "At the present time, when we are again visited by small pox in an epidemic form in the metropolis, it may be considered desirable that a general *disinfection of* the houses, both infected and otherwise, with chlorine in the parishes where the disease is prevalent should be adopted." We cannot think that our correspondent's suggestion is feasible, or that even if it were so it would be useful To disinfect every house in all the parishes where small pox is prevalent would be almost impossible. To disinfect any one house in which a case of infectious disease has occurred is not only possible, but is always done if the matter gets to the ears of the sanitary authorities, and the process, combined with the removal of the patient, goes far to prevent the spread of the infection. But what is the use of disinfecting an uninfected house? As soon as the chlorine was well out of the house there would be nothing to prevent the germs of small pox or any other infectious disease obtaining a footing. The cost, too, of disinfecting a whole parish would be very considerable, and the necessary money would be far better spent in cleansing operations or in improving defective dwellings.

## THE ORDER FOR THE BURIAL OF THE DEAD.

THE honorary secretary of the Funeral Reform Association, whose letter will be found in another column, asks whether all the funeral *service except the committal and the grace might not be said in the* church during inclement weather? There is no reason why it should not, except the very pertinent one that the Book of Common Prayer orders otherwise. There is but little else said at the grave, only the burial antiphon and the antiphon commencing, "I heard a voice ......" together with a versicle and response and two prayers. Until the Prayer-book be revised perhaps the bishop might be able to allow the simple and far more beautiful form of burial service laid down in the first Prayer-book, where the office to be said at the grave was shorter, or else the two collects might in the present office be transferred to the end of the lesson and so said before the coming to the grave.

## WANTED—AN ANNUITY OFFICE.

*To the Editors of* THE LANCET.

SIRS,—Can any of your readers inform me of any office which grants annuities according to the state of health of the applicant after medical examination similar to life insurance? Also if the same is allowed by law for purchase of annuities by trustees?

I am, Sirs, yours faithfully,

Jan. 31st, 1902. M.D.

## "THE FEAR OF SMALL-POX."

THE following letter appeared in the *Newcastle Daily Journal* of Jan. 30th, under the above heading:—

> SIR,—Care should be taken to keep the streets clean. The corporation men should not leave the droppings of the tubs at your back door. There is no need to frighten the people. I have sailed the salt sea Once our mate took the small pox after we got out to sea *I nursed him and he got better without a doctor. No* one else in the ship took the small pox.—I am, etc.,
>
> A SAILOR OF THE QUEEN.

We quite agree with this bold mariner's dictum about keeping the streets clean and fully sympathise with the editor of our contemporary *on account of the corporation* men leaving the *droppings of* the tubs at his back door. But we cannot understand what small pox has to do with it. And, on second thoughts, was it small pox?

## VACCINATION GUARDS.

*To the Editors of* THE LANCET.

SIRS,—I have been asked by several practitioners whether there is a vaccination guard of a similar design to the one which appears illustrated in THE LANCET of Feb. 1st, p 317, but suitable in size for infants and children. May I be allowed to supplement the particulars already given of this appliance by explaining that precisely the same instrument may be used for any age? In the case of infants or children, however, the upper end should be bent over and moulded by the fingers to fit the curve of the shoulder in each case.

I am, Sirs, yours faithfully,

Feb. 9th, 1902. HAYDN BROWN.

## THE STORY OF A HAIRPIN.

*To the Editors of* THE LANCET.

SIRS,—The following case occurred in my experience about 15 years ago. A labourer, tipsy of a Saturday night, was enjoying a fish supper, when, having, as he fancied, swallowed a bone, he asked his housekeeper for a hairpin, which he proceeded forthwith to straighten and convert into a hook for the purpose of fetching it up, thus . In the attempt the hook caught in the fauces and was swallowed. Having been called in, in due course, as there were no urgent symptoms I contented myself with laying him up in bed and putting him on liquids, determined to await events. There was not much discomfort for a week or two, when he had a sharpish attack of bronchitis lasting for another week or two, towards the end of which a hardness was felt in the epigastric region, which by-and-by developed into a distinctly sausage shaped tumour, lying midway between the sternum and the umbilicus, a little to the left of the middle line and sloping obliquely downwards from right to left. This being carefully *palpated from* day to day, a hard point was felt towards the lower end gradually approaching the skin, which it eventually perforated, protruding for about half an inch, and necessitating the use of a tent to prevent contact with the bed-clothes. It could be cautiously drawn out for an inch or two without causing any pain, and I was under the impression at the time that, could he have been constantly watched and kept lying on his back, with a weight attached to it over a pulley in the tent, the thing would gradually have eaten its way through without any *further ado.* But as this was impracticable I secured the assistance of Mr. G. B. Morgan who introduced a tangle tent down through the comparatively open passage alongside the pin with the view of

## Communications, Letters, &c., have been received from—

—Mr. Edward Allcott, Lond.; Aktien Gesellschaft Bad Salzschlirf, Salzschlirf; A. M. W.; Messrs. Armour and Co., Lond.; Anasarcin Chemical Co., Winchester, U.S.A.; A. H. B.; A. B.; Dr. J. Attlee, Lond.; Messrs. Allen and Hanburys, Lond.

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**FRIDAY** (21st).—EPIDEMIOLOGICAL SOCIETY (11, Chandos street, Cavendish square, W.).—8 30 P.M. Meeting.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN (11, Chandos-st., W.).—Cases will be shown by Dr. C. O. Hawthorne, Mr. S Stephenson, Mr. J. J. Clarke, Mr E. W. Goble Dr. L. C Chaffey, and Dr. G. Carpenter. Papers.—Dr. C. N. Gwynne (Sheffield): Notes on a Case of Congenital Dilatation of the Sigmoid Flexure of the Colon.—Dr. J. P. Parkinson · The Local Treatment of Adenoids

## LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

**MONDAY** (17th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Dr. T. G. Brodie: The Pulmonary Circulation, more particularly in relationship to Variations in Cardiac Activity. (Arris and Gale Lecture)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. T. C. Fox Clinique. (Skin.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Saunders · Therapeutics.

**TUESDAY** (18th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.).—4 P.M. Dr. R. L. Bowles: Clinique. (Medical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Keetley. Appendicitis.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3 30 P.M Dr. Ormerod: Hysteria.

**WEDNESDAY** (19th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Dr. T. G. Brodie. The Pulmonary Circulation, more particularly in relationship to Variations in Cardiac Activity. (Arris and Gale Lecture)

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL (Gray's Inn-road, W.C).—8 P.M. Dr. Holloway. Ear Diseases accompanied by Discharge.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. A H. Tubby: Clinique (Surgical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road W.).—5 P.M. Mr. McAdam Eccles: Lantern Demonstrations on Hernia.

**THURSDAY** (20th).—ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Dr. Corfield · The Etiology of Typhoid Fever and its Prevention. (Milroy Lecture)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.).—4 P.M. Clinique. (Surgical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road, W.).—5 P.M. Dr. Davis: Medical Anatomy and Physical Diagnosis.

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond street, W.C.)—4 P.M. Dr. Hutchison · Different Forms of Paralysis in Children. (Lantern Demonstration).

CHARING-CROSS HOSPITAL.—4 P.M. Dr. Willcocks: Medical Cases. (Post-Graduate Course.)

**FRIDAY** (21st).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Dr. T. G. Brodie. The Pulmonary Circulation, more particularly in relationship to Variations in Cardiac Activity. (Arris and Gale Lecture.)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.)—4 P.M. Dr D. Grant: Clinique. (Ear.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Moullin: Ectopic Gestation

## EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff It is urgently necessary that attention be given to this notice.

*It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.*

*Lectures, original articles, and reports should be written on one side of the paper only,* AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

*Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.*

*We cannot prescribe or recommend practitioners.*

*Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."*

*Letters relating to the publication, sale, and advertising departments of* THE LANCET *should be addressed "To the Manager."*

*We cannot undertake to return MSS. not used.*

## MANAGER'S NOTICES.

### THE INDEX TO THE LANCET.

THE Index to Vol. II. of 1901, which was completed with the issue of Dec. 28th, and the Title-page to the Volume, were given in THE LANCET of Jan 4th.

### VOLUMES AND CASES.

VOLUMES for the second half of the year 1901 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra

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## METEOROLOGICAL READINGS.

*(Taken daily at 8.30 a.m by Steward's Instruments)*

THE LANCET Office, Feb 13th, 1902.

| Date | Barometer reduced to Sea Level and 32° F | Direction of Wind | Rain fall | Solar Radia in Vacuo | Maximum Temp Shade | Min Temp | Wet Bulb | Dry Bulb | Remarks at 8.30 a.m |
|---|---|---|---|---|---|---|---|---|---|
| Feb. 7 | 29 39 | N E | | 61 | 41 | 34 | 34 | 36 | Overcast |
| " 8 | 29 34 | S W | | 63 | 40 | 35 | 36 | 37 | Overcast |
| " 9 | 29 31 | W | 0·09 | 54 | 38 | 32 | 33 | 33 | Fine |
| " 10 | 29 52 | N. | · | 53 | 36 | 31 | 31 | 32 | Cloudy |
| " 11 | 29 75 | S W | | 61 | 41 | 27 | Fzn. | 28 | Hazy |
| " 12 | 29 94 | E | | 46 | 37 | 28 | 30 | 31 | Foggy |
| " 13 | 29 90 | N.E | | 54 | 37 | 28 | Fzn | 29 | Foggy |

**During the week marked copies of the following newspapers have been received**—*Rivista Medica de San Paulo, Echo, Yorkshire Post, Standard, Bristol Mercury, Liverpool Daily Post, La Caducée, Hong Kong Weekly Press, Herts Advertiser, Times of India, Reading Mercury, Aberdeen Free Press, Mining Journal, Local Government Chronicle, Windsor and Eton Express, Thrapston and Raunds Journal, Review of the River Plate, Revista Ibero-Americana de Ciencias Médicas, Nottingham Guardian, Hertfordshire Mercury, Pharmaceutical Journal, Manchester Guardian, Dublin Evening Telegraph, Southampton Echo, Stafford Advertiser, Glasgow Evening Times, Leeds Mercury, Coventry Herald, Belfast News, Birmingham Daily Mail, Municipal Reformer, Allgemeine Medicinische Central Zeitung, Liverpool Journal of Commerce, Il Policlinico, Halifax Courier, Aberdeen Daily Journal, &c.*

equilibrium, any excess which may occur being subsequently absorbed. This is seen in the *repair* of a wound or a fracture. If, however, the condition is unstable, the cells proliferate continuously without forming the necessary amount of intercellular substance, thus forming a *sarcoma*

Secondly, there is a condition of equilibrium between epithelium and connective tissue with regard to position. If the condition is stable and is disturbed—e.g., by introducing some epithelium into the connective tissue—the epithelial cells may proliferate for a time but are eventually absorbed or encapsulated. If, for example, a few epithelial cells be introduced into the subjacent tissue, as sometimes occurs as a result of trauma, the effect is that the cells proliferate for a time, forming a globular mass of cells or an *implantation pearl*. If a larger portion of epithelium, including the basement membrane, be introduced, the result is an *implantation cyst*. An implantation cyst is the result of the natural tendency of epithelial cells to cover any bare surface. The cells on each side of the included portion proliferate until they line the cavity in which it lies and the cyst subsequently increases in size only by accumulation of its contents. The implantation cyst, therefore, is not a tumour in the strict sense of the word, since the increase in size is not due to an active proliferation of its cells so much as to the retention of its contents. If the original condition between the epithelium and the subjacent tissue is unstable the epithelial cells which are introduced continue to undergo active proliferation and the result is the formation of a *carcinoma*.

In the next place, there is a condition of equilibrium between the different parts of a tissue forming part of an organ. In stable equilibrium the removal of a portion of tissue leads to a proliferation of the neighbouring portions which continues until the deficiency is made good and then ceases—*regeneration*. Corresponding to this in the unstable condition we have a *tissue tumour* which consists of an overgrowth of a limited portion of tissue.

Again, there is a condition of equilibrium between the amount of the essential tissue and that of the supporting tissue of an organ. In the stable condition atrophy of the essential tissue leads to an increase of the supporting tissue as is seen in *replacement fibrosis*. The corresponding progressive process to this would be *progressive fibrosis* such as is seen in the fibrosis of nerves, and, possibly, in some forms of cirrhosis of the liver.

Next, there is a condition of equilibrium between the structure of a tissue and the function which it has to perform, both in quantity and quality. In the stable condition any increase of function leads to a corresponding hypertrophy of the tissue; this is *secondary compensatory hypertrophy*. I call it secondary because the primary change in the tissue in this case is hyperergia; examples are seen in muscles and glands. If the function which a tissue has to perform be altered in character the structure of the tissue also undergoes a change to enable it to fulfil its new function. This is *compensatory metaplasia*. If, for example, a surface covered by columnar epithelium is exposed to friction the epithelium undergoes metaplasia and is changed into stratified squamous epithelium. If, again, a tendon, the structure of which is only adapted to withstand a tension in the direction of its fibres, is called upon to support a stress at right angles to that direction, its structure becomes modified by the formation in it of cartilage or bone. Examples of this are found in sesamoid bones, drill bones, &c. The corresponding process in the unstable condition is *progressive metaplasia* such as is seen in myositis ossificans.

In the next place, there is a condition of equilibrium between the size of the different organs. If the equilibrium is stable and is disturbed by removing a portion of an organ or one of a pair of organs, the remaining portion undergoes *compensatory hypertrophy*. Whether or not a true primary compensatory hypertrophy, as distinct from the secondary form, exists, seems to be a matter of doubt—at any rate after intra-uterine life. The corresponding process in the unstable condition is *progressive hypertrophy*, examples of which condition are seen in the prostate, breast, thyroid gland (goitre), bones (leontiasis ossea), and perhaps in the lymphatic glands in Hodgkin's disease. The hypertrophy in these cases is not accompanied by hyperergia

Lastly, there is a condition of equilibrium between the functions of the different organs. Diminution of the function of an organ leads to *compensatory hyperergia* of a similar or correlated organ Corresponding to this we have, in the unstable condition, *progressive hyperergia*, examples of which are found in the kidneys (diabetes insipidus), leucocyte-forming organs (leucocythæmia), and, perhaps, in the thyroid gland in Graves's disease. Hyperergia, whether compensatory or progressive, is followed by secondary compensatory hypertrophy.

We see from the foregoing considerations that diseases may be divided into two great classes: (1) those which occur in a body in which the condition of equilibrium is stable; and (2) those which occur in a body in which the equilibrium is unstable The pathological processes which characterise the diseases of the first class all tend towards the restoration of the original position of equilibrium, while those which are characteristic of the diseases of the second class have a progressive tendency away from the original position.

I have omitted all mention of the retrogressive processes, but on examining these we find that, in the same way, some are characteristic of stable, others of unstable equilibrium. The former are due to definite causal factors which are extrinsic to the part concerned; they cease on the removal of this factor and restoration takes place. The latter are not characterised by definite extrinsic factors and restoration does not occur. We can, in fact, liken the organism, the cells, tissues, and organs of which are in stable equilibrium to a nation composed of individuals bound together by a well-ordered government and various moral forces, and living together in harmony and prosperity, each individual doing his own work and propagating his own species. In such a community if an attack were threatened from without those at the point attacked would first resist the invaders and if these were unsuccessful the whole number of individuals would take their share in defence. On the other hand, an organism, the component parts of which are in unstable equilibrium, can be likened to a nation of individuals discontented with the government and at variance with each other. In such a case a very slight attack from without would suffice to kindle a rebellion on the part of the discontented faction which would tend towards the destruction of the nation. The same effect might easily occur, without any extrinsic interference, from intrinsic causes alone. Thus the reparative processes constitute a defence of the organism against extrinsic injurious agents, while the progressive processes constitute a rebellion on the part of certain components against the mastery of the body as a whole. What, then, are the forces between which this equilibrium exists? We can represent them diagrammatically in the following way:

FIG. 2.

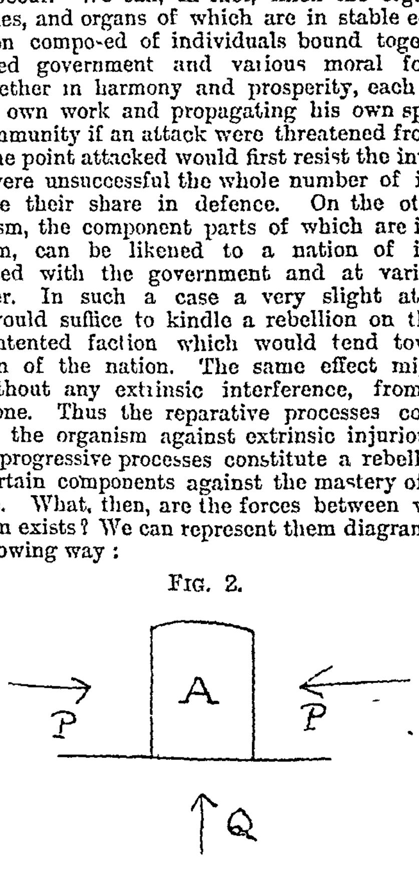
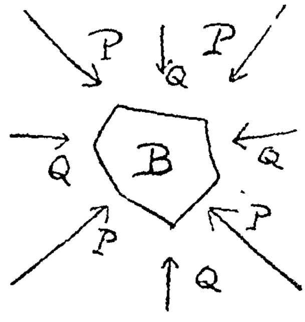


FIG. 3.



Let A (Fig. 2) represent an epithelial cell. This cell possesses an intrinsic tendency to proliferate in all directions. This tendency is kept in check by certain forces P exerted by the epithelial cells adjacent to it and by the force Q exerted by the subjacent connective tissue. Under normal conditions the tendency to proliferate and these intercellular forces are in equilibrium. As the tendency to proliferate in the direction of the free surface is not counteracted by any intercellular force proliferation may

# The Erasmus Wilson Lectures

ON

# THE GENERAL PATHOLOGY OF TUMOURS.

*Delivered before the Royal College of Surgeons of England on Feb. 10th, 12th, and 14th, 1902,*

BY CHARLES POWELL WHITE, M.A.,
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## LECTURE III.[1]

*Delivered on Feb. 14th.*

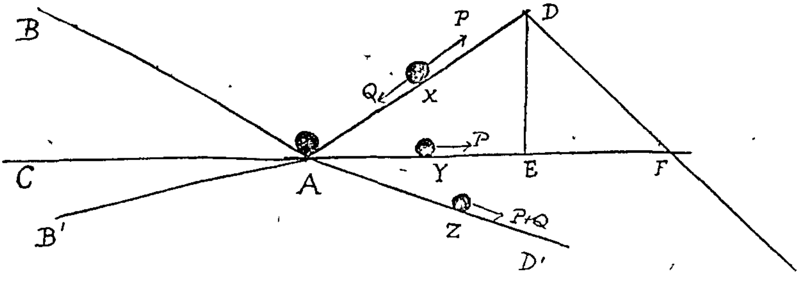
MR. PRESIDENT AND GENTLEMEN,—In the preceding lectures I have considered the classification and life-history of tumours, and I have reviewed various theories which have been advanced to explain their causation I now propose to consider the relation of tumour formation to other pathological processes

### PHYSIOLOGICAL EQUILIBRIUM.

The various parts of which the organism is composed are normally in a condition of equilibrium; that is to say, each component exists in such a position and quantity as is best suited for the useful performance of its functions, and the functions themselves are also in equilibrium. The position of equilibrium—that is, the exact relation between the component parts—varies in different individuals and in the same individual at different ages. This condition of equilibrium we call *health*. If this condition of equilibrium is disturbed in any way by an alteration in the position, quantity, or function we have the condition known as *disease*. We can represent this by a mechanical illustration (Fig. 1).

Let B A C, D A E, be two inclined planes, the angles at A being equal and the inclinations of the planes being in opposite directions. Let D F E be a third plane sloping from D in the opposite direction to D A. A position of equilibrium—that is, a condition of health—is represented by a ball resting on the planes at A, all forces acting on the ball being supposed to act in the plane of the paper, which is considered vertical. The condition of disease will be represented by a displacement of the ball up the plane A D to a position X, in which it is no longer in equilibrium. At X the ball is acted upon by two forces (neglecting the resistance of the plane), the disturbing force P acting up the plane, which represents the extrinsic cause of the disease, and the component of gravity Q (= W sin D A E, W being the weight of the ball), acting down the plane, which represents the tendency to repair. The stability of the equilibrium is measured by the force Q, and, since this is equal to W sin D A E, it is proportional to the sine of the angle D A E. If this angle is positive—that is, if the planes are above the horizontal line C A E—Q acts in the direction down the plane towards A. If the angle D A E is zero—that is, if the planes are in the position of the horizontal line—Q = O and the condition is one of neutral equilibrium in which there is no tendency to return towards the original position A. If the angle is negative—that is, if the planes are below the horizontal line in the positions A B′, A D′—Q is negative and acts in the same direction as P, and the condition of equilibrium is unstable, there being no tendency to return to the original position A but a tendency to move farther and farther away from that position, this tendency being independent of the disturbing force P.

FIG. 1.



Now, corresponding to these two conditions of stable and unstable equilibrium we have two groups of pathological processes—the *reparative processes*, such as repair, compensatory hypertrophy, and compensatory hyperergia; and the *progressive processes*, such as tumour formation, progressive hypertrophy, and progressive hyperergia. The characteristic of the reparative processes is that there is a tendency to return towards the original position of health, while in the progressive processes the tendency is to fall more and more away from that position. We can, therefore, represent a disease characterised by the reparative processes, such as an inflammatory disease, by the position X, P being the irritant and Q the tendency to repair. If P be the greater the ball will ascend the plane and in time may arrive at a position such as D, in which any further displacement will cause it to run down the plane D F. If, however, Q be the greater the ball will return towards A. That is, if the irritant overcomes the tendency to repair the disease will extend and may ultimately give rise to a progressive process such as a tumour arising in a chronic ulcer. If, however, the irritant is overcome by the process of inflammation repair sets in and health is restored. It is obvious that, for a given force P, the amount of displacement of the ball depends on the stability of the system, and in the same way the reaction of the body to an irritant depends on the stability of the individual, some patients being immune and others extremely susceptible to the same irritant. A disease characterised by a progressive process is represented by the position Z in which the tendency is for the disease to extend progressively.

In the reparative processes, although the tendency is always to return to the original position of health, yet this position is seldom exactly regained, the position of equilibrium itself being altered more or less according to the intensity or duration of the disturbing factor. This alteration of the original position is indicated, in the healing of a wound for instance, by the presence of a scar. Under certain circumstances the original stable position may become unstable, as is seen in tumour formation in a scar. This might be represented in the diagram by supposing that the force P did not act directly up the plane, but acted more horizontally so as to press the ball against the plane and thereby to depress the latter so as to bring it eventually into the position A D′ The diagram also shows that under stable conditions the disease will extend so long as the extrinsic force P continues to act, while *in the unstable condition* the extent does not depend on the extrinsic force but only on the intrinsic.

Now this condition of equilibrium exists between different parts of the body. Firstly, there is a condition of equilibrium between the component parts of the various tissues, that is, between the cells and intercellular substance If the condition is stable and is disturbed—e.g., by injuring the tissue—the cells at first proliferate out of proportion to the intercellular substance; these cells then lay down the intercellular substance and thus restore the and Sir William Bennett, in the lecture to which I have previously referred, described two cases in which mental concentration directed to the breast seemed undoubtedly to have taken part in the causation of tumours in that situation. Age also plays a part especially in the causation of carcinoma, and the observations of Thiersch, Woodhead, and others have shown that it acts through the relative atrophy of the connective tissue compared with the more active epithelium.

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[1] Lectures I. and II. were published in THE LANCET of Feb. 15th, 1902, p. 423.

The influence of heredity on the causation of tumours has been variously estimated and I do not propose to go into the statistics on this point. There can, I think, be no doubt that heredity has a share in causation, but it is not the tumour, but the unstable condition of equilibrium, which is inherited. The extent to which the body cells proliferate in normal development and growth is undoubtedly inherited and, since errors of development are admitted to be inherited to a certain extent, it is probable that errors of growth, such as tumour formation, may be also. Tumours, however, may be congenital without being inherited and are, in this case, apparently due to a defect in the normal heredity of structure. Just as there may be a defective development of an organ, so there may be a defective development of the intercellular forces. The part which heredity plays in tumour causation differs from the part that it plays in the causation of such diseases as tuberculosis in the fact that in tumours the essential factor—namely, the unstable condition of equilibrium—may be inherited, while in tuberculosis it is the adjuvant factor, the susceptibility, which is transmitted.

An important factor in tumour causation is to be found in the influence of civilisation. Cancer is admittedly more common among civilised nations than among uncivilised, and it is more common among domestic animals than among those that are wild. Civilisation acts probably by means of the unnatural mode of life which it entails. Indoor life, sedentary occupations, excessive feeding, unnatural clothing, the mental worry and excitement which are inseparable from such a life all play their part. It is to these factors that we must look for an explanation of the alleged increased frequency of cancer at the present day.

It is not to be supposed that the equilibrium throughout the body is in an unstable condition. The instability sometimes affects the whole of one tissue in an organ, as in the case of diffuse sarcoma and carcinoma, but it is usually limited to a much smaller area, to a minute piece of tissue or even to a single cell or group of cells. While, then, this instability explains the occurrence of the primary tumour, it will not explain its extension to surrounding parts nor will it explain the occurrence of metastasis.

There are certain bacteria which at first grow with great difficulty on artificial media; by frequent transplantation, however, they acquire the property of growing readily on such media and this property is transmitted to their descendants. In the same way the cells of a tumour by continuous proliferation in the primary growth acquire an increased power of proliferation which power is handed on to their descendants. If, then, these descendants arrive in a region in which the equilibrium is stable, they are able to proliferate in spite of the resistance offered to them and so to give rise to tumour growth. This increased power of proliferation is called by Adami the habit of growth. Once the cells have acquired this habit they behave as independent parasites. This explanation of malignant disease—namely, that the cells themselves act as parasites—will explain how it is that tumours are, as a rule, only infective among animals of the same species, since it is known that the blood of an animal can be replaced by that of another animal of the same species, but not by that of an animal of a different species; transplantation of tissues, also, is only successful between animals of the same species.

As I have mentioned previously, the wasting and cachexia of malignant disease can probably be explained by the destruction of tissue and the drain of nutriment by which it is accompanied, especially by the loss of carbohydrate material. Absorption of the products of degeneration may also take part in the causation of these conditions. This view of the pathology of tumour formation is based on the groundwork of observed facts and will explain all the phenomena associated with tumour growth.

### SUMMARY OF CONCLUSIONS.

I would sum up my conclusions as to the pathology of tumour formation as follows: 1. Tumours are to be classified on a histological basis. The best mode of effecting this is to make use of the three-fold basis of cells, tissues, and organs. 2. The rudiment from which a tumour springs may consist (1) of the structures normally present at the point of origin; (2) of an embryonic collection of cells such as is described by Cohnheim; or (3) of tissues of new formation, the result either of an inflammatory condition or of previous tumour formation. 3. Extrinsic factors play a part in tumour causation, but are not the determining factors—that is, the occurrence or non-occurrence of a tumour does not depend on extrinsic factors. In particular, the parasitic theory is shown not to stand a critical investigation. 4. The determining factor in tumour causation is to be found in the intrinsic factors. 5. This determining factor consists in the existence of a condition of unstable equilibrium between the intercellular forces, so that proliferation, once started, is progressive and is not limited by the resistance of the surrounding tissues. 6. The causes of this instability are many and various and may be either intrinsic or extrinsic. 7. Proliferation having started, the cells acquire the habit of growth—that is, the power of independent proliferation which enables them to proliferate in parts of the body in which the condition of equilibrium is stable. 8. Tumours grow by proliferation of their own cells. 9. Tumours do not invariably continue to increase without limit. Under certain circumstances they may cease to grow and may diminish in size or may even disappear completely. 10. Tumour formation is not to be regarded as an isolated process but is to be considered as one of a group of progressive processes with which it is closely allied. Still less must one form of tumour, such as carcinoma, be considered apart from the others.

### INDICATIONS AS TO TREATMENT.

It is not my duty as a pathologist to enter into details regarding the treatment of tumours, but we must remember that the three divisions of practical medicine and surgery—namely, pathology, clinical observation, and therapeutics—are mutually interdependent. The pathologist learns much from the clinician and the therapeutist and in return can render them assistance by suggesting modes of treatment. It is one of the most important duties of pathology to point the way to new methods of diagnosis, prognosis, and treatment, and without this it would have no practical utility.

If we refer to our mechanical illustration (Fig. 1) we see that when the ball has been displaced to the position X it can be brought back to its original position by two methods—either by removing or diminishing the extrinsic force P or by increasing the force Q. Since the force Q depends on the angle D A E, we can increase the force Q by increasing this angle. Similarly in disease we can either remove the extrinsic causes or we can increase the resistance of the body so as to enable it to overcome these causes. We can also act upon any intrinsic factor that may intervene between the extrinsic cause and the ultimate effect. In the case of tumours and the progressive processes generally, since we have to do with an active cellular proliferation we can hinder this by diminishing the supply of nutriment.

I have pointed out that the extrinsic factors in tumour causation are many and various and that they only act in initiating the disease. The removal of these factors, therefore, will act mainly as a prophylactic. For this purpose all sources of irritation, whether mechanical, parasitic, chemical, or the result of inflammatory conditions should be removed or avoided, especially in the case of those who show a propensity to tumour formation, such as those from whom a tumour has already been removed. This mode of treatment has, obviously, only a limited application. By removing the tumour we remove at once the area in which the condition of equilibrium was unstable and the cells which have acquired the habit of growth. In the case of simple tumours this mode of treatment will effect a permanent cure, and the same will be the case with a primary malignant growth if the removal is complete—that is, if all the cells which are the result of the tumour growth are removed so that none are left to find their way to distant parts of the body to give rise to metastatic tumours. This method of treatment is, and will remain, by far the most important, both with simple and malignant tumours. Unfortunately, it is not common to meet with malignant growths in a sufficiently early stage to enable us to be certain of effecting their complete removal, and after removal it is practically impossible, even after a minute histological examination, to be quite sure that all the proliferating cells have been removed.

take place in this direction In the case of secreting cells however, proliferation towards the free surface is replaced by secretion If, now, we remove one of the forces P, as by removing the neighbouring epithelial cells, proliferation is set free in the direction of the removed force The same will be the case if one of the forces P be diminished instead of being removed, as is the case in the epithelial cells lining a retention cyst If the original condition of equilibrium was stable the force P will be restored by the proliferation and the equilibrium will be regained *This is the case in* regeneration of epithelium following a wound &c. If how ever the equilibrium was originally unstable the force P will not be restored and proliferation will continue, thus giving rise to an epithelial histioma If the force Q be removed or diminished proliferation will take place into the subjacent connective tissue In this case if the original condition was *stable the force Q would be restored and proliferation would* cease If, however the equilibrium was unstable, the force Q would not be restored and proliferation would continue in the connective tissue giving rise to a carcinoma

Again let B (Fig 3) represent a connective tissue cell This cell has a tendency to proliferate in all directions, which tendency is kept in check by the forces P exerted by the neighbouring cells of the tissue and also by certain forces Q representing the influence of the intercellular substance If the forces P are diminished or removed, the forces Q remaining the same proliferation will take place and will be accompanied by the formation of the normal amount of intercellular substance This will give rise, in the stable condition to regeneration of the tissue , in the unstable, to a histioma consisting of the same kind of tissue If on the other hand, the forces Q be diminished proliferation of the cells will occur but the intercellular substance will not be formed in the proper amount and this will give rise in the unstable condition to a sarcoma and, in the stable condition, it is seen in the proliferation which is characteristic of repair The other processes to which I have referred might be represented in a somewhat similar manner

As to the nature of these intercellular forces we have no knowledge They are apparently not the recognised physico chemical forces nor are they nervous although the nervous system may have an effect in regulating them Development proceeds regularly and uniformly under the influence of these forces before the existence of nervous connexions the different tissues developing in their proper situations and of their proper structure according to the part which they have to play in the organism The more we study the growth and development of living organisms the more difficult it is to believe that vital phenomena can be explained on a physico chemical basis The intercellular forces may be altered directly by extrinsic agents such as irritants, but being intrinsic forces they may also be affected by intrinsic factors *without the direct action of external agents*

### CAUSATION IN GENERAL

A cause is defined by logicians as the invariable unconditional antecedent of an event which in relation to the *cause is called the effect A cause is said to have five* characteristics it is quantitatively equal to the effect and qualitatively it is invariable unconditional, immediate, and antecedent Cause in this sense is the sum of all the conditions which are necessary for the occurrence of the event A cause it is to be noticed is not a definite entity, but is a state or process , it is essentially matter in motion The equality of cause and effect follows from the principles of the conservation of energy and the indestructibility of matter The effect is in fact the cause redistributed , hence it follows that any substance which forms part of the cause must also be found in some form or other, in the effect For any given event there is only one cause and a given cause gives rise to only one effect. We can, however, consider the cause itself as an effect and proceed to inquire into its causation We thus arrive at intermediate and remote causes but the farther we proceed the more conditions we introduce We can *thus divide causes into immediate* and remote, the remote being connected with the immediate by a series of intermediate causes Of these the only unconditional cause is that which is immediate remote causes being always conditional In the remote causes there are, however certain essential factors present

To take an example let us consider tuberculosis This disease is defined at the present day as a disease caused by the bacillus tuberculosis and the only certain method by which we can say that a given disease is tuberculous is to demonstrate the presence of the bacillus The immediate cause is therefore the action of the bacillus on the living tissues If we proceed a step farther and inquire into the cause of this action we find that it is the entrance of the bacillus into the tissues with the condition that the tissues must be capable of being acted upon by the bacillus, or, in other words that the tissues must be susceptible We can proceed step by step in the same way and arrive at more remote causes but however remote the cause there must always be *present the essential factor—namely, the bacillus* itself Tuberculosis is therefore a disease characterised by an essential causal factor which is of extrinsic origin

To take another example, let us consider carcinoma. The characteristic feature in carcinoma is the presence of proliferating epithelial cells in the connective tissue spaces In carcinoma therefore, there is no necessary extrinsic factor *present corresponding* to the bacillus of tuberculosis and from the equality of cause and effect there can be no necessary extrinsic factor in the cause of carcinoma The immediate cause of carcinoma is the disturbance of an unstable position of equilibrium between the epithelial cells and the connective tissue so that the epithelial cells penetrate into, and proliferate in the connective tissue, the essential factor—namely the instability—being intrinsic The immediate cause of carcinoma is therefore, an intrinsic one and involves no extrinsic factor

### ETIOLOGY OF TUMOURS

In considering the causation of tumour formation we must take into consideration the peculiarities of tumours In the first place tumours are local overgrowths and in the second, this overgrowth is progressive—that is, *it is not limited by* the influence of the surrounding tissues Now the growth in tumours does not differ essentially from that of normal structures and there is no reason to suppose that the cause of the proliferation is different in the two cases Cell division is as Adami states an intrinsic property of the cell and is only influenced indirectly by extracellular conditions The usual *conditions* which give rise to proliferation are injury or removal of the neighbouring cells thus producing an altera*tion of the intercellular forces acting on the cell Increased* functional activity and increased blood supply also give rise to proliferation In addition these intercellular forces may be altered by intrinsic conditions

The progressive nature of the growth in tumours shows that the original condition of equilibrium of the part in which the tumour arose was unstable so that the growth once started is not opposed by the normal intercellular forces This instability is the determining factor of tumour formation and the other progressive processes as in its absence no amount of extrinsic irritation would give rise to them In this instability of equilibrium then we have found that for which we have been seeking namely, the common factor of tumour formation The cause then of the progressive processes is the disturbance of a part of the body the component elements of which are in unstable equilibrium This satisfies the necessary qualitative conditions of a cause , it is immediate unconditional invariable, and antecedent and it is the only cause which satisfies these conditions any remoter cause being conditional If we proceed to look *for the causes of this instability—that is for* the remote causes of tumour formation &c —we find that they are many and of various kinds They may be the same as those which cause the disturbance of the equilibrium or they may be different Chronic irritation is a frequent cause, this may be mechanical as *in the irritation of a tooth or as* in soot and paraffin cancer, or it may be parasitic as in the carcinoma arising in lupus nodules and in the bladder tumours which are sometimes met with in bilharzia disease Dr T Harris[2] of Manchester has described a case of carcinoma associated with bilharzia irritation in which the ova were found not in the tumour itself but in the tissues of the bladder wall in the neighbourhood The ova had given rise to a chronic irritation which had produced a condition of unstable equilibrium with the formation of a tumour as a result Besides these extrinsic causes, which, it will be observed have no specific characters there are also intrinsic causes. The great frequency with which the female *organs of generation* are the seats of tumour formation is to be explained by the frequent alternations of rest and activity to which these organs are subject Tumours have often been attributed to mental worry and similar conditions,

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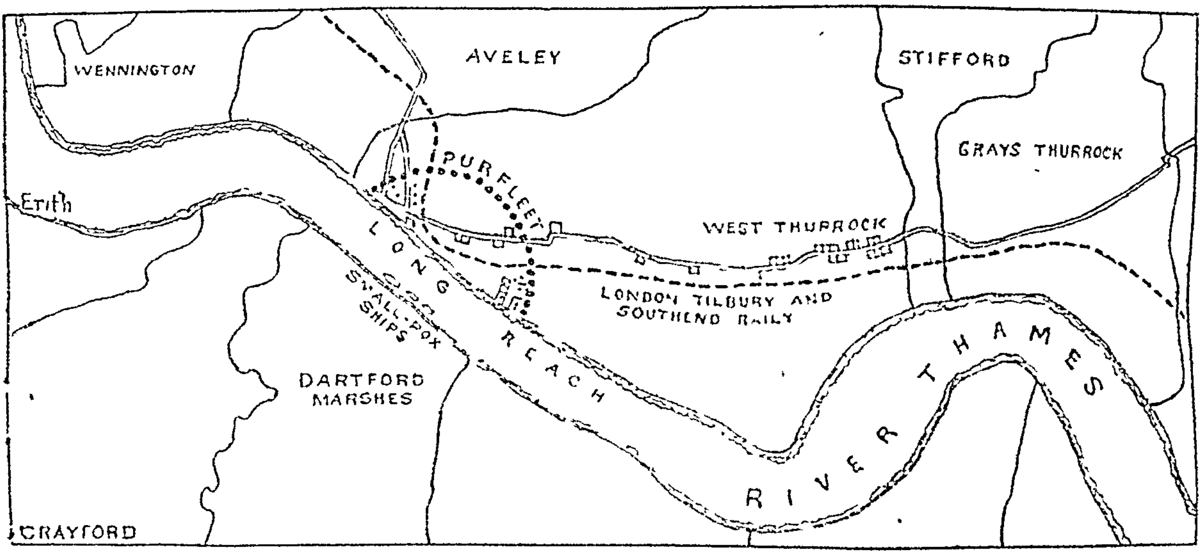
[2] Transactions of the Pathological Society of London vol xxxiv, 1883

FIG. 1.



Map showing the position of the hospital ships in the Thames in relation to Purfleet and West Thurrock. The dotted line includes Purfleet.

in 1884. Prior to this time I cannot ascertain that there was any unusual incidence of small-pox in this hamlet, but, as the following figures show, the disease was more prevalent, as indicated by the death-rate, in the Orsett Union than in other parts of Essex. This is probably due to the fact that vaccination has until recently been very lax throughout the union.

TABLE I.—*Deaths from Small-pox in the Orsett Union and in the Remainder of the County of Essex.*

| — | Orsett Union. | Remainder of the county. |
|---|---|---|
| Number of deaths from small-pox, 1871–1883 inclusive . .. . ... | 25 | 389 |
| Annual death rate per 1000 ... .. | 0·117 | 0 089 |
| Number of deaths, 1884–1900 inclusive .. .. .. ... . ... | 33 | 116 |
| Annual death rate per 1000 . ... | 0 072 | 0 014 |

It will be seen that since 1884, when the floating hospital was placed in the Thames, the deaths in the Orsett Union from small-pox have proportionately greatly increased. The ratio which in the first period was 4 to 3 has since been 5 to 1. To what is this change attributable if not to the proximity of the ships?

The accompanying map shows the position of the floating hospital in the Thames, relatively to Purfleet and West Thurrock parish in the Orsett Union. Within the half-mile radius of the ships there are only about four cottages on the Essex side of the river, whilst the three-quarter mile radius includes all the hamlet of Purfleet which is a portion of the parish of West Thurrock Beyond this limit the only groups of houses are in West Thurrock on the road to Grays. At Purfleet there are paper-mills, oil-stores, &c., employing many hands, some of whom reside at Grays. In investigating the cases which occurred during 1892-95 there was no evidence of infection from these works or from the rubbish-tip used by a London vestry. During these years 15 cases occurred in the Purfleet area, 28 in the remainder of the West Thurrock parish, and 52 in the rest of the union. The relative prevalence is given in Table II.

TABLE II.—*Relative Prevalence of Small pox in certain Districts of the County of Essex.*

| — | Number of cases. | Proportion relatively to population, Purfleet being taken as 100. |
|---|---|---|
| Purfleet ... . .. . . | 15 | 100 0 |
| West Thurrock (whole of) . | 35 | 46 0 |
| Orsett Union without West Thurrock | 48 | 7 0 |
| Essex County without Orsett Union | 658 | 3·5 |

Within the three-quarter mile radius from the ships cases were twice as numerous in proportion to the population as in the whole of the parish of West Thurrock, 14 times as many as in the remainder of the union, and 30 times as numerous as in the remainder of the administrative county. In other words, the further the district from the ships the less the number of cases. The aerial conveyance of infective material alone appears to account for this excessive prevalence.

TABLE III.—*Progress of Small pox in the County of Essex for the period extending from August, 1901, to January, 1902.*

| — | Population. | 1901. August. | September. | October. | November. | December. | 1902 January. | Total. |
|---|---|---|---|---|---|---|---|---|
| Barking . .. . .. .. | 21 547 | 0 | 0 | 0 | 2 | 2 | 11 | 15 |
| Chingford ... ... .. | 4,372 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| Colchester ... ... .. | 38,350 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| East Ham .. ... ... . | 95,990 | 0 | 0 | 3 | 16 | 11 | 21 | 51 |
| Grays ... ... ... ... .. | 13,831 | 1 | 2 | 0 | 3 | 32 | 55 | 93 |
| Leyton ... ... ... . | 98,900 | 0 | 0 | 1 | 2 | 3 | 7 | 13 |
| Leigh ... .. .. ... .. . | 3,063 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Maldon ... ... ... .. . | 5 561 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Romford ... ... . . ... | 13 656 | 0 | 0 | 1 | 1 | 6 | 22 | 30 |
| Shoebury ... ... ... . .. | 4,081 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Southend ... .. ... . ... | 28 857 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Walthamstow.. ... ... . | 95,125 | 0 | 2 | 0 | 0 | 1 | 16 | 19 |
| Woodford .. ... ... .. .. | 13,806 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Other urban districts . | 138,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Billericay Rural District . | 17,504 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Chelmsford Rural District | 23,717 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Halstead Rural District .. | 10,176 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Maldon Rural District .. | 14,630 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Orsett Rural District ... .. | 19,890 | 0 | 8 | 9 | 33 | 73 | 74 | 197 |
| Rochford Rural District . | 14,512 | 0 | 0 | 0 | 0 | 1 | 3 | 4 |
| Romford Rural District . | 19,015 | 0 | 0 | 0 | 0 | 5 | 13 | 18 |
| Other rural districts . | 121 310 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Totals . ... .. ... .. | -- | 1 | 12 | 14 | 60 | 139 | 228 | 454 |

Seeing that proliferation of cells plays the important part in tumour formation, it is natural to ask whether it is possible to hinder the proliferation by any process of starvation Starvation might be induced, either by a general reduction of the nutriment supplied to the body, or by a local cutting off of the nutriment such as is effected by ligature of the arteries which supply the tumour with blood We should not expect much from the first method since the other tissues would be equally affected by the deficiency of nutriment The second method has been tried in some cases of inoperable carcinoma with the effect of temporarily diminishing the rate of growth

I have previously referred to the presence of large quantities of glycogen in tumours, especially in those which are malignant This glycogen is found wherever active proliferation is taking place and it supplies the energy necessary for the proliferation The question arises therefore whether we can control this supply in any way In glycosuria we know that the carbohydrates excreted in the urine may be derived either from the ingested carbohydrates or from the proteids of the body The origin of the glycogen in tumours has not been investigated so fully, but probably the same two sources are available as in diabetes An examination of the quantity of nitrogen excreted in the urine would be of assistance in determining this point but I am not aware of any systematic investigations in this direction The urine in malignant disease has not received the attention that it deserves The presence of wasting and cachexia would seem to show that the proteids of the body are broken up and it is very likely that the glycogen arises, in part at least from this destruction of proteid matter If this is the case we cannot expect much from a carbohydrate free diet since the body proteids would still remain as a source of the glycogen Is it possible then to remove the glycogen which has been formed? We know that malignant disease is very rarely met with in association with diabetes and we also know that in acute diabetes wounds heal with great difficulty The explanation of this is probably that the glycogen which is necessary for the proliferation of cells is continuously being removed from the body as glucose It is permissible, then, to think that by setting up an artificial glycosuria we could remove the glycogen as fast as it is formed and so prevent it being available for supplying the energy necessary for the proliferation of the tumour cells Such a glycosuria may be set up by means of certain drugs—such as phloridzin This is a point which might well be investigated by therapeutists I am afraid, however, that we must not expect much from such a treatment because the drug would remove the glycogen from the normal tissues as well as from the abnormal and it would be of little use to hinder the progress of a tumour if the surrounding tissues were not able to take advantage of the occasion by reacting and absorbing it Much depends on the question whether the normal or the abnormal tissues would yield up their glycogen most readily

The most important question at the present time with regard to malignant disease is whether anything can be done to prevent or to retard recurrence and metastasis and to benefit inoperable cases As I have pointed out, tumours are essentially due to intrinsic causal factors, and any treatment should therefore be directed towards these factors The cases described by Sir William Bennett, to which I have referred and numerous other recorded cases, show that malignant disease does not always proceed to a fatal termination but may become arrested and even cured To facilitate this course measures should be taken which would raise the enfeebled resistance of the body tissues In this connexion I may mention that arsenic which has a markedly tonic action has been recommended in all diseases characterised by the progressive processes and in some cases with some degree of success At a recent meeting of the French Académie de Médecine Dr Lucien le Roy[3] gave an account of a case of cancer of the lung in which the patient apparently recovered after treatment with arsenic and quinine The details of this case are not yet published Coley s fluid probably acts in the same way by producing an increased reaction of the surrounding tissue against the tumour and the same may, perhaps be said of such procedures as oöphorectomy and feeding with thyroid extract This last mode of treatment has been recently reviewed by Mr H. T Butlin[4] who comes to the conclusion that the benefit derived from it is only temporary

The immense improvement which has taken place in the treatment of tuberculosis points the way to a similar procedure in malignant disease This hygienic treatment acts by increasing the resistance of the body tissues to the encroachments of the tubercle bacilli and I think that it is worth while to consider whether by a similar mode of treatment the body tissues could be encouraged to resist with greater force the encroachments of the tumour cells I am inclined to think that if a patient from whom a malignant tumour has been removed, instead of returning to a sedentary and unhealthy mode of life were to lead an active outdoor existence in a healthy climate with sufficient exercise and good plain food leading as natural a life as possible, there would be less tendency for the disease to recur, and it is possible that a tumour already present might under these circumstances show a slower rate of growth or might even undergo a diminution

And now Mr President and Gentlemen, my task is ended I have laid before you no new hypothesis, nor have I brought forward any startling experimental results I have endeavoured to bring to your notice the facts mostly well known to you concerning the process of tumour formation and to show what conclusions we can legitimately draw from these facts and I have tried to point out to what modes of treatment these conclusions lead Finally, I would urge that the investigation of the pathology of malignant disease should not be left altogether to the bacteriologist Histologists, pathological chemists clinicians, and therapeutists should all take part for much remains to be discovered in all these branches of medical research There is especially a great field for work in the study of the clinical characters of malignant disease such as the temperature, the urine, and the phenomena of cachexia There is too much tendency at the present day to regard micro organisms as everything in the causation of disease and to neglect the personal or intrinsic factors I would also urge that the investigation should not be confined to the malignant tumours alone but should include other tumours and those processes which are allied to tumour formation It is only in this way that we can hope to arrive at any final conclusion as to the pathology of tumour formation

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# THE HOSPITAL SHIPS OF THE METROPOLITAN ASYLUMS BOARD AND THE DISSEMINATION OF SMALL-POX

BY JOHN C THRESH, M D VICT, D SC LOND,
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MEDICAL OFFICER OF HEALTH OF THE COUNTY OF ESSEX

THE excessive prevalence of small pox in the Orsett Union has for many years been notorious in the county of Essex Investigations made during the years 1892–95 led me to conclude that the sole cause of this excessive prevalence was the proximity of the small pox ships of the Metropolitan Asylums Board This was also the popular view From 1895 until the autumn of last year the county of Essex and the metropolis remained almost free from the disease During the quarter ending June 30th 1901 only six cases were notified in London but soon after there was a marked increase resulting in 272 cases being notified during the third quarter As soon as this tendency to spread manifested itself and the number of cases of small pox in the ships increased the opinion was openly expressed that an outbreak would speedily occur in the Orsett district and that as usual it would commence in Purfleet By the middle of September a few cases had occurred and since then cases have followed in rapid succession until now (Feb 1st 1902) about one tenth of the whole population in Purfleet has been attacked This outbreak soon spread to the town of Grays and to adjoining parishes and is gradually extending into all parts of the county The expense already incurred in providing accommodation for the patients is very considerable and in the Orsett Rural District it is almost ruinous The subject, therefore is of very great importance to the county

The small pox ships were anchored opposite Purfleet early four and a half miles from the ships. The disease once introduced into West Thurrock is carried by the men engaged at the cement and other works into Grays and other parishes. It has been surmised that the enormous volume of infected sewage poured into the river from the ships may explain the incidence of the disease in the parishes adjoining the river. Of this there is at present no proof. The evidence usually adduced is based on the fact that several men who have contracted the disease had been accustomed to bathe in the river. I am decidedly of opinion, however, that this sewage should be treated in some way before it is allowed to flow into the Thames.

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[3] Brit Med Jour Jan 25th 1902

[4] Ibid Jan 4th 1902

I desire to express my indebtedness to my assistant, Mr. Sowden, who has collected for me a large mass of information with reference to small-pox prevalence in the Orsett Union, a portion only of which has been utilised in the present paper.

Chelmsford.

# ON CLEFT PALATE.

BY W. ARBUTHNOT LANE, M.B., M.S. LOND., F.R.C.S. ENG.,

SURGEON TO GUY'S HOSPITAL AND TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

*(Concluded from p. 438.)*

FROM the consideration of the facts narrated in the previous article the indications for the treatment of the sufferers from cleft palate seem to me to be clearly as follows. First, we must endeavour to increase the vital capacity of the sufferers by teaching them how to breathe properly and efficiently. To do this the demand on the expenditure of energy should at first be reduced to the minimum requisite to fill and empty the chest to its utmost, avoiding any exercise of the muscles which does not bear directly in bringing this about. In this manner as much energy as possible is accumulated at a minimum of cost to the total energy or capacity for work of the individual. To make these children perform systematic exercises for purposes other than increasing the respiratory capacity is a most wasteful procedure and quite beyond that permissible by the amount of their usual income of energy. By increasing their breathing capacity you supply a proportionately larger quantity of oxygen, which enables them as individuals and their several tissues as component parts to perform physiological functions in a more satisfactory manner. The improvement can be gauged by measuring the daily progressive differences between the measurements in extreme inspiration and extreme expiration. Of course, the air breathed should be as good as possible. Secondly, the mouth must be kept shut habitually and certainly during the respiratory exercises air must be driven freely and forcibly in and out through the naso-pharynx alone. If any mucus exists in the nasal passages it must be cleared by blowing the nose vigorously. If this treatment is pursued efficiently and thoroughly the nasal catarrh is removed as well as the irritation and hypertrophy of the lymphatic tissues in the pharynx and there is increase of the lumen of the naso-pharynx with the bony and other structures directly dependent on its development for their complete evolution. The rate at which this result is obtained varies inversely with the chronicity of the condition and with the age of the child. The form of the alveolar arches and of the palate alters, the arch opening out in either case. The change in form which the whole face undergoes in consequence of the increase in size of the naso-pharynx and the cavities communicating with it is in some cases most remarkable, attracting at once the attention of those who have not seen the patient in the interval during which the treatment has been adopted. As to how this is best done must vary largely with the intelligence of parents, their perseverance, and the time and means which they have at their disposal.

In out-patient practice from the circumstances of the parents the treatment can rarely be carried out in the same effectual manner that is possible in private practice, where the patient is under the immediate control of the medical attendant who sees that his instructions are strictly enforced. In hospital work it is well to give the mothers a rinted form containing the following or similar instructions: 'Put the child on the back three times a day for half an hour at a time, and make it breathe in and [illegible] possible through the nose, the mouth being kept shut," and to endeavour to interest them in its application.

In the treatment of this condition, as of many others with which we are constantly confronted, in hospital practice measures have often to be adopted of a more serious nature and at an earlier period of the disease than would be considered advisable for one moment in the case of patients in comfortable circumstances, where the rest, care, and change that they could command would probably produce far better results in the long run. Among the better class of mothers, such as the wives of policemen and mechanics, results will frequently be obtained almost as good as those obtained in private practice; but the poorer portion of the community have neither the time nor the intelligence to follow these instructions, nor will they often devote their energies to the duty. The surgeon can readily determine whether his treatment is carried out efficiently or not by keeping a diary in which the differences between the measurements of the chest in extreme inspiration and extreme expiration must be entered daily. These daily observations will keep him informed of the degree of progress which his patient is making. Should this variation not show a steady increase in amount he can rest assured that his instructions are not being carried out properly.

One of the results of improving the respiratory capacity which is of considerable importance is the steady increase in weight which ensues. The following is a nurse's reports of the progress of a girl under her care for a month and it affords some indication of the results that can be obtained. The measurements are taken at the level of the nipples and represent the inspiratory and expiratory limits. They are certainly better than the average for the reason that every care was taken to make the treatment as effective as possible.

| — | Inspiration. | Expiration. | Weight. |
|---|---|---|---|
| Feb. 1st ... ... ... ... ... | 30 inches. | 28½ inches. | 7 st. 12 lb. |
| ,, 2nd... ... ... ... ... | 30½ ,, | ,, ,, | — |
| ,, 3rd ... ... ... ... ... | 31 ,, | ,, ,, | — |
| ,, 4th ... ... ... ... ... | 31½ ,, | ,, ,, | — |
| ,, 5th ... ... ... ... ... | 31½ ,, | ,, ,, | — |
| ,, 6th ... ... ... ... ... | 31 ,, | ,, ,, | — |
| ,, 7th ... ... ... ... ... | 32 ,, | ,, ,, | — |
| ,, 8th ... ... ... ... ... | 32 ,, | ,, ,, | 7 st. 13 lb. |
| ,, 9th ... ... ... ... ... | 32 ,, | ,, ,, | — |
| ,, 10th ... ... ... ... ... | 32¼ ,, | ,, ,, | — |
| ,, 11th ... ... ... ... ... | 32½ ,, | ,, ,, | — |
| ,, 12th ... ... ... ... ... | 32½ ,, | ,, ,, | — |
| ,, 13th ... ... ... ... ... | 32½ ,, | ,, ,, | — |
| ,, 14th ... ... ... ... ... | 32¾ ,, | ,, ,, | — |
| ,, 15th .. ... ... ... ... | 32¾ ,, | ,, ,, | 8 st. 2½ lb. |
| ,, 16th ... ... ... ... ... | 32¾ ,, | ,, ,, | — |
| ,, 17th ... ... ... ... ... | 33 ,, | ,, ,, | — |
| ,, 18th ... ... ... ... ... | 33 ,, | ,, ,, | — |
| ,, 19th ... ... ... ... ... | 33 ,, | ,, ,, | — |
| ,, 20th ... ... ... ... ... | 33 ,, | ,, ,, | — |
| ,, 21st ... ... ... ... ... | 33 ,, | ,, ,, | — |
| ,, 22nd... ... ... ... ... | 33¼ ,, | ,, ,, | 8 st. 5 lb. |
| ,, 23rd ... ... ... ... ... | 33½ ,, | ,, ,, | — |
| ,, 24th ... ... ... .. ... | 33½ ,, | ,, ,, | — |
| ,, 25th ... ... .. ... ... | 33¾ ,, | ,, ,, | — |
| ,, 26th ... ... .. .. ... | 33¾ ,, | ,, ,, | — |
| ,, 27th .. .. .. ... ... | 33¾ ,, | ,, ,, | — |
| ,, 28th .. ... .. .. ... | 34 ,, | ,, ,, | 8 st. 7½ lb. |

The treatment was continued uninterruptedly, being superintended by the sister of the patient, and on May 27th of the same year, four months having elapsed since it was started, the following report was sent me: Inspiration, 36 inches; expiration, 29½ inches; and weight, nine stones four pounds. This shows the following increases: Inspiration, six inches; expiration, one inch; and weight, one stone eight pounds.

As the respiratory capacity improves so the child obtains energy to spare, and it becomes more active in the full enjoyment of life. If this treatment is adopted under

The present epidemic has afforded me an opportunity of studying more carefully the effect of the floating hospital. The earliest case of small-pox recorded in the county last year was that of a man employed during the day at Purfleet but residing at Grays; this was in the last week in August. The progress of the disease in the county since is shown in Table III.

Grays Urban District forms part of the Orsett Union. The number of cases in this union is therefore 290, the population being 33,721; in the remainder of the county in which cases of small-pox have occurred there have been 162 in a population of 523,465, or taking the whole county save the Orsett Union 162 cases in a population of 782,700. Therefore, the cases per 1000 of the population in the Orsett Union were 8 6, while those in the remainder of the county were 0·21 per 1000. In proportion to the population there have been 40 times as many cases in the Orsett Union as in the remainder of the county.

The only centre of population within a mile of the hospital ships being the hamlet of Purfleet and the nearest parish being West Thurrock we should naturally expect these portions to have suffered most severely if the ships are the foci of infection. That this is the case can be demonstrated in a most conclusive manner.

Up to Feb. 1st there had been 290 cases of small-pox in the Orsett Union; 42 of these occurred in the hamlet of Purfleet within the three-quarter mile radius shown on the map, 50 in the remaining portion of the West Thurrock parish, and 198 in the other parishes of the union. In the following table the relative incidence of the disease in these districts is given, calculated on the basis of the last census returns and upon a census of the population made for the purpose by my assistant, Mr. G. Sowden:—

TABLE IV.—*Incidence of Small-pox in the Districts of Purfleet, the Remainder of West Thurrock, and the Remainder of the Orsett Union.*

| — | Purfleet hamlet. | Remainder of West Thurrock. | Remainder of Orsett Union. |
|---|---|---|---|
| Population ... .. ... .. | 479 | 2106 | 30,578 |
| Cases of small pox ... ... | 42 | 50 | 87 |
| Rates per 1000 of the population .. . .. ... | 88 | 24 | 2·8 |

It will be seen that nearly four times as many cases (in proportion to the population) have occurred in Purfleet as in the remainder of West Thurrock and 30 times as many as in the rest of the Orsett Union, notwithstanding the epidemic prevalent in Grays The next table, showing the condition of the population with reference to vaccination, proves that there is nothing in this to account for the extensive and persistent character of the outbreak.

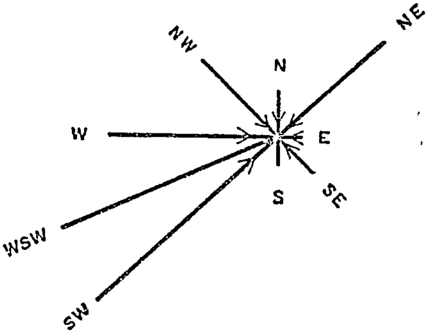
TABLE V.—*Statistics of Vaccination in Purfleet.*

| — | Vaccination in infancy only | Vaccination in infancy and since revaccinated | Not vaccinated but had small pox. | Neither vaccinated nor had small pox. | Total. |
|---|---|---|---|---|---|
| Adults ... | 111 | 171 | 8 | 4 | 294 |
| Children 12 years of age and under ... | 70 | 106 | 2 | 7 | 185 |

Moreover, the Orsett Rural District and the Grays Urban District possess a joint hospital (some miles from Purfleet) which was promptly used for the reception of patients. From my own observations I am convinced that more was done in this district than is usually done in such districts for preventing the spread of the disease, but these efforts have been futile since the focus from which the disease is being spread still remains.

There is only one other parish in the Orsett Union which is near the hospital ships This is Aveley with a population of 1061. During the period under consideration 22 cases have occurred in this parish, or 11 3 per 1000 of the population—a further confirmation of the air-borne character of the infection

FIG. 2.



Wind rose, August 18th, 1901, to Jan. 31st, 1902, showing prevalence of south-westerly winds.

Still more cogent proof, however, is obtained when the relation between the prevalent wind and the distribution of the disease is considered. The wind rose shows that by far the most prevalent wind has been from south-west and west-south-west and would therefore blow over that portion of Purfleet to the south of the railway. (See map.) Between the cottages here and those to the west of the railway there is a considerable area upon which there are very few houses. To the west of the railway there is a group of 32 houses lying almost due north of the ships. On very few occasions has the wind blown in this direction, hence if the infection is air-borne the inhabitants of this portion of Purfleet should have almost escaped. This is exactly what is found. In West Purfleet, with a population of 137, there has been only one case, whilst in South Purfleet, with a population of 342, there have been 41 cases The attacks in West Purfleet were 0 8 per 100, while in South Purfleet they were 12·0 per 100. In other words, in the cottages nearest and exposed to the prevailing wind out of every eight persons one has been attacked. If such an epidemic prevalence had occurred in London there would have been over half a million cases during the past seven months

In connexion with this outbreak in Purfleet it is interesting to note that out of the adult population, containing 12 who had not been vaccinated prior to the commencement of the epidemic, eight persons had had small-pox, and three have contracted the disease during the epidemic Amongst the children were nine who were unvaccinated; one had had small-pox some two years ago, two were too young to be vaccinated, and of the remaining six five have since contracted small-pox Taking both adults and children (excluding the two infants) there were 19 unvaccinated persons, of whom nine had had the disease before the epidemic, leaving 10 who had neither been vaccinated nor had had small-pox Of these eight, or 80 per cent., have contracted the disease during the past seven months.

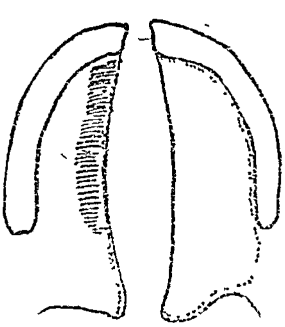
When cases were occurring in Purfleet in 1895 and the attention of the Metropolitan Asylums Board was directed to this fact the opinion was expressed that this was due to the proximity of the ships. It was then suggested, however, that the infection was spread by personal contact with visitors and others passing to and from the ships. This intercourse was stopped and for years past, I am informed, there has been no intercourse whatever between the ships and the Essex shore. Any infection, therefore, from the ships must have been air-borne

Besides the cases referred to of residents in West Thurrock I have notes of 15 others, persons engaged in works there but residing in Grays, Aveley, and Rainham. The last-named parish is in the Romford Rural District but is within a four-mile radius of the ships to the north-west.

It is exceedingly difficult to ascertain to what distance the infection may be carried by the air, but my impression is that in the direction of the wind it may be carried two, or possibly three, miles. I doubt very much whether the influence extends as far as Grays which lies from three to patient's intonation is peculiar, or, as it is usually called, nasal, is that the outgoing air does not pass through the nose, and when the cleft is closed at the usual time there is in the extremely undeveloped nose very little space through which air can be transmitted, and as far as I am aware no effort is made by surgeons to develop this space after operation. This is probably due to the fact that they had not considered the mechanics of this channel. If, however, the space is systematically and forcibly ventilated the calibre of the naso-pharynx is increased, and a considerable proportion of air passes through it, so that the so called nasal character of the voice is diminished very greatly. Still, assuming this statement and the preceding to be absolutely correct, in what light are we to regard the next? "Of primary importance is the question, At what age should the operation be performed? It may, I think, be laid down that whilst it is never wise to operate upon the child under three years of age the time of election is from this age up to six years." If we allow the second and third statements to be true, as they are approximately so, it is difficult for the ordinary mind to grasp the logical sequence of the conclusion deduced from them. The treatment of cleft palate, like the greater part of surgery, has been a matter of creed and tradition and has not been arrived at in any reasonable manner. In order to treat these cases as efficiently as possible no time whatever should be lost in restoring to the nose its normal physiology, or, in other words, in giving back to it the mechanical factor which alone determines its development and that of the other structures dependent on it to a considerable extent for their normal form.

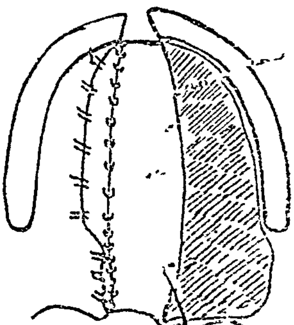
There are next for consideration the following questions—viz.: 1. What is the best age for operation? 2. What is the best method of performing the operation? 3. How and when can any complication such as harelip be met to the greatest advantage?

FIG. 16.



A complete cleft of the palate. The dotted lines indicate the incisions, and the shaded area the portion of muco periosteum elevated from the subjacent bone.

FIG. 17.



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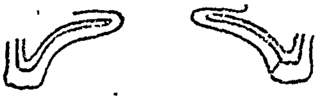
The flap fixed in position by a double row of sutures. The shaded part shows the surface of hard palate stripped of muco-periosteum.

1. *Age.*—I find that as a rule the best age for operative interference is during the fourth or fifth week, providing that there is no special indication to the contrary, by which I mean bronchitis, diarrhœa, and the results of bad feeding [illegible]lly. Under such circumstances it is necessary to postpone the operation till the condition of the child is satisfactory. At the same time if the child is a vigorous and [illegible] I prefer to operate as soon after birth as possible. The advantages of operating at this early period are: (1) that the child bears the operation very well; (2) that but slight subsequent discomfort is experienced and the child will take food with satisfaction within an hour or two of the operation; and (3) that the amount of hæmorrhage is very slight and is easily controlled.

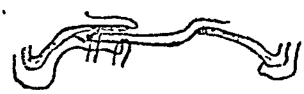
2. *Method of operating.*—Though the details of the operation must vary considerably in a small proportion of the cases, in a large number I endeavour to raise a flap of mucous membrane and periosteum from one side and to fasten it securely beneath the separated margin of the opposite side. This is to a certain extent a modification of a mode of treatment by flaps introduced by the late Mr. Davies-Colley. The measures which I usually adopt can be best illustrated by diagrams. Fig. 16 represents a cleft running through the whole of the hard and soft palate. A flap which is attached to the margin of the cleft is turned up from the bone of the hard palate and is dissected off the soft palate. Its extent must vary with the area to be closed. There is practically no limit to the amount of flap that can be obtained, since the whole of the muco-periosteum covering the under and outer surfaces of the edentulous alveolus may be included in it, and this is sufficient to fill any gap in the hard palate, however large (see Figs. 20, 21, 22, and 23). Great care must be taken not to tear away this flap from the margin of the cleft in the hard palate. The latter part of

FIG. 18.



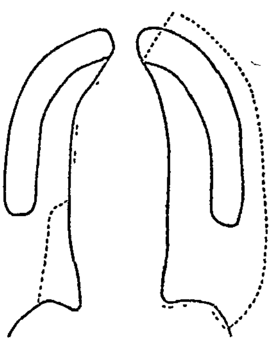
Showing in vertical transverse section the line of incision along the margin of the flap.

FIG. 19.



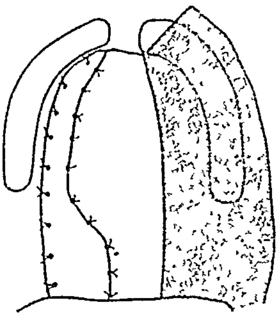
Showing the flap raised and fixed in position. It is a transverse section through Fig. 17.

FIG. 20.



This is a cleft of a breadth sufficient to require the employment of a flap from the entire alveolus. The dotted lines indicate the incisions, that to the left of the cleft being on the nasal surface of the palate, while that on the right is on the buccal aspect.

FIG. 21.



The flaps sutured in position. The shaded area represents the surface laid bare by the removal of the flap.

viz., the enlargement of the lymphatic tissues in the upper part of the pharynx—will disappear, and the so called adenoids will no longer exist, since I presume the term cannot reasonably be applied to the structure in its normal condition, but only in its chronically inflamed state. That this does take place I have satisfied myself with absolute certainty on very many occasions, and this has also been the experience of many others who have applied the principles involved in the treatment effectually. Authorities seem to form very different estimates as to the quantity and density of lymphatic tissue which the patient is justified in retaining without being dubbed "adenoids," and urgently calling for its removal. Specialisation in medicine and surgery tends often to extreme narrowness of vision on the part of the so called specialist. It attempts to appear to progress and it confuses issues of causation by using unmeaning terms which are apparently not capable of accurate definition. Words like "adenoids," and the equally indefinite one of "hyperplasia," instance products of these processes. They possess different meanings in the minds of different people and even under different conditions.

Not only does the enlargement of the lymphatic masses in the naso pharynx subside under this treatment, but there is also a corresponding improvement in all the conditions I have described as being consequent on imperfect oxygenation of the blood. This is now fully recognised by a large number of able and experienced medical men who apply in their practice the principles indicated in this and previous papers. Any person of average intelligence should be able to appreciate these views were it not that in many cases the medical creed of the individual and his interests coincide only too closely, his capacity to grasp general principles being in consequence unconsciously and involuntarily limited.

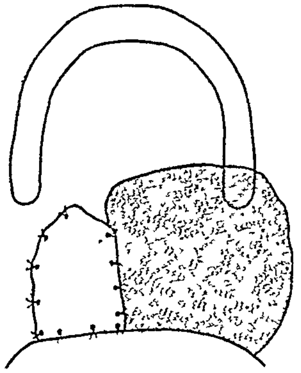
The only circumstances under which I can understand the surgeon being warranted in attacking the pharyngeal tonsil are (1) when the condition has been so thoroughly neglected that the child is unable to drive air through an undeveloped naso pharynx unless the enlarged pharyngeal tonsil is surgically removed; (2) when for some reason or other, such as considerable difficulty in forcing air through the nose, serious ear trouble, important school or other engagements, peculiar circumstances, &c., it is necessary or advisable by operative measures to shorten the duration of the treatment, and (3) when the child is too young to do what it is told. In private practice the first condition should not exist, and it only arises because absolutely no attention is paid to the manner in which a child performs by far its most important function—namely, respiration, by means of which the oxygen, the prime factor of life, is distributed to the several tissues in the body. Many inquiries are made as to the manner in which the intestines perform their functions, and if, because of an imperfect supply of oxygen and owing to the constant assumption of sedentary and resting habits, these viscera are not fit to carry out the work they should do in a healthy subject, they are stimulated in an unnatural manner by drugs. Too often one finds that the patient who exhibits no thoracic respiration whatever has the spine fixed in a position of extension by a steel support or by some form of brace, while at other times exercises are ordered which rapidly exhaust the child's imperfect capital of oxygen. This all results from an insufficient knowledge of the mechanics of the respiratory process, and especially of the important part which the spinal column takes in it. The physiologist has misled the profession chiefly by his attempts at illustrating the respiratory process by means of a mechanism in which the spinal column is represented as a rigid immoveable rod. As is too often the case, the generally received teaching is absolutely false, since the variations in the spinal column are much more conspicuous than those of the rest of the wall of the thorax. I would therefore urge that the mode in which the organism is supplied with oxygen should receive at least as much attention as the rate at which the sewage products are evacuated from the body. If the former is done, and done well, the various degrees of adenoids, the conditions on which they depend for their causation, the several varieties of resting deformities and many other states directly and indirectly due to imperfect aeration will disappear. Let medical men treat their patients in a common sense manner, regarding them simply as machines, recognising that they bear only a mechanical relationship to their surroundings and they will soon observe a rapid improvement in their physique. When difficulty is experienced in inducing the patient to pursue such respiratory exercises as increase the vital capacity it is well to place a trained nurse in charge, when progress is generally rapidly made even in very young children. I hope that we may soon have the advantage of hearing expressed fully the views of dental surgeons upon that portion of this question which interests them, especially as it is clear that their opinions and observations must be very valuable indeed.

The dental aspect of the case appeals to me most strongly for the reason that the observations of the dental surgeon are recorded indelibly in plaster casts. These are capable of the most accurate definition and measurement and do not depend mainly upon the statement of the observer which must vary of necessity with his education and interest. My dental friends have been of the greatest service in helping me to obtain accurate information as to the changes that ensue in the jaws and palate, not only from the absence of normal aeration, but also from the restoration of that function. I trust that my views and experience may be of some use to dental surgeons in the treatment of the deformities that they meet with so constantly in the present day and especially of superior protrusion.

When the septum between the naso pharynx and the mouth is incomplete the mechanical factor upon which the nasal cavities depend for their development is in abeyance, and therefore they do not increase proportionately in size. In consequence the sides of the alveolar arch become approximated, as do the edges of the cleft, and the portions of the roof on either side become more vertical and extensive. I will call particular attention to this, since it will be found that many surgeons use as an argument in favour of delaying the operation that the changes in the roof of the mouth which I have indicated take place in time and render surgical interference more simple at a later date. In other words the less developed the nose the more easy the operation for the closure of a deficiency in its floor. Since the calibre of the nasal cavities bears an inverse proportion to the height of the palate, and as the lower part of the nasal fossæ is that through which air is chiefly transmitted, this is especially encroached upon by any abnormal increase in the height of the palate. Being aware of the mechanics of the naso pharynx, it will be easy to recognise the immense importance of separating the mouth from the nose as early in life as possible so that the pressure exerted by the air as it passes through the former can be brought to bear upon the walls of the space and the nasal cavities and the adjacent bones influenced by normal developmental factors.

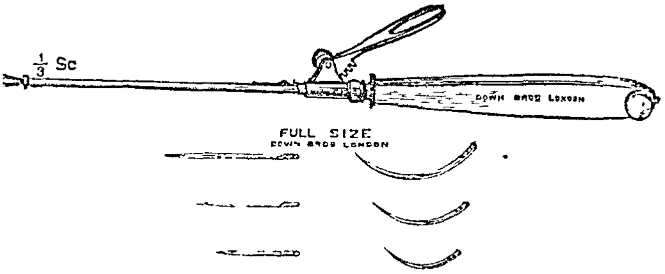
In order to recall to mind the practice followed by surgeons of the present day I will quote a few lines on the treatment of cleft palate from Treves's "System of Surgery," which is, I think, one of the most recent English text books: "In the infant the cleft is by almost all surgeons rightly deemed inoperable. In the child, after the age of two years the chief importance of the malformation is the defect of speech which is occasioned. It is well, therefore, to be prepared for the fact that the closure of the cleft in no way remedies the defect of articulation. Of prime importance is the question, At what age should the operation be performed? It may, I think, be laid down that whilst it is never wise to operate on a child under three years of age, the time of election is from this age up to six years." These definite statements which are picked out from the text, we may regard as representing generally accepted views and as open to our criticism. The author does not appear to adduce any argument in support of the first statement—viz., that surgeons are acting wisely in avoiding operations in infants, therefore, we may satisfy ourselves by merely asserting that, in our opinion, this statement is not borne out by our experience, but that the reverse is true. The second statement is, I fancy, partly correct. Some patients will, however, complain more of the discomfort which they experience through food getting into the nose than from the consciousness of the fact that their voice differs from the normal. The chief disadvantage of the deformity depends upon whether it is regarded from the point of view of physical discomfort to the sufferers or of depreciation of them in the opinion of their fellow creatures, since the peculiar intonation, *per se* causes no discomfort and is often not recognised by the speaker. Now as to the statement that "it is well further to be prepared for the fact that the closure of the cleft in no way remedies the defective articulation." This I am prepared to deny if the operation is performed during the period of growth. The reason that the any portion of the flap-covering in the cleft in the hard palate to give way, but occasionally the margins of the soft palate may come apart. To remedy this after an interval of two or three weeks a flap should be taken from the side of the hard and soft palate opposite to that utilised on the first occasion and be retained by the same method in the cleft, one of the methods indicated in Figs. 25, 26, 27, and 28 being employed. The area of the flap employed must necessarily vary with the size and form of the cleft and the thickness and vascularity of the part. By this means the sutured surfaces are exposed to a minimum of strain. To render this method of operating in the young infant possible it was necessary to devise an instrument for the purpose, since those in common use at the time were inefficient. The needle-holder and needles shown in Fig. 29 meet all possible requirements. The needles are made straight and full-curved, and they vary in size from three-eighths of an inch upwards. For pinning the flap the straight needles are best suited while the curved ones are more serviceable in the later stages of the operation. The sutures used are of the finest silk and are employed dry to facilitate threading. The gag which I employ is one that was made for me by Messrs Down Brothers some time ago It is perfectly self-retaining owing to the presence of small, sharp teeth, which bite into the gum behind the molars. It is depicted in Fig. 30 and is shown in position in Fig. 31. It is well to be provided with several sizes of this gag. The gag most generally used is too powerful for the infant only four weeks old. Messrs. Weiss made me a very useful pair of forceps which have terminal teeth and approximating serrated plates. (Fig. 32) By means of the teeth the flap can be held and with the plates the operator can grasp the needle firmly and readily and can draw it through the flap when necessary. Messrs. Down Brothers constructed lighter and shorter instruments which I have also found useful. (Figs. 33 and 33 A.) As a rule, the needle is taken up and drawn through the flap by the needle-holder.

FIG. 28.



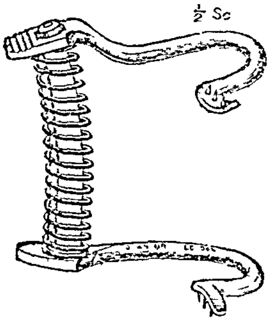
The flaps sutured in position.

FIG. 29.



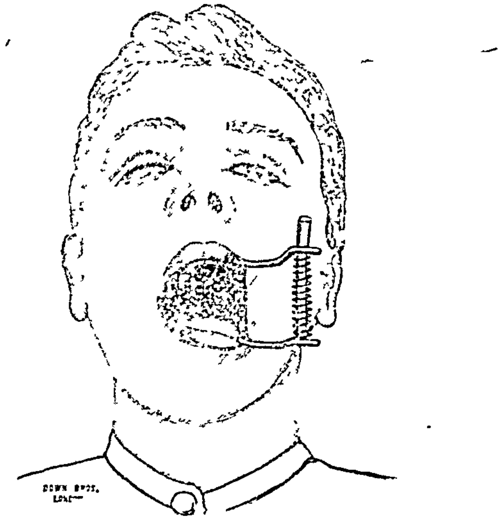
Needle-holder and needles.

FIG. 30.



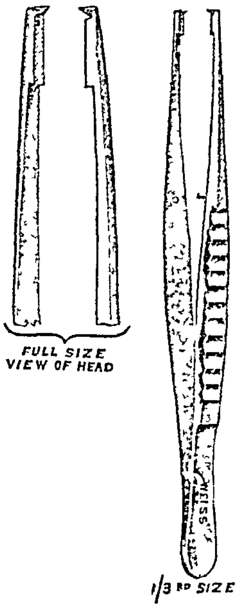
Mouth gag.

FIG. 31.



Mouth gag in position.

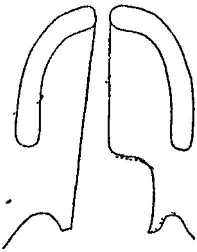
FIG. 32.



Forceps with terminal teeth and approximating serrated plates.

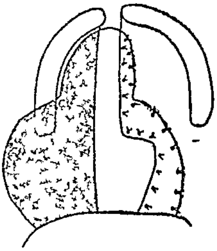
As I tapped a perfectly new source I was inundated with material, the mothers being delighted to have the deformity removed as early in life as possible. Owing to this circumstance I have possibly performed more operations for cleft palate for some time than any single surgeon has ever done or ever will do in the future. It now seems almost impossible to look back to the time when clefts in the palate in children of three years old and upwards were closed with large clumsy needles of various shapes attached to long handles and called cleft-palate needles. As soon as it is possible the respiratory capacity should be carefully attended to and all air should be driven habitually through the nose the operation can be done very well with a knife or by means of very sharp pointed scissors. In doing this the descending palatine vessels are exposed as they emerge in a loose periosteal sheath from a single foramen. These can be "cut long," and any hæmorrhage can be readily controlled by ligature, by torsion or by forcible compression.

FIG. 22.



This represents a common form of cleft in shape like a Queen Anne chair in profile. The dotted lines on the nasal aspect to the right of the cleft and on the buccal aspect to the left of the cleft indicate useful incisions.

FIG. 23.

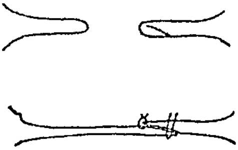


The flap in Fig. 22 in position and sutured.

At this early period of life the vessels are very small and the amount of blood lost is always trifling. On no occasion have I ever felt the slightest anxiety on that account. This was certainly not my experience when operating on children over three years of age. Indeed, it was in a case of cleft palate apparently moribund from loss of blood that I first applied the method of intravenous injection of saline solution which has since been the means of saving so many lives not only from hæmorrhage but also from exhaustion, as in cases of intestinal obstruction, &c. The case was described in THE LANCET of Sept. 12th, 1891, p. 626, under the heading of "A Surgical Tribute to the late Dr. Wooldridge." There had been published in the Transactions of the Obstetrical Society of London for the year 1879 the report of an investigation on transfusion carried out at the request of that society by Professor Schäfer in which he asserted that the intravenous injection of saline solutions served no useful purpose whatever and insisted that it should not be employed. Needless to say the researches made by Dr. Wooldridge completely negatived the conclusion arrived at in the report. The following are Professor Schäfer's own words (page 333): "Solution of salt and any other watery fluid is without permanent benefit and should never be used for transfusion."

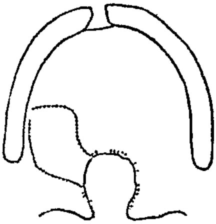
To close the cleft an incision is made along the opposite free margin of the cleft in the hard palate and the muco-periosteum is raised from the bone for about a quarter of an inch. The soft palate on the same side is pulled forward, being held in forceps, or a thread may be passed through its extremity. It is split in the same manner as is indicated in Fig. 24, none of it being removed. If more material is required a flap is cut from the posterior aspect of the soft palate so as to increase still further the area of the raw surfaces which can be brought into accurate apposition with the upper surface of the flap reflected from the opposite side. The reflected flap is first introduced between the separated edge of the muco-periosteum and the bony palate and its margin pinned at intervals by sutures. Then the edge of the flap of the soft palate is similarly attached to the outer limit of the raw surface on the back of the opposite margin by separate sutures. The free limit of the elevated border is attached securely to the raw surface of the reflected flap by sutures. In this manner two large raw surfaces well supplied with blood vessels are retained immoveably in accurate apposition and free from strain and are placed under the most favourable circumstances for immediate union. In many cases, especially in narrow clefts limited to the soft palate, I find that the old method of freshening of the edges of the divided palate, tension being removed from the line of suture by vertical incisions, gives excellent results. This is clearly of no use when the cleft is horseshoe shaped. It is very unusual for

FIG. 24.



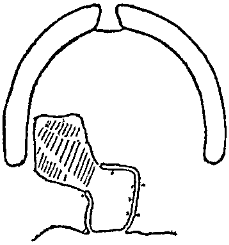
Showing the manner of treating the soft palate.

FIG. 25.



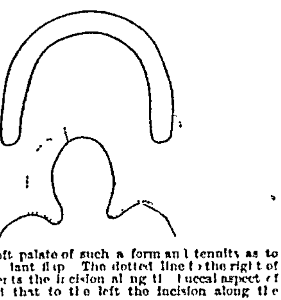
A mode of treating original or residual cleft in soft palate.

FIG. 26.



Showing flap reflected and sutured in position.

FIG. 27.



A cleft in the soft palate of such a form and tenuity as to require an abundant flap. The dotted line to the right of the cleft represents the incision along the buccal aspect of the palate and that to the left the incision along the pharyngeal aspect.

Having received information about the same time of several similar accidents, of which I need not give details, where women's and children's hair was set on fire by celluloid combs while they were seated, perhaps drying their hair, in front of ordinary fires, none of which cases fortunately proved so severe as that just reported, I requested the assistance of Professor Japp, professor of chemistry in the University of Aberdeen, as to the ignition point of articles sold as celluloid and generally as to what was known on the subject. This he most kindly gave me and to the following effect. His experiments were mostly made with pieces of combs worn by Dr. Beddie's patient and identical with that by which she had been injured. Professor Japp wrote as follows:—

> I have ascertained, as nearly as it can be done, the ignition temperatures of the two specimens of celluloid—light coloured and dark coloured—which you submitted to me for examination. I cannot detect any difference in their behaviour on heating, but they are both unduly sensitive to heat. On dropping small pieces into a test tube heated to a perfectly constant temperature of 270° F. they began to swell up and froth, and within one and a half minutes from the beginning of the experiment they suddenly decomposed with a puff of smoke leaving a charred residue. On one occasion I succeeded, by gradually raising the temperature, in inducing this sudden decomposition as low as 264° F., but this difference is very slight; moreover, in this way of performing the experiment much depends on the rate at which the temperature is raised; if this is done very slowly one may effect a slow decomposition, and the residue is not charred.
>
> The following data with regard to the action of heat on celluloid are taken from the "Journal of the Society of Chemical Industry," vol. x., p. 564. They will show you that this substance is expected to exhibit greater stability than the foregoing specimens: "At 194° F. it becomes very plastic, further heat softens it, and at a temperature of 285° F. it decomposes into pyroxyline and camphor aldehyde. At 383° F. the decomposition is instantaneous, the nitro cellulose inflames, and the camphor is vaporised." Your specimens therefore exhibit this sudden decomposition more than 100 degrees lower than properly manufactured celluloid.
>
> I thought I would examine at the same time a celluloid hair pin which I obtained from a member of my family. In appearance the celluloid was indistinguishable from your dark-coloured specimen, but it stood a constant temperature of 270° F. for 15 minutes without showing any change beyond slight swelling up and giving off a little camphor with a mere trace of nitrous fumes. There was no trace of the sudden decomposition which your specimens showed almost immediately under the same conditions.
>
> Of course, even the lowest of the ignition temperatures which I observed with your specimens is far above what would prevail at a distance of six feet from an ordinary fire. But it is a matter of common observation with unstable and explosive substances that they occasionally explode, or ignite—as it were, by mere chance and when they are not wanted to—under conditions that, when one is experimenting with the substances, would appear to ensure perfect safety. In the case of substances like celluloid this is readily explicable, as they are mixtures of variable composition, and they give way at the weakest point. A badly manufactured piece communicates its instability to the whole.

Professor Japp was further good enough to write to Professor C. V. Boys on the subject of ignition of celluloid. The only additional point in Professor Boys's reply is contained in the following remark: "The curious thing about the celluloid button smoulder (it is under the usual circumstances smoulder rather than burn) is that with all the smoke and fluster and stink there is nothing that cannot be put out by blowing sharply upon the place so as to cool it. The instinct, on the other hand, to squelch it by squeezing it all up in the surrounding material, is just the one thing to make it go all the more, as it is then made warmer, and what is more important the hot gases have no free egress, so they envelop the button and a kind of unstable state is engendered which results in a kind of deflagration or slow explosion, burning possibly severely the enveloping hand."

As Professor Japp's scientifically exact laboratory experiments left it open to be supposed that the conditions under which what is sold as celluloid would ignite, might, under ordinary circumstances, when it is exposed to radiant heat and surrounded by substances of varying conductivity, harmonise with both his results and the accidents reported, I performed, with the help of Dr. Fortescue, the following experiments in the rooms of the surgery department.

*Experiment 1. Heat in front of a bright fire.*—A thermometer surrounded on all sides with air and placed two feet in front of a well-burning fire showing both flames above and red incandescence below, reached a maximum temperature of 120° F. By stirring the fire or otherwise increasing the blaze the temperature could be raised a good deal higher.

*Experiment 2. Heat increases in the presence of an absorbing substance.*—If placed in the same position as in Experiment 1, with a backing of brown American cloth in contact with it behind, the thermometer registered 152° F.

*Experiment 3. Horse-hair further increases heat and affects celluloid.*—If similarly placed and backed with black horse-hair cloth the thermometer marked 171° F. A piece of the celluloid comb which burnt Dr. Beddie's patient, placed in contact with the horse-hair, swelled and became white and spongy at this temperature.

*Experiment 4. A steel pin further increases heat and ignites celluloid.*—A portion of the same comb, placed under conditions similar to Experiment 1 against the steel of a hat-pin which Dr. Beddie's patient was wearing when her accident occurred, the steel likewise touching the thermometer, ignited and left a black ash at the moment the thermometer registered 200° F.

*Experiment 5. Effect of wrapping celluloid in black hair.*—The thermometer and a third portion of the comb were enveloped in a small lock of the hair (black) of Dr. Beddie's patient and exposed as in Experiment 1. The celluloid burnt when the thermometer marked 180° F.

*Experiment 6. Variability of igniting point of celluloid.*—On repeating Experiment 5 a fourth piece of the same celluloid comb ignited only at 220° F.

*Experiment 7. Effect of wrapping celluloid in fair hair.*—The thermometer and a fifth portion of the comb were enveloped in a lock of a child's (fair) hair. The celluloid burnt at 167° F.

*Experiment 8. Control experiment to Experiment 7, with celluloid alone.*—A control experiment under exactly the same conditions as Experiment 7 gave 170° F. as the burning point of a sixth fragment of the comb taken from the spot adjoining that used in Experiment 7, when exposed naked, without being enveloped in the hair.

*Experiment 9. Control experiment with good celluloid.*—A piece of properly manufactured celluloid, exposed under identical conditions with Experiment 8 in order to control it, only became softened at 170° F.

The thermometrical temperatures in these experiments have only a relative, not an absolute, value.

### CONCLUSIONS.

1. It is evident that celluloid articles of uncertain composition and dangerously explosive quality are everywhere sold and are in constant use, and that the conditions under which they may ignite in varying circumstances cannot be fully inferred from experiments regarding their ignition point made in a physical laboratory.

2. Badly manufactured celluloid ignites at variable temperatures, too low for it to be safely used.

3. It also follows, I consider, that restrictions should be imposed upon the sale of all such articles which do not sustain, without ignition, a temperature equal to that sustained by well-manufactured celluloid.

4. It is worthy of consideration whether all celluloid articles of personal wear and such others as might give rise to fires ought not to be compelled to have the word "ignitible" conspicuously imprinted upon them.

5. If the suggestion of the writer in THE LANCET[1] to render celluloid incombustible by the addition of some chemical should be practicable it would be the best solution of the difficulty, and such an addition ought to be made compulsory by legislative enactment.

I owe my sincere thanks to Professor Japp for his advice and criticisms concerning his and my own experiments and to Professor Boys for permission to quote the sentences from his informal letter.

Aberdeen.

# A CASE OF HYDATID DISEASE OF THE GALL-BLADDER.

BY LAWRIE HUGH McGAVIN, F.R.C.S. ENG.,

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SURGICAL REGISTRAR OF GUY'S HOSPITAL.

THE following case of hydatid disease of the gall-bladder having recently come under my notice I have been tempted to record it as an example of what is, I think, generally acknowledged to be a distinctly rare condition.

The patient was a married woman, 32 years of age, who was transferred to my care in the Hospital for Women, Soho-square, by my colleague, Dr. James Oliver, with the following history. Until 14 years of age she had been perfectly healthy, but at the age of 16 years she suffered somewhat from anæmia (she stated that she had "inflammation of only Then by vocal exercises phonation must be made as perfect as it can be

---

[1] THE LANCET, March 26th, 1892, p 708.

3 *Harelip* —Many children with cleft palates are also afflicted with harelip Contrary to universal custom I leave the latter untouched till the fissure in the palate has been closed since it affords a larger aperture and renders the cleft very much more get at able and the operation correspondingly easier to perform perfectly and with a minimum of damage to the soft parts than it would be if the harelip was treated in the first instance I do not pretend to obtain the same results in the treatment of harelip as are apparently got by some surgeons, if one can place any reliance whatever upon the diagrams which they use to illustrate their methods of procedure These, I fancy, are purely imaginary, since they appear to be able to restore the imperfectly developed lip to its normal form and to its relationship to the lower lip My experience is that, excepting in slight cases, the upper lip always remains smaller than normal and disproportionate in size to the lower In some few cases I have obviated the relative loss by filling in this gap by a flap obtained from the lower lip, with which it remains continuous till it has united firmly to the upper I would point out also the advantage of passing all the sutures through the lip from within outwards, since by so doing the margins of the cleft can be brought into firm and accurate apposition and are enabled to control the hæmorrhage without scarring the skin surface, as is frequently done when the sutures pass through the skin in the usual manner

FIG 33

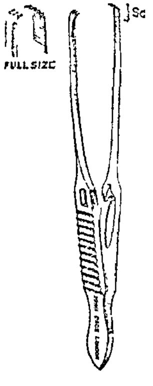
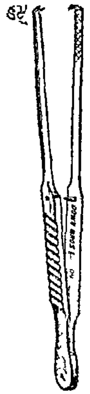
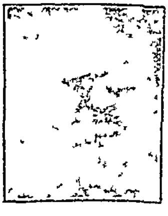


FIG 33 A



Forceps with terminal teeth for manipulating the flaps while the incisions are being made

FIG 34



Represents a case of double harelip with considerable forward displacement of the premaxilla

Besides, they can be left in much longer, as their presence causes no discomfort and retains the raw surfaces in accurate apposition The scarring of the lip was a more marked feature when the old fashioned harelip pins were employed

There is a form of cleft palate combined with double harelip in which the premaxilla is attached to the under surface of the septum of the nose immediately behind its tip (Fig 34) In such cases I have found that the most satisfactory procedure is to close one of the fissures in the lip in order to supply the premaxilla with blood vessels from a source other than the septum When this has been effected the premaxilla can be cut away from the septum, the mucous membrane covering it and the corresponding surfaces of the jaw can be removed, and the bone being trimmed and replaced can be wired securely in position The remaining fissure in the lip can then be closed, but by leaving it open till this period more room to work in is obtained and the details of the operation on the septum, &c, can be carried out with greater facility and accuracy

Cavendish square W

# BURNS FROM CELLULOID

By ALEXANDER OGSTON, LL.D GLASG, M D ABERD,
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REGIUS PROFESSOR OF SURGERY IN THE UNIVERSITY
OF ABERDEEN

BURNS from celluloid seem to be by no means uncommon The *Weekly Scotsman* of Jan. 19th, 1901, page 3, mentions an accident of this nature in which a woman, "kneeling in front of, but by no means very near to, a clear red fire, and having an imitation tortoise shell comb in her hair on the top of her head, became conscious of a smell of burning and a very disagreeable vapour around her, and on putting up her hand found that her head was on fire She poured water over it and got it out, but not before a great deal of her hair was burnt There was no other light but the fire, and it was not a case of sparks The comb must have ignited of itself" The same paper mentions the case of a "girl at Peckham whose imitation combs caught fire exactly in the same way and who died in a London hospital 24 hours later from the injuries received", and also of a "married woman at Newport who only last week lost the sight of both her eyes from a similar accident" It concludes a short article on the subject thus "I may mention another fruitful source of danger—the celluloid collars which many children wear, and some adults too they are fearfully inflammable The hot ash from a cigarette, cigar, or pipe falling on them sets them in a blaze at once, and as they are tightly fastened round the throat it is almost impossible to remove them before serious injury has been inflicted A leading medical journal some time ago cited several accidents which had arisen from this cause"

Dr Irvine Fortescue, assistant professor of surgery, has collected for me the following references to celluloid burns which have appeared in the leading English medical journals during the past 10 years —

1 THE LANCET, March 26th, 1892, p 708 Experiments with articles made of celluloid Portions placed 18 inches in front of a fire swelled and gave off dense fumes at 110° C (230° F) Artificial ivory acted similarly at 145° C (261° F) The writer (anonymous) suggests that celluloid should be made non inflammable by the addition of some chemical

2 THE LANCET, May 15th, 1897, p 1386 A boy wearing a collar made of celluloid, tied with a string, having no knife to cut the string, attempted to remove the collar by burning the string The collar ignited and lighted drops of the composition fell on his clothing His throat and face were badly burned.

3 THE LANCET, May 22nd, 1897, p 1426 Artificial ivory horn &c, are nitro compounds and are almost explosive Accidents from this cause are increasing

4 THE LANCET May 29th, 1897, p 1481 Fires in Paris due to kinematograph films igniting

I have myself been made acquainted with several cases of what appeared to be the almost spontaneous ignition of celluloid hair combs the one which impressed me most, as having been attended with the severest results, being that of a patient of Dr L B Beddie of Fraserburgh who, when seated in a drawing room before a fire which, though burning well was not unusually strong, found her head enveloped in smoke and flame from the ignition of a comb amongst her hair and before the flames could be extinguished had a portion of her scalp destroyed over an area of, perhaps four by one and a half inches The burn was of the third degree, took many months to heal, and resulted in the total destruction of the hair over the injured area the second case, reported by Mr. J. Knowsley Thornton,[2] the symptoms of acute biliary colic were present; they recurred once and were then followed by jaundice and choluria. Here the gall-bladder contained a number of hydatids and much bile-stained fluid, the cystic duct being patent, and one other cyst was removed from the omentum. The third case is reported by Mr. Frederick Page,[3] the symptoms being chiefly vomiting and epigastric pain. A tumour was felt and on aspiration yielded perfectly colourless fluid. Cholecystotomy was performed and the organ was found to contain a single cyst without daughter cysts, the cystic duct being patent. Mr. A. W. Mayo Robson[4] mentions a case of hydatid disease simulating gall-stone attacks in which hydatids appear to have been discharged from the liver into the bile-ducts, infective cholangitis being the result. But here the disease appears to have originated in the liver. The same author draws attention to certain cases, all of which appear either to have originated in the liver or to have been complicated by communications between the liver and gall-bladder, leaving the original site of the disease in doubt.

With regard to the diagnosis of hydatid disease of the gall-bladder I am unaware of any case having as yet been diagnosed before operation. The difficulties in the way of making such a diagnosis are obvious and beyond the recognition of a tumour as being the gall-bladder in a state of distension (presuming always that no other swellings exist), I doubt if a definite diagnosis is possible. As to the treatment of such cases it must necessarily be considered from the special aspect of each individual case. In my own case cholecystectomy would have been clearly indicated (the cystic duct being no longer patent and the mucous membrane completely destroyed by pressure) even had the case not been considered one of malignant disease. The patient, I may say, has made an uneventful recovery. The specimen has been deposited in the Hunterian Museum, where it is at present the only one of its kind.

Montagu-street, W.

# TETANUS FOLLOWING REVACCINATION ON THE LEG;

## RECOVERY AFTER PROLONGED ADMINISTRATION OF CHLORAL HYDRATE.[1]

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AND
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THE patient, a female, aged 21 years, was revaccinated on March 8th, 1901. As she desired very particularly to use her arms in a fortnight's time she asked that the inoculation should be done on the leg. Accordingly a mark, a little over half a square inch in size, was made on the outer side of the right leg, about midway between the knee and the ankle. Calf lymph, as supplied by the Health Office of the City of Glasgow, was used, and more than the usual precautions were taken to prevent septic infection. The middle third of the leg was cleaned with turpentine and then with methylated spirits, after which the part was again rubbed over with a carbolic solution (1 in 40). The lancet used was always kept in a glass of carbolic solution. A large adhesive thick felt or bunion plaster was then applied around the vaccination mark and was kept in position by a strip of adhesive plaster, the object being to prevent any contact of stocking or clothes with the wound on the way from the surgery to her home until it was quite dry. The vaccination "took," constitutional and local symptoms were quite insignificant, and the patient was able throughout to do serious mental work and to go about as though nothing had happened.

On the 18th (10 days after inoculation of the vaccine) she attended a concert in a hall which is notorious for its draughts and she occupied a seat in a specially draughty place. While listening to the music she complained to her friends of the discomfort she was experiencing from the draught. On the 20th (12 days after inoculation) she first complained of pain in her back, felt out of sorts, and could not settle to work. On the 21st she remained in bed and was first seen by one of us. Her temperature was normal; the pulse was 80, small, of somewhat high tension, and regular, and over and above the pain in the back there was complaint of stiffness of the neck and the jaws. There was no sore-throat and no abnormality of the thoracic or abdominal organs was detected. Through some misapprehension the adhesive plaster had never been removed from the leg, and when crust and plaster were pulled off the vaccination mark did not look particularly healthy; it was covered by a greyish-coloured slough and there was a slight discharge of thin dirty yellow pus. There was, however, no surrounding inflammation of the skin and no enlargement or tenderness of the popliteal or femoral glands. A bread poultice was ordered and this at once converted the foul sore into a healthy, healing wound, which was afterwards dressed daily with moist boric lint. (We may as well state here and be done with it that in three weeks' time from the inoculation the vaccination sore was healed.) Under the impression that she was possibly suffering from a rheumatic affection of the muscles about the neck salicylate of soda (15 grains), four times daily, was prescribed.

On the morning of the 22nd her condition was much the same as on the previous night. As the day wore on, however, the jaws got stiffer and gradually closed till by the evening she could only open her mouth to about half its usual extent. There was no rigidity or spasm of the masseters or depressors of the jaw to be detected, and with a little trouble we could still assure ourselves that there was no sore-throat. There was no difficulty in swallowing. The head was very distinctly retracted, and though the patient could raise it off the pillow and make the chin touch the sternum, she complained much of stiffness and slightly of pain in the back of the neck. The muscles of the back of the neck, however, did not feel specially rigid. Slight tenseness of the muscles of the abdomen was felt, but there were no spasms of these muscles and no pain was complained of in them. No hysterical stigmata were present. The temperature was normal and the pulse was slow (68) and regular. On the morning of the 23rd the patient seemed much better, though she had not slept much during the night. She could open the jaws well and was quite happy about herself. As the bowels had not moved since the 20th, though cascara sagrada had been given on the 22nd, the same drug, in tabloid form, was again ordered, to be followed by an enema. In the evening the jaws could be less widely opened. Pain and, for the first time, twitching of the muscles of the abdomen in the region of the right groin were complained of, and also some stiffness in the right leg. The left knee-jerk was active, and on the right side it was markedly exaggerated, showing a tendency to clonus. There was no disturbance of sensation. The salicylate of soda was ordered to be stopped and chloral hydrate, in 20-grain doses, to be given every two or three hours till the spasm was relieved and sleep was induced

On the 24th it was ascertained that in spite of the administration of 60 grains of chloral hydrate the patient had had very little sleep during the night. In the morning the jaws could be opened sufficiently to give exit to the protruded tongue, but no more. The abdomen felt hard and board-like from constant tonic contraction of the muscles, and every now and then spasms or paroxysmal contractions occurred. The spasmodic contraction of the abdominal muscles was more marked over the right iliac fossa and caused considerable pain, which made her cry out. The spasm in the neck muscles was not constant, but was absent for short periods, and it varied in intensity from time to time. She could move the head backwards and forwards and from side to side within a limited range, but movement was carried out slowly with both pain and difficulty. There was some trouble in passing urine, but no actual retention. No chloral was given in the morning, and by the afternoon it was noticed that the patient had a fixed expression about the face, as if she had suddenly become aged. The eyes had a peeping look with small palpebral fissure, and could not be fully opened owing to the contraction of the orbiculares palpebrarum. The naso-labial and mouth angle folds were deeper than was normal, and the orbicularis oris and buccinators seemed and the womb"), and shortly afterwards, after suffering some difficulty and pain during micturition, she passed certain bodies resembling "grapes with the stalks removed," which her medical attendant told her must have come from the uterus. Of these bodies she passed one more at the age of 17 years and one at the age of 19 years. No examination appears to have been made of these. She had never been abroad, nor had her employment in any way been such as to have suggested the probability of echinococcus ingestion In April, 1898, she had a miscarriage and during the subsequent bandaging she noticed a mass in her abdomen which she showed to her medical attendant. It appears to have caused her no trouble until May, 1900, when she had a sudden attack of vomiting, accompanied by severe abdominal pain, and from this time the mass was tender on pressure and was accompanied by a feeling of nausea. She had no further vomiting, but in August the attacks of nausea became more frequent, lasting two or three days at a time. From this time the tumour began to increase in size and continued to grow, accompanied by increasing nausea and pain. These attacks bore no relation to her meals but appeared to be more usual towards evening. She had never suffered at any time from jaundice and her stools had always been normal in colour. She stated that she had lost weight considerably, but as no definite record was kept this was, I think, fallacious.

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[2] THE LANCET, April 4th, 1891, p. 763.

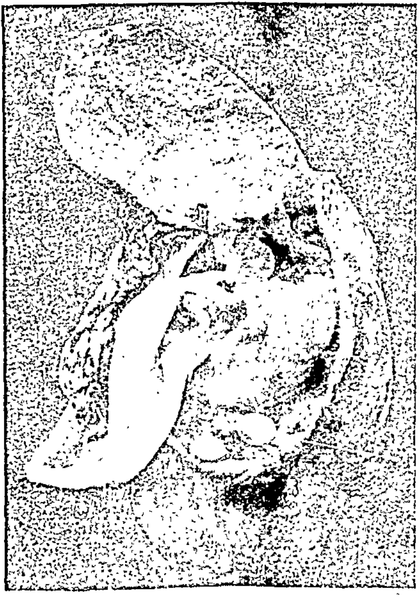
[3] THE LANCET, April 9th, 1898, p. 995.

[4] Diseases of the Gall-bladder and Bile-ducts, pp. 42, 43.

[1] A paper read at a meeting of the Glasgow Eastern Medical Society, held on Feb. 5th, 1902.

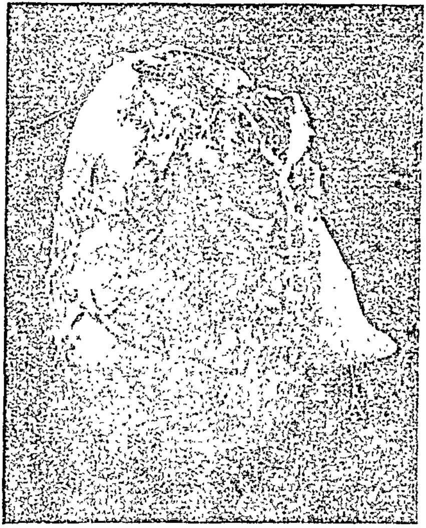
The case was seen by Dr. Oliver and myself in consultation on April 25th, 1901, when the following condition was found. Outwardly the abdomen was quite normal in appearance, no swelling being visible. On palpation the recti abdominis were felt to be separated by about an inch, and, lying slightly to the right of the middle line and about an inch above the umbilicus, was a hard, slightly lobulated, roundish mass which seemed to be rather flat than globular. It was freely moveable, especially laterally to the right, although it could be brought beyond the middle line to the left. In consistence it was hard, but not to a very marked degree; elasticity could not definitely be made out. On percussion it was dull and there was impaired resonance between it and the liver which was not enlarged. On pressing the tumour the patient complained of nausea, and on increasing the pressure of some pain in the epigastrium. As far as could be judged the tumour measured about three inches each way and was not apparently connected with the liver. In the absence of jaundice, colic, and clay-coloured stools, and from the very free mobility of the tumour, a diagnosis of carcinoma of the omentum was made, and I advised an exploratory laparotomy which was undertaken on May 2nd.

FIG. 1.



Front view. A, Hydatid membrane. B, Daughter cysts.

FIG. 2.



Back view. A, Hydatid membrane. B, Obliterated cystic duct.

On opening the abdomen in the linea alba I found a large whitish mass, measuring about three inches by five, having several flat prominences on its surface, of rather hard consistence suggesting nodules of growth, in the situation of the gall-bladder To this mass the great omentum was adherent in front, the edge of the liver was spread out over it above, and the transverse colon was in a similar condition below. The tumour was found to be the gall-bladder itself, and the position of it, so near the middle line, was accounted for by the fact that the liver was much more moveable than is usual, although the other viscera showed no marked degree of enteroptosis. Under the impression that I had to deal with a primary carcinoma of the gall-bladder I freed the organ without much difficulty, ligatured and divided the cystic duct (the lumen of which was then seen to be completely obliterated), and removed the gall-bladder. On opening it no fluid exuded, but it was found to be lined by a thick blanket of hydatid membrane unstained by bile pigment and which peeled away with extreme ease, the cavity of the cyst being occupied by numerous daughter cysts and gelatinous semi-translucent material. I then examined the other viscera for indication of more cysts, but I was unable to find any tumour or enlargement which might point to such, and, although time may prove to the contrary, I am strongly of opinion that in this case the gall-bladder alone was affected.

The rarity of hydatid disease affecting the gall-bladder, either solely or in conjunction with other organs, may be judged of from the small number of cases at present recorded I have been unable to find more than three cases recorded in the last 20 years. The first is that mentioned by Dr. Bowman,[1] in which the patient died during aspiration of a hydatid cyst of the lung. The gall-bladder was found post mortem to be distended by a single cyst of the size of a fœtal head containing one daughter cyst. There had been no signs of jaundice nor was pain at any time present. In given to the fact, as set down by Gowers, that "there is an absence of rigidity in the neck in hysteria,"[2] and Gowers's most sound and excellent advice, "that the symptoms of tetanus coming on after an injury or exposure to cold must not be treated lightly because they occur in a hysterical person or follow fear of the disease,"[3] was not at first sufficiently acted on. Though not hysterical our patient was distinctly neurotic and both knew about and had an awful fear of "lockjaw."

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[1] THE LANCET, April 8th, 1876, p. 532.

We were loth, too, as is not surprising, to admit that the inoculation for vaccinia had at the same time sown the seeds of tetanus. Neither of us had ever heard of such a thing, yet we have been able to find references to 10 cases, where tetanus has occured after vaccination. Six, and perhaps seven, of these[4] are reported from America and two from the West Indies,[5] where tetanus itself is very common, but, unfortunately, we have not access to any of the journals containing the records of them. We learn, however, from the title of one paper that the patient was cured by large doses of opium; and from epitomes in THE LANCET and the *British Medical Journal* we get a very fair idea of the course of events in two fatal cases. A single and fatal instance of this accident is reported in Great Britain.[6]

In a case related by Toms[7] "tetanus occurred 24 days after vaccination in a weakly girl, aged five and a half years. Bovine virus was used with all possible antiseptic precautions. On the eighteenth day the child was ill, the temperature was 100·5° F., and the ulcer at the site of the vaccination was deep, slightly indurated, and discharging a sanious pus. These appearances improved under treatment and six days later the child had an aphthous stomatitis, and now for the first time, while the mouth was being examined, some trismus was noted. The muscular rigidity spread, opisthotonos developed, and the child died from œdema of the lungs 35 days after the vaccination. At the time of death the ulcer on the arm appeared to be healthy. Against the theory that the tetanus was due to vaccination are (1) the presence of the sore mouth; (2) the length of the incubation period if counted from the vaccination; and, most important, (3) the inability to cultivate the tetanus bacillus from the wound of the arm. The possible sources of infection of the arm were (1) the vaseline, (2) the sponge, and (3) the unsterilised dressings used by the patient's friends," but all these may perhaps be ignored in view of the bacteriologist's finding that the arm was not infected with tetanus bacilli, though it must be confessed that this finding loses much of its weight when we consider how very, very difficult it is to cultivate tetanus bacilli from wounds. The interval between the vaccination and the onset of trismus is somewhat over the average, but by no means too long for the incubation period of tetanus.

In another case investigated by the Royal Commission on Vaccination,[8] and published in their reports, "a female child, aged two months, developed trismus on the twenty-third day after vaccination. The child's arm did well up to the ninth day, when it became inflamed. Suppuration but no erysipelas set in on the fourteenth day. The child died with opisthotonos and interference with respiration on the twenty-sixth day. The reporter acquits the lymph used and the operation of being the cause of tetanus which is most unusual after vaccination. This child was vaccinated from the arm of a female infant, aged five months, and at the same time and with the same 'lymph' six other children were vaccinated, and none of them developed tetanus or sore arms. But tetanus may follow very slight injuries, and it is regarded as noteworthy that 28 days after the death of the above child another infant, aged 10 days, at a house half a mile off, died from tetanus supervening on an unhealed umbilicus."

In yet another case[9] "the patient was a healthy man, aged 40. Some days after the operation, which was performed about the middle of January last, he exposed himself to severe cold, and the arm became much swollen and the integument around the scab inflamed. No other lesion could be detected anywhere in the body. On Feb. 7th he noticed a little stiffness of the jaw and there was sligh opisthotonos, accompanied on the following day by profus perspirations and muscular spasms of the lower extremities. These symptoms increased in severity till the 13th, on the evening of which day death took place, the pulse at noon having been 120, the respiration 44, and the temperature 102·0°. Treatment throughout was by chloral hydrate and kalium bromide. Constipation was persistent during the entire illness. Dr. Berkeley acquits the virus of any share in producing the tetanus."

In our patient the first tetanic symptoms appeared exactly 12 days after the vaccination and two days after exposure to a draught. "The interval between the infliction of the wound and the appearance of the first symptoms of tetanus is usually from five to 14 days."[10] "Idiopathic tetanus usually follows exposure to cold, and when due to a single exposure, so that the interval could be ascertained, it has rarely exceeded two days and has frequently been only a few hours In many cases classed as traumatic tetanus there has been an exposure to cold after the receipt of the wound."[11] Now, considered from the point of view of length of incubation period we would be at a loss whether to ascribe the tetanic infection to the exposure to cold on the one hand or to the vaccination on the other, for both satisfy this criterion, were it not for the now generally accepted idea that all cases of tetanus are traumatic, and the further dictum of Gowers that "cases in which tetanus is apparently excited by cold in a person who has had a trifling injury, perhaps some time before, must be included for scientific purposes in the traumatic variety."[12] "The influence of cold has been thought to aid the occurrence of pu jaws well neonatal tetanus,"[13] but on the whole it seems mor ls had not ance with modern thought to regard "the exposu had been somehow or other predisposing the nervous syste was again from a minute dose of the tetanic poison."[14] vening the could not have been a large dose introduced in or the first amply proved by the mildness of the sympt n the region must conclude that the extra irritation in o some stiff- exposure to cold simply played the part of fir active, and already laid, just as Verneuil has noted that ed, showing ference with a wound may apparently excite t urbance of as bearing out the same idea is the case record ered to be "An injured toe had become gangrenous an es, to be tated. Trismus, absent before, was present a was relieved hour afterwards, and the patient averred that th operation distinctly made his jaw muscles c spite of the the amputation was being performed."[15] In B the patient there was also exposure to severe cold in the int ht. In the the vaccination and the development of tetanic ntly to give

The incubation period in our case was short The abdomen in one and by 11 in the other—than in two of ontraction of tioned above, and there was no abrasion, ulcera paroxysmal of cutaneous or mucous surfaces to interfere with on of the tions, as in the case reported by Toms. In all the he right cases, however, the duration of incubation if cou h made the time of the vaccination is well within the limits s not month—as set down by Gowers.[16] ed in

Now, granted that the poison of tetanus was intro head by the process of vaccination, we have the further que n a to answer—Whence came the poison? We do not see ith the lymph can be blamed, for, though drawn from ng agricultural source, the calf, which at once suggests man and dung heaps, several people were inoculated from t same tube, and this one patient alone developed tetanu Further, the probability is that had the lymph been th infective agent the whole output of a certain date wou felt tense. The abdominal muscles were still hard and board-like and paroxysmal spasms were occurring in the right iliac fossa. There were pain and stiffness in the back, and at times we thought that we could make out slight arching of the same. The head was distinctly retracted, and only with great difficulty and some pain could the chin be made to come near, but not to touch, the sternum. The extensor muscles of the neck were very hard and tense and, for the first time since the illness began, the masseter muscles were felt to stand out as stout bands. The legs were kept fully extended, and the feet were so strongly flexed as almost to continue the straight line of the legs. By gentle movement, however, after some little time this tonic spasm of the calf muscles could be overcome, and the feet could be brought forward almost to a right angle with the legs, but they would come no further. The patient distinctly objected to have her knee and hip-joints flexed and she could not sit up in bed. She had had 20 grains of chloral hydrate twice during the early part of the afternoon.

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[2] W. R. Gowers A Manual of Diseases of the Nervous System 1893, vol. ii., p 692.

[3] Ibid.

[4] W. T C Bates Traumatic Tetanus from Vaccination, Transactions of the South Carolina Medical Association, Charleston, 1882, vol. xxxii., p. 105. H. J Berkeley A Case of Tetanus following Vaccination, Maryland Medical Journal, Baltimore, 1882–83, vol. ix., pp. 241–245; THE LANCET, Nov 4th 1882, p 792 J B. Cottman: A Case of Tetanus Produced from Vaccination, Cured by Large Doses of Opium, New Orleans Medical and Surgical Journal, 1854–55, vol. xi., p. 783 T. Dimon Tetanus following Vaccination; Importance of Reliable Virus, St. Louis Cour Med., 1882, vol. vii., pp 310–312 G. Ross: Tetanus following Vaccination, South Clinic, Richmond, 1878–79, vol. i., p. 468, also Virginia Medical Monthly, Richmond, 1879–80, vol. vi., p. 700. S. Toms Tetanus Complicating Vaccinia, Medical News, Philadelphia, Feb. 24th, 1894, also Brit. Med. Jour, in Epitome of Current Medical Literature, April 28th, 1894, p. 65. Oxford, quoted by Toms (date and place of communication not known).

[5] Garcia Rijo Rudesindo Tetano Consecutivo á la Vacuna, Crón. Med.-quir. de la Habana, 1886, vol. xii., p. 388. J. Ruiz Infección Tetánica durante la Evolución Vaccinal, same journal, 1891, vol xvii., p. 649.

[6] Papers relating to Cases in which Death or Non fatal Injury was alleged or suggested to have been caused by, or otherwise connected with, Vaccination. Appendix IX. to the Final Report of the Royal Commission on Vaccination. 1897, Case X., p. 6. Also THE LANCET, Nov. 2nd, 1889, pp. 922 and 970.

[7] Toms, loc. cit.

[8] Appendix IX., referred to in Note 5.

[9] Berkeley, loc. cit.; THE LANCET, Nov. 4th, 1882, p. 792.

[10] Gowers, loc. cit., p. 677.

[11] Ibid., p. 678.

[12] Ibid., p. 692.

[13] Ibid., p. 678.

[14] Ibid

[15] Ibid., p. 690.

[16] Ibid., p. 678.

Up to this point, though tetanus had never been absent from our minds, it had seemed to us that all the symptoms could be explained by a diagnosis of hysteria; and the varying degree of the muscular rigidity—the malady appearing at one time to be progressing and at another to be receding—and the fact that such rigidity by gentle manipulation could to a great extent be overcome, coupled with the distinctly neurotic character of the patient, in spite of the absence of definite hysterical stigmata, seemed to lead in this direction But now we could no longer avoid making the diagnosis of tetanus, cerebro-spinal meningitis being excluded by the absence of fever, headache, vomiting, &c. In the evening Professor T. K. Monro saw the case in consultation and agreed with us that the malady was tetanus. It was arranged to give a further dose of purgative medicine (half an ounce of castor oil) thoroughly to clear the bowel and to continue the chloral hydrate in somewhat larger doses—from 20 to 30 grains every four hours. In view of the gravity of the disease, however, it was decided to obtain a surgical opinion to consult as to the advisability of operative interference. Professor Monro made an ophthalmoscopic examination and found the fundi normal Professor Sir Hector Cameron saw the case on the evening of the 25th, when the state of the patient was somewhat better than it had been on the previous day owing to two and a half drachms of chloral having been given during the last 24 hours. Still, all the facts which we have mentioned were present. Sir Hector Cameron agreed with the diagnosis of tetanus, but did not think that it was either necessary or desirable to excise the vaccination wound or yet to give tetanus antitoxin. He advised that the chloral be continued and even pushed, and, drawing from his great store of clinical experience, confidently asserted that the patient would ultimately get well.

From the 25th to the 26th the patient had had 240 grains of chloral during the 24 hours and by the 27th 180 grains more had been given. She was under the influence of the drug and was very silly and stupid—like a half-drunken person The eyes, however, were more widely opened, there was an absence of the ominous lines about the nose and mouth, and the slight sardonic grin was no longer perceptible. She could nod her head There was no spasm in the abdominal muscles, and the legs, in place of being extended as formerly, were now drawn up in bed. The only drawback to her splendid feeling of *bien-être* was that retention of urine had occurred. A catheter was passed at night. The improvement still continued and on the 29th the mouth could be more widely opened. During the last 48 hours 120 grains of chloral had been sufficient to allay any tendency to spasm. The catheter was passed twice during this and the preceding day. The temperature, which had previously always been normal, was 99 0° F. in the morning and 99 6° at night. On the 30th she passed urine herself, but the calls to do so became very frequent, and there was stinging pain at the end of each act of micturition. The urine was faintly alkaline and contained a slight sediment of pus. The temperature was 99 8° in the morning and 100 6° at night.

From this point onward to the end of April there was slight fever of an intermittent character, the temperature being off and on about normal in the morning and never higher than 101° at night The abnormal temperature coincided with the appearance of the cystitis, which persisted—as shown by pus in the urine—well on till the end of July. The bladder inflammation, due, no doubt, to the catheterisation, was treated all along with salol and urotropine, but chiefly the latter, which, on the whole, acted most beneficially. The chloral, in 15-grain doses, was continued at about the rate of five grains every hour, the patient calling for it as she was in dread of the spasms returning with their old force During the next three days advantage was taken of this improvement to wean her from the chloral and to substitute bromide of potassium, but the spasms in the abdomen and the legs returned necessitating a re-administration of the drug. From April 6th to the 22nd the spasms were kept under by the continued administration of the chloral day and night. So long as the patient was under the influence of the drug the spasms in the legs, the abdomen, and the back were fairly quiet and the rigidity of the muscles of the face and neck was well relaxed. Though dosed with the drug she lay in constant terror of the bed or herself being suddenly touched or jerked lest the old twitchings should come back. If anyone incautiously entered the room or walked roughly across the floor the spasms occurred. During this period she took plenty of nourishment of an entirely "sloppy" character as she was unable to chew owing to the rigidity of the jaws. By this date (April 22nd) she had consumed in all seven ounces three drachms and 10 grains of chloral. During the next fortnight the chloral was gradually lessened—exactly an ounce was given—until it was stopped altogether, and bromide of potassium in 15-grain doses four times daily was again substituted for a week, after which she was put on iron. Thus during her entire illness she took a little over eight ounces of chloral, or, to be particular, exactly eight ounces and three drachms, plus 10 grains, and never at any time was there the least sign of cardiac failure.

Towards the end of the first week in May, a day or two after the chloral was withheld, the nurse began to encourage the patient to sit up in bed, and later to get out of bed, but it was slow work, as the spasms threatened to return on the least exertion, and her extremely weak and nervous condition seemed, through terror, to anticipate, if not actually to make, them The knees and hips remained extended and for some time she could not sit down in a chair properly, but had to be propped up like a stiffened lay figure; and later, when she tried to walk, even though supported on each side, she could not lift or flex her limbs. In the legs the spasm was last to leave the flexors of the ankles; she could not set her feet down flat on the ground and walked for a period on her toes Perhaps fear of the spasms returning had something to do with her extreme helplessness and slow recovery. By perseverance, however, she gradually gained confidence and power, and towards the end of the month was walking with the assistance of the nurse's arm and a stick, though still holding her neck and back very stiffly. The trismus also remained to a slight extent and was the last of the rigidities to disappear. Solid food could now be taken in place of the finely-chopped meats required in the earlier part of the month. She was also regaining her natural sleep at night which was uncertain after the loss of the chloral. Early in June she went to the coast, where she was golfing by the end of the month and needless to say, free from all tetanic symptoms. It should have been mentioned that the muscles of the arms were never at any time affected and constipation was a marked feature throughout the entire illness.

## CONSIDERATIONS AND CONCLUSIONS.

In spite of the fact that we have no bacteriological evidence to offer, it cannot be doubted that the above was a true, though by no means a classical, case of tetanus. Further, as already mentioned, the patient was seen by Professor Sir Hector C Cameron and Professor T K Monro, and both concurred in this diagnosis. That we were not dealing with a simple rheumatism occasioned by the draught in which the patient sat two days before symptoms showed themselves was made evident by the stiffness of the neck being quickly followed by rigidity in the muscles of the jaw, and this at once aroused our suspicions These suspicions, however, we must confess, were somewhat too easily allayed by thinking that we had to deal with an extremely rare manifestation—tetanoid spasm, of that perennial pitfall and simulator of disease termed "hysteria" The trismus, however, was not sudden in onset and never became absolute, as happens in hysteria; still the variation in the amount of the trismus seemed to point to functional rather than to organic disease. Due prominence was not at first animals with samples of the different lymphs used." We do not know what authority the committee has for saying that if the virus had been contaminated tetanus would have ensued within nine days after vaccination. The authorities whom we have consulted do not give such a limited incubation period for tetanus. We believe that the lymph used by us was as free from tetanic infection as was that employed by the Camdenites, but our faith in our explanation by skin infection at the time of the vaccination remains unshaken. "In every instance it was found that vaccination had been performed in a correct and cleanly manner." But this has been said about all the cases of tetanus supervening on vaccination that we have read of and might be also truthfully said about our own case. "The committee thinks that the tetanus cases in Camden are to be explained by atmospheric and telluric conditions. There had been a long period of dry weather, with high winds, so that tetanus germs, which have their normal habitat in the earth, dust, dirt of stables, &c., were constantly distributed in the atmosphere. One case of tetanus occurred from gunshot wound during the same period in a boy who had not been vaccinated—a fact which the committee regard as proving that the tetanus germs were in the atmosphere." Now, in all seriousness we would ask, Is it sound reasoning to conclude that because one of the many injured and wounded persons developed tetanus during the same period that several cases of tetanus were occurring after vaccination, that the tetanus germs must have been in the air? Of course, the tetanus germs were in the air—they are always there more or less; but is not the logical conclusion to be derived from these facts what we have already stated—viz., that the vaccination wound offers special facilities for growth to the tetanus bacillus? If atmospheric and telluric conditions alone were to blame vaccination would not have claimed cases while injuries claimed but one case. "In all the cases it was found on careful examination that the wound had been exposed by the scab being knocked off or removed or the arm had been injured and infection resulted; frequently children scratched the vaccinated area with their dirty fingers and nails and thus infected the wound. It is given as the unanimous opinion of the Board of Health, as well as of its committee of experts, that tetanus or any other infection can never occur if the vaccination is properly protected from contact with the atmosphere or with soiled clothing, bandages, &c." In our case, as already mentioned, the scab was not removed till the symptoms of tetanus developed, and even had our patient been in possession of dirty fingers and nails she could not have scratched the wound on account of the covering that was over it. Proper protection after vaccination is not everything, and in all humility we would direct the attention of the Camden Health Board to the skin of its patients as the not improbable source of the infection.

# NOTES OF 15 CASES OF OPERATION FOR INTERNAL DERANGEMENT OF THE KNEE-JOINT.

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JUDGING from the views expressed in various text-books and recent papers on the above condition there still seems to be a considerable diversity of opinion with regard to many points in the etiology, pathology, and treatment of so-called dislocation of the semilunar cartilage. It may not be inopportune, therefore, to add the experience gathered from 15 cases of operation for this injury, as well as impressions formed from the observation of a large number of cases in which operation was not considered necessary.

The few points which I propose to discuss naturally fall under the following heads: (1) etiology; (2) pathology; (3) symptoms and diagnosis; and (4) treatment.

## ETIOLOGY.

Most writers are fairly agreed on this point. The accident usually happens when the knee is partly flexed by a sudden external twist of the tibia on the femur, or, perhaps, more strictly speaking, an internal twist of the femur on the tibia. Such a thing may happen when a person steps out of a moving conveyance at too great an angle to the line of its movement, when he rises suddenly from the kneeling position, or in the course of football or similar games. I have known the internal cartilage to be displaced in three cases by a boy falling on the outer aspect of the patient's extended leg in a "maul" at football, and another case was caused by a vigorous kick at football missing the ball. I have not met with a case where a direct blow applied to the cartilage was the cause of its displacement, but I have known an accident of this kind to account for the separation of a chip of the bone (the tibia) with articular cartilage attached, this condition being found on opening the joint. As the cartilage recedes considerably into the joint on flexion and is so well protected by the adjacent margins of the tibia and femur in extension this cause for dislocation must be very rare, though it is said to occur. There can be no doubt that, as Mr. Annandale noted some time ago, miners and others who habitually kneel at their work are particularly prone to "derangement" of the knee. I have seen several cases in such people. Chronic synovitis is also recognised as a predisposing cause. It is a matter of common experience in cases where the cartilage has been previously dislocated and where satisfactory new adhesions have not formed, that the least twist of the knee, a slight tap on the inner side of the foot, and similar trivial causes will readily reproduce the displacement.

## PATHOLOGY.

With regard to the relative frequency with which the internal or external cartilage is affected, most writers are now agreed that the former is very much more commonly at fault than the latter. I do not know whether Mr. R. J. Godlee still adheres to the contrary opinion, but this view—an incorrect one, as I venture to believe—is still held by some authorities, and appears, for instance, in the last edition of Da Costa's "Modern Surgery." My own experience coincides with that of Mr. Annandale, Mr. A. E. J. Barker, and others. Out of the 15 cases operated upon only one has been external, and I have only seen two other "external" cases in some 50 cases observed but not operated upon. In every one of the 15 operation cases the displacement of the cartilage (or of part of it) was inwards towards the centre of the joint, and while now and then one sees a case of external or marginal displacement I believe the condition to be quite exceptional.

Cases have frequently been noted in which there was tearing of the cartilage. Mr. Barker,[1] in an interesting paper, describes various kinds of longitudinal splitting which may take place. The accompanying illustration (Fig. 1) is an excellent example of what he terms "central splitting," the cartilage being split from end to end, the separated strip of the meniscus having found its way into the middle of the joint and lying against the crucial ligament.

Separation of the anterior attachment of the cartilage to the tibia is of common occurrence. I have met with it in several cases. Mr. Barker states that in none of his cases was the cartilage torn across at any point between its two ends. Strangely enough I have met with this condition in almost half of my operations, and so common a circumstance does it thus appear to me to be that I think that the term "dislocation of the semilunar cartilage" is very often an incorrect one, and prefer Hey's old name of "internal derangement of the knee-joint," which, if somewhat vague, is at least not absolutely misleading. Out of my 15 operation cases six have presented a distinct transverse tear through the edge of the meniscus, the torn fragment projecting into the joint and causing the characteristic locking, while the greater part of the cartilage remained in most cases fixed in its normal position. (*Vide* Figs. 2, 3, 4, and 5.) Fig. 6 represents the only case of external cartilage removed, and here there seems to have been some longitudinal splitting, causing thinning of the meniscus towards its middle. In one old-standing case the cartilage was found to be greatly thickened; in another the "ligamentum alare" and "infra-patellar pad of fat" were found to be much thickened and had to be removed in part along with the torn cartilage.

## SYMPTOMS AND DIAGNOSIS.

The essential point in diagnosis is the inability *fully* to extend the knee. It is often stated that the joint is locked and that movements not only of extension but of flexion are impossible. Now, while a patient instinctively holds any have been contaminated, and a regular epidemic would have resulted, such as occurred in Italy and more recently in the City of St. Louis as the result of using diphtheria antitoxin.[17] It is important, too, in this connexion, to note that in the case examined by the Royal Commission on Vaccination, human lymph was used, and only one child out of the seven vaccinated from the same source and in the same manner developed tetanus. No more can we blame the lancet or the hands of the operator, for at that particular time (in the spring of 1901) medical men were doing little else but revaccinating, and yet out of the large number vaccinated on that particular day only this one patient developed tetanus.

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[1] THE LANCET, Jan. 4th, 1902, p. 7.

We must conclude, then, that the source of the infection was in the patient's own skin, and it is to be remembered that the site of the inoculation was the leg, though in the three other cases referred to the arm was chosen. According to Thamhayn the order of frequency with which the several parts have been the seat of the wound that caused tetanus is (1) the hand, (2) the leg, (3) the foot, (4) the head and neck, and (5) the arm and trunk.[18] Of the many patients whom we vaccinated in this case alone did we do so on the leg, though we have seen it stated with authority that such is commonly practised on the infants of Canada, is the custom in Spain, and is unattended by danger.[19] But babies differ very materially from adults, and it is superfluous to point out how much nearer in the latter the leg than the arm, say, is to the great source of infection, viz., the earth. Moreover, it is important in this relation to remark that our patient conformed to the prevalent custom of wearing a long dress, and it seems hard to understand how skirts trailing along our city streets can fail to sweep up material, composed of finely pulverised earth, horse-dung, &c., and most likely containing tetanus bacilli and spores. The constant to-and-fro flap-flapping of the dress must cause the stockings very quickly to become seriously soiled with infective material, and in the case of women where wide-meshed stockings alone afford covering for the nether limbs below the knee there is no difficulty in following the infective agent through the stockings on to the legs themselves. It seems to us that, let a woman be ever so cleanly in her habits, perform ablutions as often as she likes, and change her garments as frequently as she pleases, she has only to walk a few yards—if she trails her dress—to furnish drachms oriologist with more than food for reflection.

Still, all tl iseptic measures employed, though considerable, Sir Hector (arse quite inadequate to destroy any spores of the did not thicillus lodged about the glands or the pits of the excise the ɔd, a few incantations would have been as effectoxin. He very fact, too, that the operation of vaccination is pushed, and, implant and retain the vaccine virus by means ence, confide and almost bloodless punctures, proddings, and get well. sures that any other foreign matter present will

From the ɔduced, and offers special facilities for growth to grains of ch d spores of tetanus. Tetanus is specially common 180 grains ɪured and contused wounds, and what is the influence of wound but a congeries of minute punctures and like a half-dr 'A surgical operation could most likely have widely openeJ out on this leg with impunity without any about the nos ntiseptic precautions, for the clean incision of no longer per('s knife militates against the very conditions no spasm in accinator's lancet fosters. We regret now that of being extenp the vaccination mark at the beginning and The only drawin sorry that through a misapprehension our that retentionerted the meant-to-be-temporary protection passed at niment covering, for the somewhat impervious on the 29thay have helped to produce those anaerobic During the; so necessary for the development of the tetanus sufficient Moreover, this sealing-up of the wound has was pasadvantage that it quite puts out of court any possi- The t of infection of the wound subsequently to the normanation. Further, it is important to note that in the On t'e fatal cases which we have quoted all the patients had so by sore arms, two of the arms being described as suppurat- end;. In our own case, also, the vaccination mark, though alkjt surrounded by induration and inflammation and though pe,ot associated with enlargement of glands, did not look particularly healthy, still that there was nothing much amiss s was amply proved by the absence of abnormal temperature, and the fact of a single poultice at once converting it into a healthy healing wound. "Kitasato now holds that in the natural infection in man, along with tetanus spores, the presence of foreign material or of other bacteria is necessary. Spores alone or tetanus bacilli without spores die in the tissues, and tetanus does not result."[20] Thus we see how "bad arms" may help in the development of tetanus; nevertheless, it is perhaps not entirely a question of the successful or non-successful use of antiseptics, and it is quite in harmony with Kitasato's teaching to believe that the vaccine virus itself and the consequences which it produces are quite capable of injuring the tissues to such a degree that the tetanus spores or bacilli may become pathogenic without the presence of any streptococci or staphylococci to aid and abet them.

This case was treated throughout by chloral hydrate, eight ounces three drachms and 10 grains being administered over a period of 44 days. No mild or heroic surgical measures were carried out and no antitoxin, as already mentioned, was employed. Had the tetanus antitoxin been used this case might have gone to swell the badly needed good results after such treatment. Encouraged by the confident prognosis of Professor Sir Hector Cameron, which was endorsed by Professor Monro, we waited (till not only our own patience but that of the patient's friends also was well-nigh exhausted) for the elaboration of a natural antitoxin by the patient's own tissues. That this consummation took a very long time we must confess, and it is possible that a resort to the use of animal antitoxin might have considerably expedited matters, though the ultimate result left nothing to be desired.

It may be asked what good end can possibly be served by reporting a case of this sort, so we hasten to make answer that we feel that it is only our duty to our medical brethren to do so; and if the perusal of this communication impresses the reader as we have been impressed, more especially since we began to study the literature of vaccination, with the great necessity for the employment of adequate antiseptic precautions when performing this most trivial of operations, the great cause of vaccination will be considerably helped thereby. It is more than doubtful whether many of us use an antiseptic otherwise than as a fetich. What are adequate antiseptic precautions? Can the skin be rendered aseptic or safe by scrubbing for a few minutes with disinfectants? Most surgeons, we believe, would give a very decided negative to the latter question and yet vaccination is riskier in some ways than a clean cutting operation. We are disappointed on reading over the third schedule of the Vaccination Order of Oct. 18th, 1898, issued by the Local Government Board, England, to find that though considerable space is devoted to the sterilisation of instruments, and the care and use of lymph, there is nothing more definite as regards the preparation of the skin than, "Vaccination should at every stage be carried out with aseptic precautions, and these should include: First, the cleansing of the surface of the skin before vaccination."[21] The neglect of the skin and idolatry of sterilised instruments are reflected likewise in the advertisement columns of the medical journals where instrument-makers are seen to vie with one another as to who shall produce the daintiest and most easily sterilisable outfit.

The accident in our case, fortunately so very rare, could hardly, we think, have been foreseen, and possibly could only have been prevented by adopting the same elaborate measures (extending over days) to render the skin aseptic which the surgeon employs before performing a major operation.

## ADDENDUM.

Since the above conclusions were formed and set down it has come to our notice that some cases of tetanus (number not stated) have occurred after vaccination in Camden, New Jersey, and we also learn that a committee has inquired into and reported on the matter.[22] We have tried to apply the findings of this committee of experts to our own case, and though we recognise that any opinion coming with such high authority cannot be treated lightly we see no reason to amend our conclusions in the slightest. "In every case acute tetanus occurred in from three to four weeks after vaccination, whereas if the virus had been contaminated tetanus would have ensued within nine days after vaccination. A further proof of the purity of the virus is afforded by the negative results obtained from inoculation experiments on is dealt with as follows: 1. If the cartilage is found entirely, or to a large extent, separated, or if much thickened or altered, excise the whole of it. 2. If the cartilage is separated from its anterior insertion into the tibia and curled into the joint, cut off the anterior part of the cartilage as far back as the internal lateral ligament. 3 If the cartilage is much torn or frayed in front carry out the same procedure. 4. If there is a torn tag or strip of the free edge of the meniscus projecting into the joint, while the main part of the cartilage is in place, cut off the tag or strip and leave the uninjured part 5 Under no circumstances is stitching of the cartilage, or part of it, into place advisable. More might be said for this plan if the injury were quite recent and the torn surfaces fresh. It is true that several successful cases of stitching have been reported, but there are others in which stitching has failed and the cartilage has had to be removed at a second operation. Removal of the cartilage (or of a large part of it, usually the anterior half) is such a satisfactory proceeding—every one of my 15 cases having returned to active exercise, some even to football, &c.—that there seems no argument against excision in suitable cases.

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[17] Tetanus and Diphtheria Antitoxin, Brit. Med. Jour., Jan. 11th, 1902, p. 104.

[18] Gowers, loc. cit., p. 677.

[19] Vaccination on Leg, Brit. Med. Jour., 1893, vol. i., p. 679.

[20] Muir and Ritchie, Manual of Bacteriology, 1899, p. 389.

[21] Brit. Med. Jour., Jan. 25th, 1902, p. 215.

[22] Brit. Med. Jour., Feb. 1st, 1902, p. 225; St. Paul Medical Journal, January, 1902.

Drainage of the joint after operation is not only unnecessary, but is dangerous. No fingers or strong lotions should be put into the joint; asepsis must be beyond all question. In two weeks splints should be taken off and the patient should be encouraged to move the joint a little in bed. In three weeks, if healing is sound and there is no effusion, the patient should be allowed to walk a little with sticks or crutches. These he may dispense with in another week or so; but it is safer not to allow football or any violent exercise of that kind for four or five months, after which time the joint is perfectly strong.

Edinburgh.

# RHEUMATISM AS A CAUSE OF EPISTAXIS IN CHILDREN.[1]

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IN this short paper I shall not attempt to enumerate the many causes of epistaxis. But in practice I think we must all have met with cases which cannot be ascribed to any of the usually enumerated causes, and in out-patient rooms and elsewhere I have found epistaxis so commonly associated with evidences of rheumatism, in some form, that the association appears to be more frequent than could be due to mere coincidence.

The following are brief abstracts of notes of cases illustrating this association

CASE 1.—A boy who had had rheumatic fever at the age of five years was brought to me at St Mary's Hospital on August 1st, 1893. for epistaxis. He was then 10 years of age and his mother said that he had had attacks of epistaxis for years—even before the rheumatic fever. He was also subject to sore-throats He had no pain anywhere, but his temperature was 99·6° F., and on examination I found effusion of fluid into both knee-joints and a soft mitral systolic bruit at the heart's apex. I admitted him into the hospital and he soon recovered from his joint affection under treatment by salicylates

CASE 2—A girl, six years old, was brought to St. Mary's Hospital on Sept. 25th, 1900, for epistaxis. She had been subject to attacks of it for three years but it had recently become more profuse. She was very anæmic and had enlarged tonsils. I ordered her perchloride of iron. Epistaxis recurred on Oct. 18th and on Nov. 21st the right knee became full of fluid. This gradually subsided, but in March, 1901, the child was again brought to the Hospital suffering from effusion into the knees and pains in the limbs. These gradually subsided and she was well by June. This child for years had attacks of nose-bleeding

CASE 3.—A boy, aged 11 years, was brought to St. Mary's Hospital on Nov. 6th, 1900, for nose-bleeding. I found his left knee full of fluid. He had no pain in this limb, and I only discovered its condition on searching for a cause for his epistaxis. The bleeding continued very freely on and off till Dec. 18th, though he was taking salicylates, but aspirin seemed to do him good. He came to the hospital again suffering from considerable pain and swelling of several joints in March, 1901.

CASE 4—A girl, aged 12 years, had on June 10th, 1900, headache, sickness, and epistaxis. Next day her right wrist became swollen and epistaxis recurred. She was admitted under my care into St. Mary's Hospital on June 14th, 1900, with effusion into the right wrist and ankle and a very soft systolic bruit—in fact, she had all the evidences of a subacute rheumatic attack. A little later while in hospital there were slight choreic movements.

CASE 5.—A girl, aged 13 years, who had had rheumatism three times, suffered in March, 1900, from faintness, giddiness, and epistaxis She was taken into St. Mary's Hospital on March 25th with effusion in the knee-joints, dilatation of the heart, and slight pyrexia. She soon got well under salicylate treatment.

CASE 6—A girl, aged eight years, was brought to St. Mary's Hospital in 1888 with frequently recurring epistaxis. She had had rheumatic fever at the age of five years. I subsequently saw her in 1890 with epistaxis, and again in 1892 with slight rheumatism of the joints and epistaxis, and in 1895 she was taken into the hospital with a mitral systolic and an aortic diastolic bruit; there had been no bruits when I saw her before. In this case rheumatism in the joints and in the heart and epistaxis went on for a period of seven years, during which she was under occasional observation.

CASE 7.—The patient was a girl who had had chorea at the age of nine years and again in 1895, when she was 11 years old. She had never had rheumatic fever. She had had nose-bleeding two or three times a week and had been treated for this at the Hospital for Sick Children in Great Ormond-street. She came to me on July 15th, 1895, with epistaxis. No cause was discoverable for this except her rheumatic tendency and she got better under treatment by salicylates.

CASE 8—A girl, aged 11 years, was brought to St. Mary's Hospital on Sept. 30th, 1901, suffering from chorea—a first attack. No cause was ascertainable; there was no history of articular swelling and nothing wrong could be detected in the heart. The patient had been subject to epistaxis at night for 11 months. She recovered from the chorea and the epistaxis under treatment by salicylates.

CASE 9.—A girl, aged 10 years, was brought to me at Paddington Green Children's Hospital on Oct. 6th, 1886, suffering from anæmia. She complained of giddiness when walking and she had choreic movements of the hands, occasionally dropping cups and saucers. She had never had rheumatic fever, but she had had scarlet fever at the age of four years. After attending as an out-patient for a month she came into the hospital under my care. Her heart was very irregular and weak, with a frequent dropping of the second sound and a systolic bruit. She had frequent attacks of epistaxis, slight choreic movements, irregular heart action with a systolic bruit, and recurring attacks of epistaxis. She gradually got well and the murmur disappeared; it had been due probably to dilatation of the ventricle.

CASE 10.—In a case which I saw in November, 1901, with Dr. P. Montague Smith a child, aged five years, suffered from sudden pyrexia and sore-throat with epistaxis. I was asked to see the patient as scarlet fever was feared, but we found that one of the knee-joints, though quite painless, was full of fluid. The child in a day or two developed more fully an attack of acute rheumatism with effusion into other joints. Inquiry elicited the fact that she had also had an attack of rheumatism a year previously.

In all these cases the urine was carefully examined and it was found to be free from albumin. There was no local nasal disease and no cause could be found for the epistaxis except that there were evidences of a rheumatic diathesis. I could bring forward many other cases similar to the above. In some of them the epistaxis came on with an attack of acute rheumatism, in others epistaxis alternated with attacks of articular inflammation, or was preceded by them and in some cases it occurred in connexion with chorea which was presumably rheumatic. That in children synovial effusion into joints and articular rheumatism may occur without any pain has often been pointed out, but it is even now scarcely sufficiently remembered; and I think if the joints were

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[1] A paper read before the Harveian Society of London, Feb. 6th, 1902.

*damaged joint stiff by muscular contraction, and while full* flexion may also be interfered with by effusion into the joint (a condition which usually shows itself with great rapidity after the primary accident), my experience has been that in cases where the condition can be seen before effusion sets in, and where the confidence of the patient can be obtained, the knee can always be flexed by the surgeon fully and painlessly, but any attempt at full extension is accompanied by severe pain. This is a diagnostic point of some value in enabling one to make a diagnosis between damage to the cartilage itself and strain or bruise of the tissues (ligaments, bones, &c.) lying in immediate anterior relation to the cartilage. In the former case full extension is painful, while full flexion is painless; in the latter case it is exactly the converse. This point is of importance, also, in distinguishing between an injured semilunar cartilage and a "loose body" in the joint, the latter condition being usually easily recognised by the shifting position of the pain and by the fact that now in attempts at flexion, now in attempts at extension, the characteristic "locking" and pain are produced, according to the changing position of the "loose body." I have not yet met with a case where the posterior insertion of the cartilage was completely separated (though in Fig. 5 it appears to be considerably damaged). If such separation does occasionally happen it is probable that then there would be a resulting difficulty in flexion.

FIG. 1

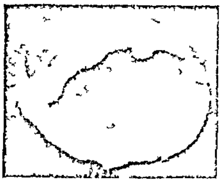

FIG. 2

FIG. 3

FIG. 4

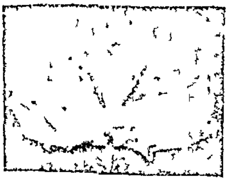

FIG. 5

FIG. 6

Fig. 1, Internal semilunar cartilage showing complete central splitting.

Figs. 2, 3, 4, and 5. Internal semilunar cartilages showing tearing of the free edge with protrusion of "tag" into the joint.

Fig. 6. External semilunar cartilage showing considerable changes due to injury.

It will be found that in many old standing cases, while all other symptoms may have disappeared and ordinary movements of the joint are both free and painless, if the surgeon makes the patient sit on the edge of a chair and put his heel on the ground with the knee fully extended, and if firm backward pressure be now made by the surgeon on the knee, *so as to hyper-extend the joint,* distinct pain will be elicited across the front of the knee. I have noticed this symptom to last many months after the original accident—it sometimes seems to remain indefinitely. It may be an encouragement to the surgeon to interfere where the other symptoms, such as occasional locking, pain, or synovitis, unpleasant though they be to the patient, may yet not be sufficiently definite to warrant operation.

TREATMENT.

With regard to the best method for the easiest reduction of the displaced cartilage, here again we find considerable difference of opinion. Thus, for example, Dr. A. Logan Turner[2] who has written an excellent paper on the subject, Mr. C. Stonham, C.M.G., and others recommend that the leg should be flexed, then rotated in the direction of the dislocated cartilage, and then extended. Da Costa advises rotation, but does not specify the direction; while in Treves's "System of Surgery" we are told to "bring the leg into full extension, rotating inwards and outwards at the same time," a piece of advice which is perhaps somewhat puzzling. Probably most surgeons are in favour of flexing, then rotating away from the side of the injury, while bringing the leg into full extension; for example, in the common case of the internal cartilage being displaced, flexing, rotating *outwards,* and then extending. This plan I have invariably found effectual, though an anæsthetic is usually necessary. It also would appear to be the most rational, for it can be easily seen when the knee-joint is opened how flexion and eversion of the leg open up the space between the tibia and the internal condyle, inversion of the leg approximating these surfaces while separating the tibia from the external condyle. One would consequently suppose that whether the internal meniscus was dislocated centrally or marginally this wide separation of the bony surfaces concerned would more easily allow the cartilage to slip or be pushed into place. It is, however, not easy to be sure as to the exact traction effect of the attachment of the cartilages to the internal lateral ligament (which structure is tightened by external rotation) and to other structures, and possibly some cases of internal dislocation may best be reduced by internal rotation; that, however, has not been my experience.

In the case of the primary injury to the cartilage, after it is reduced, it is of the greatest importance, in order to prevent recurrences, to give the torn parts sufficient time to heal firmly, while everything is done to prevent irritation and effusion. It is no waste of time for a patient to spend several weeks with his knee at absolute rest with this end in view. If this be done recovery is often complete, as I can testify from personal experience, and the joint may *then* be used for any purpose in sport or games as freely as the other. Of course, this remark only applies to a first attack; when recurrence has once taken place a permanently good result without operation is unlikely.

The use of splints is beneficial in proportion to the extent to which they limit rotation movements of the joint. For purposes of an *athletic life they are mostly unsatisfactory* and are far inferior to the results attained by successful operation. In the comparatively rare case of marginal protrusion of the meniscus a pad is possibly of value; in the commoner central displacement it is not so.

*Indications for operation.*—A patient below middle life who wishes to lead an active existence, who is in good health, who has no rheumatic or tuberculous tendencies, and whose cartilage is frequently giving him trouble, should have the operation performed.

*Operation.*—A curved incision is made through the skin and fascia, starting at the inner edge of the ligamentum patellæ just above the margin of the head of the tibia, passing downwards about an inch below the joint, and then curving upwards and backwards to end at the anterior edge of the internal lateral ligament. The flap being turned up, the capsule of the joint is then opened by a straight transverse incision, and (unlike Mr. Barker) I prefer to incise the joint above, and not below, the cartilage, cutting directly down upon the femoral articular surface about half an inch above the line of the meniscus. This incision gives one an admirable view and, I should suppose, would be much less likely to raise doubts in the mind of the operator as to how far his incision might not be responsible for the separation of the cartilage from its tibial attachment. Having exposed the cartilage—and for this purpose strong eversion of the *flexed leg will be found of great service*—it patch was of about the size of a two-shilling piece. The gums were now in an extremely foul state and the inside of the cheek was discoloured, but there was no ulceration. There was a constant saliva of foul-smelling, blood-stained saliva. Although suffering no pain the boy was so ill and weak that he was able to take very little nourishment beyond a little milk and small quantities of brandy. Owing to great thirst he drank copiously of lemonade, soda-water, &c. The patch of gangrene in the skin spread rapidly in all directions, and on the 4th its anterior limit passed in an oblique line across the lower lip to the gum, about half an inch to the right of the middle line. The inside of the cheek and the gum corresponding to this area were also black and gangrenous, but there appeared to be no attempt on the part of the surrounding tissues to separate the necrotic mass by ulceration. A patch of gangrenous skin had now appeared over the left side of the lower jaw in a similar position, and of about the same size as that first observed on the right side. The boy died on the 5th. Only palliative treatment was possible under the circumstances, as the hopeless condition of the patient from the first forbade the adoption of any surgical measures, even had the parents been willing to allow an operation.

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[2] Edinburgh Hospital Reports, vols. ii. and iii.

Affection of both sides in cancrum oris is, I believe, rare, and the course of this case is also unusual in the extent of implication of the skin before any ulceration of the cheek took place. The absence of reaction on the part of the tissues was probably due to the greatly enfeebled condition of the circulation for a long time previous to the onset of gangrene.

Hull.

# A Mirror
OF
# HOSPITAL PRACTICE,
## BRITISH AND FOREIGN.

> Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Procemium.

## WESTMINSTER HOSPITAL.

### A CASE OF ULCUS CARCINOMATOSUM OF THE PYLORUS.

(Under the care of Dr. W. MURRELL.)

THE connexion between simple ulcer of the stomach and a malignant growth is generally admitted and is well illustrated by the following case. Unfortunately, in many cases of carcinoma of the stomach the diagnosis cannot be made until it is too late for complete removal of the growth by operation. Of recent years laparotomy for simple ulcer of the stomach has been employed with success in certain cases and the advisability of an exploratory abdominal section may be considered in gastric ulceration when medicinal treatment has proved of no avail. In this way it may be possible to recognise and to remove malignant ulceration of the stomach at an early stage.

A woman, aged 35 years, was admitted to Westminster Hospital on April 12th, 1900, suffering from what was supposed to be gastric ulcer. She stated that in 1894, about a month after the birth of her first child, she had pain in the chest and back coming on soon after food and relieved by vomiting but unattended by hæmatemesis. This lasted for three and a half years when the symptoms subsided and for six months she suffered from no discomfort or inconvenience. A month before the second child was born she had another attack which lasted nine months, during which she frequently brought up blood but never in large quantities. About 16 months ago she again became pregnant and since then had suffered constantly from gastric symptoms. The pain after meals had been more pronounced and the vomiting more frequent. She stated that with intermissions her illness had lasted for six years and during the last two years she had lost flesh considerably.

On admission the patient was found to be very thin, but she presented no cachectic appearance; her weight was five stones eight pounds. She complained of a feeling of oppression in the epigastric region culminating in acute pain after food and relieved by vomiting. The vomited matter consisted of undigested food with a quantity of yellow frothy fluid having an acid reaction. There was very little abdominal tenderness, the stomach was only slightly dilated, and there was some thickening about the pylorus. The temperature was normal and the urine had a specific gravity of 1020 and contained no albumin. The patient was kept in bed and was placed on three pints of peptonised milk, five ounces every two hours, with plasmon custard, but the vomiting was so persistent that nutrient enemata with suppositories of beef peptones were substituted. These suppositories contained 50 per cent. of peptone of beef and each weighed 72 grains. The bowels were relieved from time to time by a simple enema. On this treatment she progressed favourably until May 14th, when there was a sudden rise of temperature. At 7 A.M. it was 103·4° F. and at 3 P.M. it was 104·6°, the pulse being 136. There was no sore-throat, or pneumonia, or endocarditis, and apparently nothing to account for it. She was put on small and frequently repeated doses of tincture of aconite and on the following day the temperature fell to 100°, although henceforth it was never quite normal and ranged from 100° to 101°. On the 16th she started an attack of diarrhœa which proved extremely obstinate and continued until her death. There were often from 10 to 12 evacuations in the 24 hours. The motions were loose, but not watery; they were small and greenish-brown in colour, not slimy, but very offensive. Various modes of treatment were tried without avail, including saturated solution of camphor in alcohol—three drops every five minutes—drachm doses of carbonate of bismuth every four hours, enemata of opium—15 drops of the tincture in two ounces of mucilage of starch—and from time to time pill of lead and opium. That these remedies were ineffectual is shown by the fact that she had 103 motions in 20 days, exclusive of those which were too small to note. Once or twice the stools were dark in colour and contained what was apparently broken-up clot. The patient gradually lost ground and early in May a small nodular mass was felt to the right of the middle line midday between the umbilicus and the ensiform cartilage. The stomach was dilated but not markedly so. On May 26th it was obvious that she was critically ill. She was losing flesh rapidly and was too weak to get out of bed. There was considerable anæmia and the face looked almost as if it were jaundiced, although the conjunctivæ were white. She was in no pain but took very little nourishment. The tongue was moist and tremulous and there were streaks of fur in the centre. The diarrhœa continued and there was prolapse of the rectum. There was no albumin or sugar in the urine. The stomach was more dilated, but the liver was not enlarged. At 7 A.M. on May 29th the temperature was 99°; at 11 A.M., 98·4°; at 7 P.M., 97·8°; and at 11 P.M., 96·4°. At 7 A.M. on the 30th it was 96 4°; at 3 P.M., 97·6°; and at 11 P.M., 96 8°. She died at 1.40 on the morning of the 31st.

*Necropsy.*—At the necropsy the stomach was found to be adherent about the pylorus to the liver. It was dilated and at the pylorus there was an ulcer consisting of two distinct parts. One, which was directed towards the stomach, was cicatrised and this was adherent to the liver, and the other, directed towards the pylorus, was fungoid in appearance. The two ulcers together were of about the size of a five-shilling piece. There were enlarged glands in the portal fissure and in the neighbourhood of the growth. There were no secondary deposits in the liver, which was fatty. The intestines showed melanic contents in places and the villi were atrophied. The spleen, adrenals, pancreas, kidneys, bladder, uterus, and ovaries were normal. Microscopical examination of the growth showed that the condition was one of spheroidal carcinoma. The muscular tissue about the pylorus was being invaded by a growth poor in cells and suggesting scirrhus.

*Remarks by* Dr. MURRELL.—This case is interesting in many ways and exemplifies the facility with which malignant growths of the stomach may be confounded with peptic ulcer. The disease commenced as a simple ulcer and after a time the cicatrix became the seat of carcinoma—an illustration of the well-known fact that damaged structures are not infrequently the point of localisation of cancer. The popular belief that scirrhus sometimes follows blows on the breast in the female is probably not without foundation. At what particular period of the patient's history the change commenced it is difficult to say. It was probably subsequently to the first illness in 1894, for there was a period of six months examined in some cases of epistaxis, a clue would be often found to the cause of the latter.

Epistaxis is one of the toxic effects of salicylates given internally. Dr. L. Shaw[2] found that it occurred in 11 patients of 174 under the treatment of rheumatism by salicylates. None of my patients, however, had taken salicylates before the epistaxis occurred, and all but one, who did not respond to it, took the salicylate with good result. It is possible that in some cases of rheumatism treated by salicylates where epistaxis occurs it is due to the disease and not to the drug.

In all the literature on rheumatism I have not found any suggestion that rheumatism may cause epistaxis except indirectly, through setting up endocardial changes. In a very excellent article on epistaxis by Dr. F. de Havilland Hall,[3] various alterations in the blood are mentioned which are attended with epistaxis as a prominent symptom—viz., hæmophilia, purpura, scurvy, chlorosis, anæmia, pernicious anæmia, and malarial poisoning, but not the rheumatic diathesis. The only suggestion I can find that rheumatism has any influence whatever in the causation of epistaxis is in a paper by Dr. Rendu[4] of Paris, quoted by Dr. Hall, in which it is said that epistaxis may occur in young persons who become later the subjects of piles or rheumatism. I think it may be said that epistaxis occurs in the young who are already the subjects of rheumatism.

There is nothing inherently improbable in the supposition to which many cases point, that rheumatism may give rise to epistaxis, for many other blood states are acknowledged to do so, and rheumatism is a known cause of one variety of purpura in which hæmorrhages occur from cutaneous and mucous surfaces.

# Clinical Notes:

## MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

### A CASE OF CHELOID.

BY H. TAYLOR, M.A. CANTAB., M.A., M.D. DUB.

A MAN, aged 21 years, healthy and dark-complexioned, with some tendency to acne as evidenced by the comedones scattered over his face, neck, and shoulders, sustained some two years ago—owing to the application by mistake of a poultice in an almost scalding condition—a large blister involving the skin over the lower ribs and the epigastric and hypogastric regions. This blister on healing left two elongated pigmented patches, unaccompanied, however, by any loss of the natural suppleness of the integuments until after the lapse of some five or six weeks, when the patient noticed that some "lumps" were forming in the outer patch; these gradually developed into a tumour which was tender and painful and which itched at times. It was, the patient states, however, completely removed by operation in October, 1900, but all the phenomena very shortly reappeared and in 10 or 12 weeks the recurrent growth was as large as ever. It now presents as two hard, fibrous, whitish-grey, spindle-shaped masses, with no evidence of any increase in vascularity, joined together in an A-shaped form by a shorter band of similar structure, and though at present the mass of the tumour has not trespassed beyond the area previously occupied the numerous outlying foci it is now surrounded with would point to an early encroachment on adjacent tissue. Tenderness, pain on pressure, and itching are complained of as in the original growth, but there is none of the burning sensation usually noted as one of the symptoms.

Virchow attributes cheloid to an irritation caused by, and proportionate to, the extent of the exciting lesion, while Alibert, who first described the disease, attempted to divide it into "true," or spontaneous, and "false," or cicatricial, cheloid. Others, again, would differentiate between a spontaneous or idiopathic growth and one arising from "scar tissue," but it is now considered very doubtful, in view of the many trifling injuries to the skin which may occur unnoticed or forgotten, whether it ever arises without some such exciting cause. It is sometimes associated with acne; it has developed in the scars of leech-bites, in those of vaccination, of herpes, and of small-pox. Showing itself as it usually does between the ages of 15 and 50 years it is a disease of adult life and more common in the dark than in the fair races.

It is affirmed by Liveing, in combating the view that a cicatricial cheloid is nothing more than a hypertrophied scar, that while in the former the tissue consists of fibres closely packed together and arranged in the long axis of the tumour, with a tendency to assume a spindle shape, in the latter the fibres run in every direction, forming a confused irregular network. This microscopical test, however, is not often applicable, and the same authority gives the following points in favour of a diagnosis of cheloid in distinction to that of one of "hypertrophied scar": (*a*) if the growth is on or near the sternum, especially if it be multiple; (*b*) if tenderness, pain on pressure, and subsequently itching be present in the tumour; he states further that (*c*) cheloid eventually extends, though perhaps very slowly, beyond the scar, and hypertrophy of scar tissue never does this. A spontaneous involution, more usually in young subjects (Hutchinson), sometimes take place, and Goodhart has recorded a case in which extensive cheloid tumours arising after small-pox had in a few months disappeared.

Removal by operation or caustics is never, as in this case, successful in preventing a return. Pressure applied by elastic bandages, mercurial plasters, or deep incisions into the growth have all been recommended, and Morris has seen moderately sized tumours completely disappear after electrolysis applied once a week accompanied by a daily massage. He also recommends, if the growth be painful, the injection in and around it of cocaine or the local application of belladonna or opium.

### FREQUENT REPETITION OF TAPPING FOR ASCITES.

BY JOHN DAVIES, M.R.C.S. ENG., L.S.A.,
SENIOR SURGEON, BATH WESTERN DISPENSARY.

THE patient was a strongly-built, healthy-looking man, 50 years of age, of the country yeoman type. He described himself as a moderate drinker of malt liquor only, though he went as far as to admit that he at times substituted it for a more solid meal. My first visit to him was on account of an epileptic fit, the only one he ever had. In September, 1896, he found some difficulty in getting up and down from the box of a cab which he drove, and he complained of a feeling of distension in his bowels, which he likened to water rolling and splashing from side to side. A month after being treated internally for ascites he was tapped, that was early in October, 1896, from which date up to October, 1900, he was tapped regularly, at first once in three weeks, then once a fortnight, and ultimately every nine days, making a total of 150 tappings. At first from 12 to 14 quarts were withdrawn at each sitting by Southey's tubes; towards the finish less was withdrawn but the total quantity was over 250 gallons. In October, 1900, he died from cardiac failure. Some features in the course of the case were œdema of the right leg, which cleared up, and then the same happened to the left leg, and thrombosis of the veins of the right side of the abdominal wall.

Bath.

### A CASE OF CANCRUM ORIS AFFECTING BOTH SIDES.

BY E. E. LASLETT, M.D. VICT., B.SC. LOND.

THE patient, a boy, aged six and a half years, was suffering from advanced pneumonic phthisis and for some weeks there had been great emaciation and weakness. For some days he had been suffering from severe stomatitis which was little influenced by local antiseptic treatment. The teeth became loose and dropped out or were pulled out by the boy himself. The gums were swollen and softened, and the lower gum especially was much discoloured in places. On Feb. 2nd, 1902, a black patch appeared on the skin over the right side of the lower jaw below the angle of the mouth. When I saw the patient in the morning of that day the relieved by lying down. There had been no vomiting. The bowels were habitually constipated. For the previous six weeks he had lost flesh and become increasingly weak. He found difficulty in standing for any length of time and in raising himself from the stooping posture and had been obliged to give up work because he was unable to walk to it. A few nights previously he had got out of bed and had fallen down and was so weak that he had to lie on the floor for the rest of the night. Since then he had kept entirely in bed. He was unable to give any date for the onset of the cyanosis.

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[2] Guy's Hospital Reports, 1887.

[3] Westminster Hospital Reports, 1893.

[4] La Semaine Médicale, June, 1884.

The patient was a tall, fairly well-nourished man. His mental condition was dull and apathetic and he took but little notice of what went on around him. He was slow in answering questions and his speech was slow, thick, and mumbling. His memory and attention were impaired. The temperature was slightly subnormal. The face was extremely cyanosed, especially the nose, which was large and broad and showed many dilated venules. The conjunctivæ were injected and yellowish; the pupils were contracted. There was marked clubbing of the fingers. The skin over the trunk was slightly pigmented, especially on the left side from the axilla to the hip. There were small scars over both the front and the back of the chest and the front of the legs. The skin over the arms and hands was thin, soft, and cold and bright red in colour around the joints. The lower part of the legs showed considerable bronzing. The teeth were in an extremely bad condition, the majority being either missing altogether or represented by decaying stumps. The tongue was thickly furred. The superficial veins of the abdomen were enlarged. The spleen extended down to the level of the umbilicus and to the middle line in front. It was hard and but slightly tender. There were some increased resistance in the right hypochondrium and some tenderness in the region of the gall-bladder. The liver dulness extended half an inch below the ribs, but the edge could not be felt. The heart sounds were normal except for some little accentuation of the pulmonary second sound; the pulse was 96, soft and easily compressible. There was some enlargement of the glands in the groin, but no enlargement of the thyroid. The urine had a specific gravity of 1012 and contained a cloud of albumin. Microscopically, there were some epithelial cells and leucocytes, but no casts. The total quantity passed in the 24 hours averaged from 40 to 50 ounces, and the total amount of urea was at first 400 grains. Micturition was frequent, and the patient generally passed urine three times in the course of the night. Beyond the slow mental condition no abnormal psychical signs could be detected.

On Feb. 1st the red cells numbered 9,000,000 and the hæmoglobin measured over 120 per cent. The white cells were not increased. There was no alteration in the shape or the size of the corpuscles. The spectrum of the blood showed nothing abnormal. On the 5th it was reported that the urine gave no indican reaction and showed no abnormal spectrum. On Jan. 31st and Feb 3rd and 7th the presence of a considerable quantity of uric acid was noted in the urine, and on the 6th the urea passed amounted to 738 grains. Only once—namely, on the 7th—were a few hyaline casts found in the urine. No noticeable alteration in the symptoms occurred during the patient's stay in the hospital, though occasionally he would appear to be unusually drowsy, and he was discharged in the same condition on March 20th.

Four days later (on March 24th) he was again taken to the out-patients' room on account of increasing drowsiness and he was again admitted into the hospital. The cyanosis was even more marked than before and there was distinct jaundice. He was extremely drowsy and apathetic, lay all day with his eyes closed and paid but little attention even when aroused. He constantly passed urine in bed and stated that he was not aware of doing so. The temperature was 99° F. and the pulse was 90. The liver dulness extended to half an inch below the costal margin. The blood count on March 25th and on April 2nd showed 7,360,000 red cells on each occasion. During the following days the condition steadily became worse. The cyanosis increased but the jaundice became less marked. The temperature fell below the normal level until the day of death when it rose to 100·8°. The patient died on April 8th.

*Necropsy.*—At the post-mortem examination the heart was found to be somewhat enlarged, weighing 13 ounces. The wall of the left ventricle was thickened and there was some old mitral valvul[illegible]se. No communication existed between the two sides of the heart. The lungs were engorged and the bronchial tubes contained a good deal of muco-purulent secretion. There were some adhesions between the pleuræ and the chest wall and diaphragm. The liver was large and very firm and weighed 66 ounces; the surface was smooth. The kidneys were large and congested; the right kidney weighed six and a half ounces and the left seven ounces. The capsules were not adherent. The supra-renal capsules were small, dark red, and very soft. The spleen weighed 48 ounces, but was of normal consistence on section. The brain was congested and the arachnoid was opaque in patches. The marrow of the femur was normal on naked-eye inspection, but was not examined microscopically. The condition of the thymus was not noted.

*Remarks by* Dr. RUSSELL.—Since seeing this patient I have come across the reports of three apparently similar cases, all of which were published in the Boston *Medical and Surgical Journal*, but I have not succeeded in finding any other reference to the condition in the literature of cyanosis. Brief notes of the three cases referred to are as follows:—

CASE 1.—The patient was a woman, aged 46 years, who was first seen by Dr. Cabot[1] in October, 1895. She was a masseuse and for two years had suffered from attacks of sudden mental and muscular prostration whilst at work. She had lately noticed increasing blueness of the lips, and during the attacks of prostration stated that her face got dark purple and her eyes bloodshot. The more severe attacks lasted for 24 hours and were accompanied by violent headache and nausea. Two weeks previously she had had an attack of sciatica, during which ecchymoses appeared on the outer side of the thigh. On examination the lips and nose were remarkably cyanotic and the whole face was dusky and apparently somewhat puffy. There was slight swelling of the ankles. The heart was practically normal. The temperature was 93·6° F. and the pulse was 90. The urine had specific gravity of from 1011 to 1016, and contained a slight trace of albumin and a few hyaline casts. It amounted to from 60 to 70 ounces, with eight or nine grains of urea to the ounce. The red corpuscles numbered 10,460,000 and the white cells numbered 20,000. The hæmoglobin measured about 150 per cent. The condition remained much the same for the next two years, but in January, 1897, the patient suffered from very free hæmorrhage after the extraction of a tooth. Shortly after, whilst walking in the street, her legs suddenly began to make peculiar movements of their own accord, and she had to hold on to some palings to keep from falling. In February, 1897, during one of her attacks of headache, weakness of the left arm and leg developed and she gradually became comatose and died on March 3rd. At the post-mortem examination there was a small hæmorrhage from the middle meningeal artery, with passive congestion of all the organs.

CASE 2.—This case was shown by Dr. Cabot[2] at a clinical meeting of the Medical Board of the Massachusetts General Hospital on Dec. 15th, 1899. The patient was a woman, an indiarubber worker, aged 49 years. She was first seen on Jan. 5th, 1894, and complained of vertigo, weakness, and constipation. She was then thought to be suffering from lead-poisoning. She did not attend again until Jan. 12th, 1895, when she complained [illegible] symptoms with palpitation and præcordial distress coming [illegible] excitement or exertion. She had suffered much from headaches. All her symptoms had been present for several years, but had [illegible] increased during the previous four months. On examination the face and mouth were cyanosed and the conjunctivæ were injected. The heart was normal except for a slight pulmonary systolic murmur. The edge of the liver was palpable, and the spleen could be felt two fingers'-breadth below the ribs. The gums bled easily. The hands and feet were blue but the fingers were not clubbed. The urine was of low specific gravity and contained a trace of albumin, a few hyaline casts, and a trace of bile. The hæmoglobin amounted to 120 per cent. She was discharged on March 28th, 1895. On April 4th, 1899, the patient again made her appearance in much the same condition. The red corpuscles numbered over 12,000,000. The skin showed considerable bronzing, especially about the axillæ, and some small leucodermatous patches about the trunk. The spleen extended a hand's-breadth below the ribs and the liver three fingers'-breadth below the right costal margin. The urine contained 0·1 per cent. of albumin. Later the red cells numbered 9,252,000 and the white cells numbered 10,600. The hæmoglobin then measured 110 per cent. The patient was readmitted on two subsequent occasions in the same year, but there was no material alteration in her condition.

CASE 3.[3]—The patient, a man, a packer in an iron-foundry, aged 53 years, was first seen on May 6th, 1901. He had been liable to sudden attacks of dyspnœa at intervals of from six months to two years during the last 20 years. There was no history of venereal disease and the patient had been strictly temperate. He had first noticed blueness of the face and hands one and a half years previously, and stated that it had come on suddenly whilst recovering from one of the attacks of dyspnœa. It often increased suddenly without any accompanying symptoms, and was not brought on by exertion, though it was generally more marked during an attack of dyspnœa. He had had no headaches. For two years he had been subject to frequent attacks of diarrhœa. On examination, there was extreme cyanosis of the face, especially of the lips and tip of the nose and ears. The small veins and capillaries of the skin were dilated. The hands and feet were very blue, and there was slight clubbing of the fingers. The conjunctivæ were injected; the gums were swollen and they easily bled. The heart was normal. The edge of the liver was not felt, but the dulness extended to two fingers'-breadth below the ribs; the spleen was felt one inch during which she was apparently well and the stomach symptoms were quiescent. Too much importance, however, must not be attached to the temporary improvement, for Leube of Jena[1] records a case of cancer of the stomach, confirmed by post-mortem examination, in which the patient gained five pounds in weight in eight days. Our patient had been losing flesh for two years before admission, but even that is no proof that the disease had then assumed a malignant form. There was thickening about the pylorus, but that might have been due to the formation of cicatricial tissue from the healing of an ulcer. The first symptom to attract attention was the sudden elevation of temperature followed by persistent diarrhœa. It was probably septic in origin and there can be no doubt that the disease had then assumed a malignant form.

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[1] A Case of Chronic Cyanosis without Discoverable Cause, ending in Cerebral Hæmorrhage. By Richard C. Cabot, M.D. Boston Medical and Surgical Journal, Dec. 7th, 1899.

[2] Boston Medical and Surgical Journal, March 15th, 1900.

[3] A Case of Marked Cyanosis Difficult to Explain. By Sylvester F. McKeen, M.D. Boston Medical and Surgical Journal, June 20th, 1901.

Malignant disease of the stomach is not common at so early an age, although several cases in young children have been recorded. In some of these, however, no histological examination was made and they may have been examples of sarcoma of the stomach or of hypertrophy of the pylorus. Norman Moore[2] published the case of a girl, aged 13 years, in which the microscopical characters of the new growth were those of carcinoma with somewhat wide trabeculæ and extensive degeneration of the cells. Perry and Shaw[3] mention a case in a woman, aged 32 years. The wall of the stomach was in large part destroyed and replaced by a mass of colloid, which freely invaded the abdominal wall and the neighbouring viscera. There was a secondary deposit in the liver. Histologically the growth was a spheroidal carcinoma with scanty stroma and colloid change. In 1898 there was a case in the Westminster Hospital[4] of cancerous infiltration of the pyloric portion of the stomach in a woman, aged 36 years. Micro-sections showed colloid carcinoma, the colloid degeneration being limited to the gastric mucosa in a few isolated patches between the muscle bundles. Again, in 1900,[5] there was a woman, aged 34 years, with a growth invading the whole wall of the stomach and implicating the liver. Microscopically it was found to be a much degenerated squamous-cell carcinoma. The cylindrical carcinomas are amongst the most common of the tumours of the stomach, but apparently neither age nor sex has any determining influence on the character of the growth.

The development of cancer in gastric ulcer is a well-recognised sequence of events, especially at the pylorus. Rokitansky and Dettrich were the first to describe this condition and Hauser gave an accurate histological description of it. Kollman in 1891[6] reported 14 cases and since then many others have been recorded. Some authors—Rosenheim, for example—say that it occurs in from 6 to 8 per cent. of the cases, whilst others consider that as an etiological factor it is of very little importance. Brinton[7] long ago pointed out that the presence of an open ulcer sometimes provokes the development of the cancerous cachexia as well as aids in determining the deposit of cancer in the particular organ. He had probably been impressed by a case which he had shown at the Pathological Society[8] some years previously in which the floor and especially the margin of a large gastric ulcer exhibited a deposit from a quarter to half an inch thick which on microscopical examination was found to be cancerous. There are two other cases recorded in the Transactions of this society, one by Goodhart (vol. xl., p. 78), in a man, aged 32 years, and another by Newton Pitt (vol. xlvii., p. 52), in a man, aged 57 years. Stewart[9] mentions a case in which there were two isolated carcinomatous ulcers. Tapret,[10] Bouveret,[11] Hayem,[12] Dieulefoy,[13] and various other writers record cases. This complication, however, cannot be very common, for Fenwick[14] says that only two genuine specimens were observed in the post-mortem room at the London Hospital during a period of 40 years.

The diagnosis of gastric carcinoma *ex ulcere* presents many difficulties, and it is often not easy to distinguish it from hypertrophic stenosis of the pylorus. For example, Hemmeter[15] speaks of a case in which no tumour was to be felt, and the only symptoms were those of cachexia in gastric ulcer. As Boas[16] has pointed out, in some cases the metastases in the liver or other organs with ascites or peritoneal carcinosis may excite suspicion, but such aids are rarely obtained, and in the majority of instances there is nothing to guide us until quite late in the progress of the disease. The discovery of the Oppler-Boas bacillus in the vomited matter may be of diagnostic importance.[17] In unstained preparations these organisms are readily recognised by their large size, their immobility, and their peculiar base-ball bat shape. They possess the property of forming lactic acid from various kinds of sugar, a constant parallelism being observed between the occurrence of these bacilli in large numbers and an excessive formation of this acid. Kaufmann demonstrated their presence in the vomited matter in 19 out of 20 cases of gastric carcinoma. Although, as shown by Schlesinger and Kaufmann,[18] they are not pathognomonic of cancer, and although there are many other organisms which form lactic acid, their presence is suggestive. Whether in this particular case pylorectomy as performed by Péan in Paris in 1879, and subsequently by Cavazzáni, Rydygier, Wölfler, Czerny, and others, would have stayed the progress of the disease it is difficult to say. Probably pylorectomy with gastro-enterostomy, as suggested by Billroth in 1885, would have been the better operation.

# BIRMINGHAM GENERAL HOSPITAL.

## AN UNEXPLAINED CONDITION OF CHRONIC CYANOSIS, WITH THE REPORT OF A CASE.

(Under the care of Dr. SAUNDBY and Dr. J. W. RUSSELL.)

THE disease affecting the following case and the three other cases the records of which have been discovered by Dr. Russell is evidently a definite clinical entity and one which is new to medical science. It is not improbable that records of other similar cases may be discovered in medical literature. One of the most striking features of the disease is the great increase in the number of red corpuscles.

A man, aged 48 years, an electro-plater, was first admitted into the Birmingham General Hospital under the care of Dr. Saundby on April 24th, 1891, during Dr. Russell's term of office as resident medical officer. The patient complained of pains all over the body, most marked in the abdomen, and of general illness of five days' duration. He had, however, been feeling "out of sorts" and had suffered a good deal from headache for the previous three or four months. An epidemic of influenza was at that time at its height in the town and as the temperature was considerably raised the immediate symptoms were thought to be due to that complaint; but the spleen was persistently enlarged throughout his stay in the hospital. The urine had a specific gravity of 1010 and contained a trace of albumin; there were no casts. Beyond unusual pigmentation of the mammillæ and the presence of a few pigment marks about the trunk no abnormal colouration was observed. The patient was discharged on May 16th, the spleen remaining large as on admission.

Dr. Russell next saw the patient on Jan. 29th, 1898, when he attended as an out-patient. He then complained of pains all over the body, especially in the right side and head, of six weeks' duration. He was extremely cyanosed, and Dr. Russell therefore sent him into the hospital, where he was again admitted under the care of Dr. Saundby. The patient's family history was unimportant except that his mother died from phthisis. He had himself contracted syphilis at the age of 19 years. He had suffered from "gastric fever" at the age of 24 years, and a few years later he had a short attack of jaundice. There had been no other illness with the exception of that for which he was admitted in 1891, and from which he had entirely recovered. He had lived in comfortable surroundings and denied any alcoholic excess. The present illness had been coming on for about eight months, during which time he had suffered from pains in the abdomen of a gnawing character, generally worse in the earlier part of the day. These were mostly independent of food and were neutrophile leucocytes were ever formed there. The remainder of the paper was occupied by a comparison and contrast of the granular and non-granular cells as regarded distribution, spheres, and rapidity of action, extent of supply, variations in size, &c.

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[1] Ziemssen's Cyclopædia, vol. vii., p. 250.
[2] Transactions of the Pathological Society, 1885, vol. xxxvi.
[3] Guy's Hospital Reports, 1891, vol. xlviii., p. 156.
[4] Westminster Hospital Reports, vol. xi.
[5] Ibid., vol. xii.
[6] Berliner Klinische Wochenschrift, 1891.
[7] Lectures on Diseases of the Stomach, 1864, p. 243.
[8] Transactions of the Pathological Society, 1858, vol. ix., p. 200.
[9] American Journal of the Medical Sciences, 1898.
[10] L'Union Médicale, No. 93, August 18th, 1891.
[11] Traité des Maladies de l'Estomac, 1893.
[12] La Presse Médicale, August, 1897.
[13] Ibid., November, 1897.
[14] Ulcer of the Stomach and Duodenum, 1900, p. 373.
[15] Diseases of the Stomach, second edition, 1901.
[16] Diagnostic und Therapie der Magenkrank.
[17] Deutsche Medicinische Wochenschrift, 1895, No. 5.
[18] Wiener Klinische Rundschau, 1895, No. 15.

Dr. **WILLIAM HUNTER** said that three points had been brought out by the paper, first, the origin of the polynuclear leucocyte from the bone-marrow; secondly, that the changes in the bone-marrow had been regarded as compensatory to the changes in the blood, whereas Professor Muir had shown that there were very constant series of changes which corresponded to infective influences; and thirdly, the relation between the spleen and the bone-marrow and the appearance of myelocytes in the spleen in ases of changes in bone-marrow. He had shown experimentally the changes in the bone-marrow after removal of he spleen.

Dr. J. H. **DRYSDALE** said that the finely granular cells from cases of myelogenic leukæmia certainly varied very considerably in size, whereas Professor Muir had stated that they were of very uniform size He said that there might be a marked leucocytosis in the blood with a marked diminution of the leucocytes in the bone-marrow. He asked if the cases referred to as severe small-pox were cases of hæmorrhagic small-pox, and he said that he believed that such cases were small-pox with secondary infection.

Dr. A. G. **PHEAR** referred to a case of injury to the knee-joint with suppuration. Four weeks after the injury operation was performed, and following that there was profuse hæmorrhage; the patient died four days later. There was in this case a double factor—namely, suppuration and severe hæmorrhage some few days before death. The bone-marrow when examined was found to consist of a firm pink tissue of increased consistency with considerable diminution of fat cells. Three forms of cells were present—myelocytes, rythroblasts, and giant cells—and in two points the condition differed from that found by Professor Muir: firstly, nce; the number of the giant cells was increased and, condly, the absence of any karyokinetic figures.

Dr. O. F. F. **GRUNBAUM** asked whether the mitotic ures were more common in specimens obtained post rtem than in those obtained during life.

Professor **MUIR**, in reply, said that in mentioning the size of the finely granular cells he had not especially referred to their condition in leucocythæmia, but in the bone-marrow they did remain very constant in size He did not think that the mitotic figures were more common in specimens of bone-marrow obtained post mortem than in those obtained during life.

# CLINICAL SOCIETY OF LONDON.

### *Seventy-four Cases of Appendicitis with Localised Suppuration, with Special Reference to the Treatment of the Appendix in such cases —The Treatment of Intra-peritoneal Abscess of the Appendix, Illustrated by Cases*

A MEETING of this society was held on Feb 14th, Mr. **HOWARD MARSH**, the President, being in the chair

Mr. H. **GILBERT BARLING** read a paper on 74 Cases of Appendicitis with Localised Suppuration. He said that of 40 cases of appendicitis operated upon in the acute stage 74 had, been cases of localised suppuration in the right iliac fossa or immediately adjacent to it. In 46 of these the abscess, though well shut off by adhesions, had not yet come forward so as to be adherent to the parietal peritoneum and operation involved the opening of the general peritoneal cavity. In the remaining 28 cases the abscesses had become adherent and were evacuated without opening the general cavity. The points to which attention was directed were (1) the diagnosis of pus and the time at which it should be evacuated; (2) the safety with which this could be done if the removal of the vermiform appendix was not insisted upon; (3) the rarity with which recurrence took place if the appendix was not removed; (4) complications at the time of, or following, operation; and (5) certain risks to life which follow attacks of appendicitis apart from recurrence The abscess should be attacked as soon as the diagnosis of suppuration was made, but it should be remembered that pus might be present in he presence of a normal temperature and pulse, though there ight be other symptoms indicating it. Leucocytosis, though t pathognomonic, was decidedly valuable. In a series of cases in which pus was present leucocytosis was only absent in two cases and in every case examined where a high leucocyte count was found pus existed. The safety with which appendix abscesses might be treated if removal of the appendix was not insisted upon was shown by the small mortality in the cases under discussion. In the 74 cases there were two deaths. The appendix was only removed 25 times and in 49 it was not removed. All but two of those patients in whom the appendix was not removed had been traced since, and of these two, both hospital patients, nothing could be learnt; of the other 47 patients only one had suffered from recurrence—a girl who had had another attack within a few weeks of her operation and who was subsequently operated upon successfully and the appendix removed. Complications were not numerous and had been chiefly phlebitis and pleurisy and pneumonia.

Mr. F. C. **WALLIS** read a paper on the Treatment of Intra-peritoneal Abscess of the Appendix illustrated by eight cases This paper dealt with those cases of appendix abscess in which the abscess, although shut off by adhesions from the general peritoneal cavity, was in no way adherent to the abdominal parietes. It was therefore necessary to open the general peritoneal cavity before the abscess could be dealt with. In giving details of the operation great importance was attached to the fact that all the cases quoted except one occurred in young people and that adhesions at this age were very frail and required delicate manipulation to prevent the pus under tension in the abscess sac from escaping uncontrolled into the general peritoneal cavity. To prevent this Gamgee sponges were packed in a crescent around the affected area and when possible the pus was gradually evacuated and sponged up as it appeared. When the amount and tension of the pus was too great for this to be done the patient was tilted bodily over to the right side and the escaping pus was caught in a small bowl held underneath When most of the pus had been evacuated the cavity was more freely opened and thoroughly cleansed. Th appendix and its remains were then removed and the cavit was dusted with iodoform and packed with iodoform gauze It was a matter of importance to keep the wound as dry as possible. The necessity for operating quite early after the primary attack in young people was strongly urged.—Mr. A. E J. **BARKER** said that he had seen several severe cases of recurrent appendicitis in those patients in whom the appendix had not been removed at the primary operation. As an instance of this he quoted the case of a lad, aged 15 years, in whom the appendix could not be removed at the first operation and he had had five recurrences, and in some of these there had been severe collapse. He (the speaker) thought it advisable that the appendix should be removed at the time of the first operation if it could be done easily, otherwise it was best to wait till the acute stage had passed and to remove it in the quiescent interval. He was in favour of washing out the abscess cavity with saline solution and he was of opinion that strong germicides should not be used. It was, however, essential that a free exit for whatever fluid was used should be allowed, He thought that more effective drainage was obtained by means of an aseptic gauze "apron" than by means of a tube. He was greatly in favour of separating the muscle-fibres instead of making an incision through them, and sufficient room to evacuate the abscess was nearly always obtained and the advantage to the patient was undoubtedly great.—Mr **JAMES BERRY** said that it was inadvisable to remove the appendix in all cases of suppurative appendicitis, although such a practice had been advocated by some surgeons. He said that there were two schools, firstly, those who waited till the abscess was "safe," and secondly, those who opened the abdomen widely and removed the appendix at once. He was greatly in favour of waiting till adhesions had formed and making a small opening, and in support of this view he brought forward the following statistics. In 41 cases of appendicitis in which a small opening had been made only two patients died, while in 39 cases in which an extensive operation had been performed only seven recovered and 32 died. During a period of two years there were 240 patie suffering from appendicitis admitted to the medical a surgical wards of St Bartholomew's Hospital; of these died, a proportion of one in eight; taking the cases admitte to the surgical wards only the mortality was one in seven Of 200 cases admitted to St Mary's Hospital 25 patients died, giving a proportion of one in eight; of these 102 were admitted to the surgical wards and 22 died, giving a mortality of one in four. He thought that it was better to wait rather than to attempt to remove the below the costal margin. The temperature was normal. The urine amounted to 70 ounces; it had a specific gravity of 1015 and contained a trace of albumin and 35 grammes of urea. There were a few granular casts. The red corpuscles numbered 9,440,000 and the white numbered 9000. The hæmoglobin measured 120 per cent. The polynuclear white corpuscles amounted to 74 per cent., the small mononuclears to 18 per cent., the large mononuclears to 6 per cent., and the eosinophiles to 2 per cent.

These cases possess many points in common besides the extreme cyanosis. In three out of the four great weakness and prostration were prominent symptoms: the fourth patient suffered from attacks of dyspnœa, whilst one of the others had attacks of palpitation and præcordial distress. Three suffered from severe headaches and all were constipated. In all it is noted that the conjunctivæ were injected and in two bleeding occurred from the gums. The liver was slightly enlarged in three of the cases, but jaundice only existed in the one which I have reported, though in another there was once a trace of bile in the urine. The spleen was markedly enlarged in three of the cases and in all four there was a trace of albumin in the urine with a few hyaline casts. Patches of pigment were noted in one other case besides my own. The condition of the blood was practically identical in all four cases; there was a great increase in the number of red corpuscles, which often amounted to more than double the usual number. The hæmoglobin was always markedly increased, but by no means proportionately to the number of the red cells. The white corpuscles were either normal or but slightly increased. All the patients were over 45 years of age.

It is impossible to make any suggestion as to the pathology of these cases in the absence of more detailed anatomical observation. Dr. Cabot was unable to obtain any but the most meagre information of the necropsy on his case, and two of the other three patients were still alive when the reports were published. In the case which I have recorded there was no microscopical examination of the bone-marrow or the suprarenals, and the condition of the thymus was not noted. M. Weil[1] has recently recorded two cases of congenital cyanosis in children, apparently without heart lesion, but with "*hyperglobulie*" and, in one case, enlargement of the spleen, in which there were marked changes in the bone marrow and thymus. A careful examination of the suprarenals is suggested by the extreme muscular feebleness which, apart from the cyanosis, was the leading clinical feature of my case

I am indebted to Dr. Saundby for permission to publish the notes of the case.

# Medical Societies.

## PATHOLOGICAL SOCIETY OF LONDON.

### *The Reactions of the Bone-marrow and other Leucocyte-forming Tissues in Infections.*

A MEETING of this society was held on Feb. 18th, Mr. W. WATSON CHEYNE, the President, being in the chair.

Professor R. MUIR (Glasgow) made a communication, illustrated by lantern and microscopical demonstrations, on the Reactions of the Bone-marrow and other Leucocyte-forming Tissues in Infections. He pointed out the difference in distribution of the functional activities of the leucocytes—the germ centres of lymphoid tissue, Malpighian bodies, &c., and the bone-marrow being essentially formative areas and the lymph sinuses and splenic pulp being specially adapted for phagocytic activity, &c. The bone-marrow was the seat of formation of the characteristic elements of the blood—red corpuscles and granular leucocytes. He had shown by experiments that this activity as regarded neutrophile leucocytes was greatly increased in inflammatory and suppurative conditions. An account was given of observations in like states in the human subject, a great many different conditions being investigated. The results were entirely confirmatory, the leucoblastic change (neutrophile reaction) being shown not only by an increase of the myelocytes in the existing marrow, but by a partial change of the fatty marrow into red marrow. At the spreading margin of the young marrow the chief elements found were red corpuscles and neutrophile myelocytes, there being no evidence that the latter were formed from non-granular cells. The newly formed marrow ultimately contained all the elements of the normal marrow, the distinctive feature being the relative excess of the neutrophile cells. Mitotic division was most active in these latter. In addition to the marrow obtained post mortem the condition of that obtained during life in cases of rib-resection for empyema was described. The state of the marrow in small-pox was then considered. In this disease there was always a percentage diminution of neutrophiles, though the actual number might be somewhat increased; the lymphocytes and hyaline cells showed both a relation and absolute increase, the percentage being sometimes as high as 60. The marrow showed very slight or no neutrophile reaction (a slight extension in the femur was often present) and there was often, especially in grave cases, a great depletion of its cells, notably neutrophile myelocytes, the place of them being taken by widened vascular channels distended with blood. The presence of these cells in the blood and the spleen was related to this change. These changes were the result of toxic action. The gelatinous change in the marrow was next considered, this affecting both the fatty marrow and the red marrow. Evidence was given to show that the essential factor in its production was starvation. It might be associated with leucoblastic change, though probably tending to interfere with the latter. The conditions governing the chief variations of the neutrophile cells in the tissues, the blood, and the marrow had been established; in all probability the eosinophiles behaved in an exactly analogous manner. The chief pathological changes in the bone-marrow were the following. 1. Changes in leucocythæmia—lymphatic and medullary respectively. 2. Reactive changes: (*a*) leucoblastic—the neutrophile reaction, in all probability also an eosinophile reaction, and possibly a hyaline reaction; and (*b*) erythroblastic—normoblastic after hæmorrhage, megaloblastic in pernicious anæmia, also in bothriocephalus anæmia. 3. Degenerative or retrogressive changes: (*a*) gelatinous marrow; and (*b*) fatty marrow, recorded in a case of idiopathic anæmia, possibly aplastic. The spleen was chiefly treated of in contrast to the bone-marrow, the outstanding feature being the extensive destructive changes in the former as contrasted with the formative functions of the latter. Acute enlargement was chiefly due to accumulation of blood or of leucocytes, hence variation in the colour. Both endothelial cells and hyaline cells might increase in number and size and act as phagocytes. In addition to bacteria, damaged red corpuscles and neutrophile leucocytes underwent an intra-cellular destruction by non-granular phagocytes (to a greater extent in animals than in the human subject); they were also digested extra-cellularly. Myelocytes appeared in the pulp, especially in severe cases, and with them nucleated red corpuscles were usually present. They probably represented an escape from the marrow owing to disturbance of its delicate structural arrangements. Proliferative changes occurred at the periphery of the Malpighian bodies, a zone of comparatively large basophile cells resulting (the potential myelocytes of Dominici, Bezançon, &c). In the neighbourhood of these myelocytes might be seen, but it was not certain that the latter were formed from the basophile cells. The marrow elements present might merely be separated from the blood; the question of "myeloid transformation" must be considered an open one. With regard to lymphatic glands and other lymphoid tissues, evidence that an increased formative activity could be produced by substances in the blood was still wanting. In small-pox there was a lymphocytosis in the blood, but this might possibly be due to irritating substances carried by the lymphatics from the skin lesions, &c. Local hyperplasia of lymphoid tissue might be produced by abnormal conditions in the corresponding area drained through it. Enlargement of glands in infections was, however, usually due to one of two causes. The first was the emigration of neutrophile leucocytes from the blood-vessels (as in other tissues); these might invade the whole gland structure. In milder cases with favourable results these cells might be destroyed by the non-granular phagocytes and a return to normal follow. The other cause was the reaction in the lymph sinuses and paths—marked desquamation and proliferation of endothelial cells with phagocytic activity occurred. This was seen well in typhoid fever and also in a somewhat similar manner in small-pox, especially with extensive skin lesion. A study of the lymphatic glands in infections afforded no evidence whatever that organs it was too late to apply x-ray treatment to the original site of the disease. Dr. LEWIS JONES concluded by explaining that the scope and aim of the British Electro-therapeutic Society were mutual instruction by bringing forward reports of work done and scientific examination of that work. Uniformity in apparatus was to be brought about and they must be prepared to inform scientific men as to the instruments which they could usefully employ in investigations. The journal of the society must be the medium for putting all their members in touch with what was being done, both at home and abroad. The encroachment of unqualified persons upon the field of work of the society was a very serious matter which should engage the attention of all the members. In some instances medical men had too thoughtlessly countenanced this practice and it was only too late that the medical men discovered the loss which they sustained and were sustaining. The taking of x-ray photographs by photographers and instrument-makers was undoubtedly a bad thing for the profession. The treatment of lupus by any irresponsible person who happened to have an induction-coil should not be countenanced by any medical man, and with the possibility of the use of the x rays in the treatment of cancer the danger became greater. He had been told already of a fatal case where a patient suffering from cancer died from the effects of the x-ray treatment applied by an unqualified person.

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[1] Société de Biologie, June 29th, 1901; La Semaine Médicale, July 3rd, 1901.

Dr. G. HERSCHELL, Dr. S. SLOAN, and Mr. J F. HALL-EDWARDS (Birmingham) exhibited Apparatus, and Mr. E. W. H. SHENTON showed Radiograms illustrating Certain Points in Hip-joint Injuries.

## LIVERPOOL MEDICAL INSTITUTION.

*Cerebellar Abscess with Thrombosis of the Lateral Sinus.—Exhibition of Cases.—The Preparation of the Hands for Surgical Operations.*

A MEETING of this society was held on Feb. 13th, Mr. USHTON PARKER, the President, being in the chair.

Mr. DAMER HARRISSON described a case of Cerebellar Abscess with Thrombosis of the Lateral Sinus in a young man who had suffered from ear disease for 11 years. There were some dulness of the intellectual faculties, paresis of the right facial nerve, and a tendency to fall to the right side. There were also some swelling over the mastoid process and fulness in the upper part of the neck. There was no optic neuritis. The antrum was cleared, the necrosed inner wall was removed, and the abscess cavity was opened up. The patient became very collapsed and further operation was deferred. After a few days, the temperature being still irregular, the internal jugular vein was exposed and ligatured below the thrombus, an excised bit of vein contained a softening clot. The patient made an excellent recovery.—Mr. C. G. LEE had seen some 30 cases of cerebral and cerebellar abscess resulting from ear disease. In many cases it was often impossible to say in which situation the abscess was. Optic neuritis was as frequently absent as present in cases of cerebral and cerebellar abscess. Cerebral abscesses were frequently multiple, and he referred to the case of a child who had paralysis of one arm and leg in which he opened and evacuated the abscess. This was followed by complete recovery of the limbs. Ten days later the child died, and the post-mortem examination showed the whole of one occipital lobe necrosed and several small abscesses scattered about the cerebrum.—Dr. PHILIP NELSON asked if the source of the discharge from the ear had been definitely ascertained, for owing to difficulty of drainage mastoid and other complications were more liable o occur when the attic was the seat of the trouble, the erforation being in the membrana flaccida. Referring to the acial palsy, he pointed out the frequency of this trouble in tuberculous disease, particularly in children.—The PRESIDENT, Dr. W. PERMEWAN, Dr. A. S. F. GRUNBAUM, and Mr. R. W. MURRAY spoke, and Mr. HARRISSON replied.

Dr. NATHAN RAW showed a woman upon whom he had performed Cæsarean section twice. There was no evidence of rickets. The conjugate diameter of the pelvis was two and one-third inches, the promontory of the sacrum projecting markedly. At the time of the first section the patient had been 26 hours in labour and general cutaneous emphysema was present. The child from the second section was shown and attention was drawn to the circular shape of the head. Dr. RAW raised the question as to what the correct procedure was in this case. The patient was unmarried. He thought that she must take the consequences but it was a most difficult question to answer.—The PRESIDENT, Dr. W. MCFIE CAMPBELL, Dr. H. BRIGGS, Mr. F. T. PAUL, Mr. HARRISSON, and Mr. G. P. NEWBOLT spoke, and Dr. RAW replied.

Dr. DAVID MORGAN showed three cases of very obstinate and extensive Lupus and Rodent Ulcer cured by the x rays and violet light. The first patient, a woman, aged 34 years, had suffered from childhood from lupus of the nose and cheeks. Every variety of surgical treatment had been adopted, including over 40 scrapings, but the benefit was only temporary. X ray treatment had proved quite successful, the patient exhibiting a very healthy white scar. The second case was that of a tuberculous ulcer of the cheek of limited size treated by the violet rays. A healthy cicatrix formed in six weeks. In the third case a large rodent ulcer presented over the scalp and forehead in an elderly spinster. The disease had been in progress for many years and was too extensive for excision. Three months' treatment with x rays had cured the disease.—Dr. FRANK H. BARENDT thought that the results produced by the x rays and light treatment in Dr. Morgan's three cases had been unattained by any method hitherto practised. The case of healed serpiginous rodent ulcer of 12 years' duration showed an excellent result. No previous treatment had any permanent effect, and now the former site of the ulcer was occupied by a smooth and to the naked eye sound scar; moreover, there was a total absence of any return. The dermic results of the x-ray and light treatment could not at present be explained; it was futile to theorise about these therapeutic effects in the absence of definite knowledge of the nature of the rays which had produced such remarkable results as were portrayed in these cases.—Dr. G. G. STOPFORD TAYLOR congratulated Dr. Morgan upon his interesting and instructive demonstration. He said that the effect of the "light" treatment was largely superficial, and the number of cases to which it could be applied were limited in number on account of the necessity of actually placing the lamp in contact with the surface. With the x rays it was quite a different matter as they certainly penetrated much more deeply and could be therapeutically applied to every part of the body.—Mr. ARTHUR N. WALKER mentioned that Dr. Finsen had found Bang's iron electrode lamp unsuccessful in the treatment of lupus on account of the lack of penetration of its rays.—The PRESIDENT and Mr. PAUL emphasised the need for microscopical confirmation of the diagnosis.—Dr. PERMEWAN and Mr. C. T. HOLLAND also spoke and Dr. MORGAN replied.

Dr. T. B. GRIMSDALE described the method which he had used for some time in the Preparation of the Hands for Surgical Operations. The hands were cleaned with a nail-brush and boiled water for a definite time, then they were soaked in a solution of potassium permanganate, the colour was discharged by washing in oxalic acid solution, the acid neutralised by washing in sterilised lime water, and, finally, the hands were washed in sterilised water. The results of this method had been rigorously tested on several occasions by Dr. E. E. Glynn, Dr. J. H. Abram, and Dr. C. Hill. In every instance Dr. Grimsdale's hands and those of his assistants were sterile, and his opinion, therefore, was that the hands could be made practically sterile. Moreover, of all the methods that he had tried this one had the least roughening action on his skin—in fact, it did not roughen it at all. He did not think that the method was simply mechanical in its action.—The PRESIDENT, Dr. BRIGGS, Dr. HILL, Dr. GRUNBAUM, Mr. HARRISSON, Mr. PAUL, and Mr. G. A. HAWKINS-AMBLER discussed the paper, and Dr. GRIMSDALE replied.

## EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

(*Concluded from p. 453.*)

*Chloroma and Lymphatic Leukæmia.—Infantilism.*

WE now conclude our report of the fifth ordinary meeting of the present session of this society, held on Feb. 5th, Professor T. R. FRASER, the President, being in the chair.

Dr. BYROM BRAMWELL read notes of a case of Chloroma and of three cases of Lymphatic Leukæmia, illustrated with water-coloured drawings and lantern-slides. In the first of these cases the patient was a married man, aged 25 years, acute stage. With regard to his own and Dr. Sainsbury's cases at the Royal Free Hospital, he said that during the last five years they had had 53 cases. 49 of the patients in these cases got well, four died, a mortality of one in 13. 34 of these had been admitted to the surgical ward and of these three had died, a mortality of one in 11. Of the patients in those three cases in which death occurred one was an old man, aged 51 years, who had general peritonitis and had been ill for four days when first seen; a second was a boy who died from intestinal obstruction; and the third was a case in which if operation had been performed early the fatal termination might have been prevented. He asked if Mr. Barling attached any importance to the presence of a low temperature, as he had seen such cases and they seemed to him comparable to those cases of low temperature in association with abscess in the brain.—Mr. CUTHBERT S. WALLACE said that he had met with three cases of recurrent abscess after appendicitis. The first was a woman, aged 53 years, who four months after the primary operation had an abscess in the same situation, and after incision the patient again recovered. The second was in a man in whom an abscess recurred four months after the first operation. The appendix was removed at the second operation, but the patient died on the twelfth day. The third was in a man who had a recurrence two and a half months after the first operation. In the St. Thomas's Hospital Reports from January, 1895, to December, 1901, there were eight cases of recurrent appendix abscess. One of these occurred three weeks after the first abscess had been opened; in the remainder the interval between dates of admission and re-admission was from two to four months, except in two cases in which the interval was 19 months and seven years respectively. During this period 128 localised appendix abscesses had been incised, making a recurrence frequency of 5·5 per cent.—Mr W. G. SPENCER said that he should always open an appendix abscess as soon as he had diagnosed the presence of pus. He considered that the iliac incision was far better than one opening the general peritoneal cavity, as it was easier to find the appendix, or if not found at once it could be traced from the cæcum. He criticised Mr. Berry's statistics in respect of the comparative mortality between medical and surgical cases and thought that they did not fully represent the facts, as in many cases the patients died before they came to operation, and therefore would not be included in his figures. [Mr. BERRY denied that he had instituted any such comparison.] He asked Mr. Barling if the patients in his cases had remained in good health after the operation, for he thought that although these patients did not have recurrence they yet frequently suffered from general ill-health. He considered it advisable to remove the appendix at the time of the first operation. He had employed a method of secondary suture in two cases where the abscess had been large. He incised the abscess, packed the cavity with gauze, and after a week, when granulations had formed, he sewed up the cavity.—Mr. C. R. B KEETLEY said that he was inclined to remove the appendix in as great a proportion of cases as possible and he considered that by using gauze packing in a systematic manner this could be done without increasing the risk. He thought that it was best to open the abdomen in the mid-line, for in this way a view of the condition present could be obtained. He considered that it was rare to meet with multiple collections of pus.—Mr. CHARTERS J. SYMONDS thought that it was much better not to remove the appendix in most cases. He considered it better to make an incision nearer to the anterior superior spine than over the most prominent part of the swelling, for in this way one was less likely to open the general peritoneal cavity. In considering the dangers which attended the non-removal of the appendix he said they were two: *firstly, the possibility of recurrence* (and of these he had seen two cases both discharged through the old scar); and secondly, the possibility of the formation of a sinus. Neither of these did he consider of serious consequence. He was in favour of immediate operation and he did not think that he had ever seen any harm follow such practice. If the general peritoneal cavity was opened he thought it best to pack the cavity and to open the abscess. If the swelling was found to be in the lumbar region it was best to close the abdominal opening and to open the abscess in the loin. If the swelling was in the pelvis he recommended that the abscess should be opened into the rectum.—Sir THOMAS SMITH said that he considered that the incision should be made low down; if it were made over the most prominent part of the swelling there was considerable chance of opening the general peritoneal cavity. If he failed to obtain pus after making the low incision he was in the habit of putting in a drainage-tube and he had often seen the pus come through this after a few days.—Dr. H. A. CALEY stated that the proportion of relapses in cases which had been operated on was certainly not more than from 1·5 to 2 per cent. and that 5 per cent. was too high. He asked if a counter opening in the lumbar region might not be of value in some cases.—Mr. BARLING, in reply, said that the general consensus of opinion of the society had been that the appendix should not be removed unless this could be done with ease. He could not agree with Mr. Berry with regard to waiting, but would always operate at once.

# BRITISH ELECTRO-THERAPEUTIC SOCIETY.

*The Present and Future of Electro-therapeutics.*

A MEETING of this society was held on Feb. 14th, Dr. W. S. HEDLEY, the President, being in the chair.

Dr. H. LEWIS JONES read a paper on the Present and Future of Electro-therapeutics. The changes in the practice of medical electricity which had taken place in the last 12 years were numerous. The general introduction of public electric lighting supplies had not only helped greatly to extend the practice of medical electricity, but had also provided the profession with a new and valuable agent in the sinusoidal current. In electrical testing there was still need for a method of measuring induction-coil currents, and the difficulties of doing this might be evaded by the substitution of condenser discharges in place of them. Galvanometers and electrodes were much improved. The brass handles and the wet sponges were, or ought to be, things of the past. Chemical batteries, with the troublesome preparation of exciting fluids, were being rapidly discarded by the profession and the modern dry battery or the portable accumulator was superseding them, with the result of greater simplicity in working and greater confidence in the instruments used. The static machine had begun to return to favour and seemed likely to achieve great things in the near future. The treatment of lupus and of rodent ulcer by electrical methods seemed to be assuming an established position. In a case of ulcerated cancer of the breast under treatment at St. Bartholomew's Hospital there had been extensive healing from exposures to x rays. The patient when admitted had a large open ulcerated wound of the right breast, measuring about four inches in one diameter and five inches in the other. Treatment with x rays was commenced on Nov. 14th and an exposure of 10 minutes was given four times a week, with few omissions, until Jan. 17th. After a few days signs of healthy cicatrisation began to appear round the margins of the ulcer. This continued to advance until the healing process had extended inwards from the margin for a distance of fully half an inch all round. Curiously, the new epithelium was deeply pigmented. The centre of the wound gradually ceased to slough and appeared to be in process of healing all over; but, unfortunately, the patient being at a late stage of her illness, secondary deposits in remote parts of the body became very disagreeably evident. She suffered a spontaneous fracture of both the femur and the humerus, and the x-ray treatment was suspended in view of the hopelessness of the future of the patient. The total number of exposures was 17, and it was very important to note that many were made with the ulcerated surface covered by dressings or bandages. Since the suspension of the treatment exactly four weeks ago, the process of healing had gone on quite steadily, and now there was a firm and healthy scar covering the whole surface, except about one square inch in the centre. This portion was also a healthy healing surface, though not yet covered by epithelium. Thus nineteen-twentieths of the area of a cancerous ulcer had healed in three months as a consequence of x ray applications, and the result was obviously a most significant one. The local effect was splendid, but there was no influence upon the spread of the disease in the remote parts of the body. Indeed, it would have been unreasonable to expect it. The opportunity must be hoped for of treating some cases of cancer in the early stage when the disease was still limited to the superficial part, for when the disease was no longer local but had implicated distant and deep-seated

Professor George Dock, who had made a special study of the disease. Professor Dock agreed with him in thinking that the first case which he (Dr. Bramwell) had described was a case of chloroma. As Dr. Dunlop had told them, chloroma was a very rare disease, some 25 cases only having been recorded up to the present time. In typical cases the characteristic features of chloroma were as follows. 1. The presence of lymphoid deposits in the orbits, temporal fossæ, and periosteum of the bones of the skull, and the symptoms and signs resulting therefrom. In consequence of the lymphoid deposits in the orbits there was usually, but not always, exophthalmos ; and often as the result, partly, perhaps, of the pressure on the optic nerve and its vaginal sheath, and partly of the altered blood condition (lymphatic leukæmia and anæmia), hæmorrhages in the retinæ and optic neuritis. Lymphoid infiltrations of the conjunctivæ, which in some cases produced large protruding swellings giving the idea of sarcomatous growths, sometimes occurred. Lymphoid infiltrations of the cornea were also sometimes developed. Firm bilateral swellings in the temporal fossæ were very often present. The periosteal lesions were not confined to, though they were apparently always most marked in, the region of the skull and face. The periosteum of the bones of the vertebral column was often affected. In a recent case (Rosenblath's first case) the spinal column was eroded, the nerve roots and spinal cord were pressed upon, and secondary ascending degeneration in the spinal cord developed. Deafness was very common; it was apparently in some cases due to pressure on the auditory nerve, in others to lesions (involvement) of the middle or internal ear. Facial paralysis, due to pressure on the facial nerve, was sometimes met with. There was in many cases difficulty in breathing through the nose, the result of swelling and infiltration of the nasal passages. The tonsils were often enlarged and infiltrated. The remarkable swelling of the gums, epiglottis, and larynx, which was present in the two cases which he had related, had not, so far as he had been able to find, been hitherto described, but he was much interested to find, when Dr. Dunlop kindly gave him an opportunity of seeing his case during life, that in his case the palate was swollen and infiltrated in exactly the same manner. 2. The green colour of the lesions (lymphoid deposits in the orbits, periosteal lesions, lymphoid deposits in the kidneys, the liver, the spleen, the bone-marrow, &c.). This was a remarkable feature of the disease. In many cases the green discolouration was only noticed after death. But that the green colour, in some cases at least, was not due to post-mortem changes was conclusively shown by the fact that in some of the recorded cases the urine was green during life. As Dr. Dunlop had stated, the exact cause of the green colour was still unknown. In his own case the change in colour which the skin lesions went through during life was suggestive of a blood change, and the marked increase of the green colour which was noticed at the post-mortem examination in the skin lesions in the upper part of the body seemed to be suggestive, in part at least, of a post-mortem (? decomposition) change. The question naturally arose whether in all cases of chloroma the green colour was due to the same cause. It was possible that it might be due to different causes in different cases and that the green tumours were not invariably due to one and the same pathological condition. Further, though this might at first sight seem to be a contradiction in terms, it seemed to him probable that cases of chloroma occurred in which there were no green tumours and no green lesions. He was strongly disposed to think that the green discolourations, though they had hitherto been considered to be essential and characteristic features of the disease, might in some undoubted cases of chloroma be absent. These questions required solution. 3. A profound blood change, characterised by anæmia, cachexia, hæmorrhages into the skin, bleedings from the mucous membranes, especially epistaxis, and petechial extravasations into the retinæ and internal surfaces (epicardium, &c.). The same profound blood change was met with in most cases of acute lymphatic leukæmia, but it was certainly not always present. In the first two cases which he had just described (of chloroma and acute lymphatic leukæmia) there was little or no anæmia and there was no cachexia. The essential blood change in chloroma seemed to be an enormous excess of the lymphocytes and especially of the large lymphocytes in the blood ; in short, in cases of chloroma the blood seemed (? always) to present the characteristic features (95 per cent. or more of lymphocytes) which up to the present time were regarded as indicative of one condition only—viz., lymphatic leukæmia. 4. Further, the bone marrow, the spleen, the lymphatic glands, and the organs throughout the body were affected (infiltrated with lymphoid deposits) as in lymphatic leukæmia. In all the recent cases of chloroma which had been examined exhaustively the blood presented the characters of lymphatic leukæmia. In some cases in which it was said that there was no excess of leucocytes the character of the corpuscles *had not been ascertained by stained films.* Now, the first case which he had related showed that lymphatic leukæmia might be present when there was no excess of leucocytes. The question whether chloroma was a definite and distinct disease or whether it was merely a variety of acute lymphatic leukæmia was a very difficult one to answer—a good deal could be said on both sides. The peculiar location of the lesions to the orbits and skull bones, though they were not of course confined to these parts ; the green colour of the tumours ; the fact that in some cases the tumours were of cartilaginous consistency ; and the fact that in some cases the bones (as in one of Rosenblath's recent cases) were eroded and perforated by the growths, were in favour of sarcoma or lympho-sarcoma rather than of lymphatic leukæmia. But the condition of the blood was highly suggestive of lymphatic leukæmia. The three cases which had been brought before the society that evening seemed to show that no hard-and-fast line could be drawn between acute lymphatic leukæmia and chloroma. Dr. Dunlop's case was a highly typical case of chloroma with all the changes in the blood characteristic of acute lymphatic leukæmia. The case now being considered was a typical case of very acute lymphatic leukæmia with peculiar lesions in the gums, the tonsils, the larynx, and the skin, and the first case seemed to be midway between the two—between Dr. Dunlop's case and Dr. Bramwell's second case. The mouth lesions appeared to be the same in all three cases. The whole question seemed to turn upon the nature and definition of lymphatic leukæmia. Possibly the same condition of blood (95 per cent. or more of the white corpuscles being lymphocytes) might result from more than one pathological condition. But, practically speaking, lymphatic leukæmia and chloroma were the only known diseases in which such a condition of blood was present. Probably more than one disease was included under the term "acute lymphatic leukæmia," or, at all events, different varieties of the disease existed. Certainly different cases of lymphatic leukæmia presented considerable differences in their clinical history and course and in the relative intensity of the lesions found after death in the bone-marrow, the spleen, and the lymphatic glands respectively. In this connexion Dr. Bramwell next briefly described his third case—a case of very acute lymphatic leukæmia which had just occurred in his hospital practice, in which there was comparatively little glandular change, but in which the lesions in the spleen and in the bone-marrow were very marked ; this case was very interesting because of a peculiar condition of the kidneys. Both kidneys were very much enlarged and the cortical substance was infiltrated with numerous large hæmorrhages, the intervening substances being pale, exactly of the colour of very anæmic brain tissue; the left kidney weighed 18 ounces and the right kidney weighed 14 ounces. The peculiarity of the condition was that the urine, which was carefully examined on three separate occasions during the last three days of life, was pale and was absolutely free from blood and albumin. At the post-mortem examination the bladder contained 14 ounces of very pale urine, the specific gravity of which was 1012 ; it was absolutely free from blood and it contained the merest trace of albumin which was perhaps derived from the vesical epithelium. Dr. Bramwell next referred to a case—the fourth case—one of chronic lymphatic leukæmia in which there were enormous glandular swellings throughout the body. Lantern slides illustrative of the condition of the blood, &c., in these cases were shown. In conclusion, Dr. Bramwell stated that the present communication was merely preliminary. It had been impossible in the time placed at his disposal to attempt to discuss the questions exhaustively ; all he had attempted to do was to mention the chief clinical and pathological facts of the cases which he had related.

Dr. **Bramwell** also showed a case of Infantilism. The condition was very rare and, so far as he had been able to ascertain, was not described, though incidentally referred to, in medical literature. The patient, aged 18 years and 10 months, did not look more than 12 years of age. He was bright and intelligent mentally. There was no suspicion of who had enjoyed excellent health up to October, 1900, when he accidentally discovered a small glandular swelling on the left side of the neck below the jaw; a week later a similar swelling developed on the right side of the neck. In January, 1901, an eruption developed on the front of the chest and gradually extended over the greater part of the body. In February rheumatic pains were felt for a fortnight in the back. In April the face and gums swelled, the eyes became watery and painful and the voice husky, and some deafness developed. On May 22nd, 1901, the patient was sent to Dr. Bramwell by Dr. C. E. Douglas of Cupar. The condition was then as follows. The patient was much debilitated and had lost a stone in weight. He complained of soreness of the mouth and gums and of deafness, more marked in the right than in the left ear. He was not anæmic. There was no excess of white corpuscles in the blood. The face was swollen, the swelling being chiefly due to the presence of nodular swellings in the skin, œdema of the skin, and glandular swellings in the neck and parotid regions. The voice was husky, the breathing was attended with some stridor, there was frequent cough, and the patient could not breathe through the nose. The pulse was quick (from 120 to 130) and the temperature was 100·6° F. A remarkable eruption was present over the greater part of the body; it was copious on the thorax, the abdomen, the back, the arms, the face, and the scalp, but sparse over the lower extremities. The eruption consisted of flat-topped nodules varying in size from that of a pin's head to that of a sixpenny-piece. In many places the nodules were confluent and they produced a uniform raised infiltration of the skin; they were painless, not adherent to the deeper parts, and for the most part of a slatey-grey or purple-grey colour, some of them being yellow in their centres. The gums were enormously swollen, firm, and of a dark purple colour, and the right tonsil was much swollen and was also firm and of a dark purple colour. The conjunctivæ presented a peculiar appearance, being infiltrated with a translucent fleshy-looking growth in which vessels could be seen ramifying. There was no exophthalmos. The optic discs were normal. The glands on each side of the neck below the jaw were swollen, hard, and painless. The parotid glands appeared to be enlarged. There was some symmetrical swelling in each temporal region. The splenic dulness was increased. The liver was somewhat enlarged. The urine was normal. There were no pigmented moles or warts, but Dr. Bramwell concluded that the case was probably one of melanotic sarcoma, with peculiar infiltration of the skin, the gums, the tonsil, and the conjunctivæ. The patient was admitted to the Edinburgh Royal Infirmary on May 23rd and he remained there until his death, which took place a month later—on June 24th. Microscopical examination of portions of skin excised during life showed that the case was not one of melanotic sarcoma; the nodules in the skin consisted of lymphoid deposits and were entirely made up of small unenucleated round cells. The blood-count showed that the red corpuscles numbered 4,480,000 and the white corpuscles 8000 per cubic millimetre. The white corpuscles were almost entirely (95 per cent. or more) lymphocytes, chiefly large lymphocytes, with large nuclei and clear, non-granular protoplasm. During the month that the patient remained in hospital the condition of the blood remained practically the same. The temperature was elevated, the highest point reached being 104°, and the pulse was remarkably quick (from 110 to 160); the respirations were always above the normal (from 25 to 35). The breath was foul and the gums occasionally bled slightly. No micro-organisms were detected (either in stained films or after incubation of gelatin tubes) in the blood The skin eruption increased and many of the nodules became yellow, some yellowish-green, and a few on the face distinctly green in colour. The face became much more swollen The fleshy infiltrations of the conjunctivæ became much larger. On post-mortem examination the skin lesions (nodules) on the face, the thorax, the abdomen, the back, and the arms were of a green colour; some of the glands in the neck were green, the tonsil was green, and the epiglottis and laryngeal mucous membrane were green. The bones of the head and face were not examined (permission was limited to the respiratory and abdominal cavities). The glands in the neck were enlarged, the spleen and the liver were enlarged, and the gums, the tonsils, the epiglottis, and the larynx were greatly swollen, the swelling being due to lymphoid infiltration. The bone-marrow of the ribs contained some, but not very numerous, lymphoid cells similar to those in the skin, the gums, and the blood. There were some petechiæ on the heart. The thoracic, the abdominal, the axillary, and the inguinal glands were hardly affected at all. The kidneys were infiltrated in places with lymphoid deposits. The case was undoubtedly one of chloroma. The condition of the blood corresponded to that of acute lymphatic leukæmia and it was very important to note that the leucocytes (95 per cent. or more of which were lymphocytes) were not increased in number (8000 per cubic millimetre). The mere fact that the leucocytes were not increased in number did not exclude leukæmia. It was necessary to note the character of the leucocytes in stained films. The case was remarkable because of the lesions on the skin and the very peculiar infiltration of the conjunctivæ, the gums, the epiglottis, and the larynx. Dr. Bramwell had never seen anything like the condition of these parts before. Curiously enough, another case in which exactly similar lesions were present had since come under his observation. The second of Dr. Bramwell's cases was one of acute lymphatic leukæmia with a similar lesion in the gums, the epiglottis, and the larynx to that which was present in the first case. The patient was a man, aged 33 years, who was admitted to the Edinburgh Royal Infirmary on Sept. 29th, 1901, and who died on the following day. He complained of shortness of breath on exertion, of deafness, and of glandular swellings on each side of the neck and the jaw. The deafness had commenced a month previously, but he had continued his work until three days before his admission to the hospital. He was a thick-set, well-nourished, muscular man. There was no anæmia—in fact, his face and lips were turgid and cyanotic. No examination of the blood was made during life, but after death the blood was found to contain a large excess of lymphocytes, mostly of the large form. The patient was very deaf. His voice was husky and almost toneless, he was very short of breath, and the respiration was attended with stridor. Large, hard, painless, glandular swellings were present on each side of the neck, being especially marked about the angle of the jaw, the face was swollen and blue, and the veins of the neck were somewhat engorged. Dr. Bramwell, who had seen the patient for a moment on his admission to hospital but had not made an exhaustive examination of the case, thought that the condition was suggestive of enlargement of the mediastinal glands with intra-thoracic pressure. The case had been more carefully examined by Dr. Montgomery Bell, house physician. The chest was full of bronchitic râles. The pulse numbered 108, the temperature was 102°, and the resiprations were 20. The tonsils were swollen and ulcerated. The patient died on the day following his admission to hospital. Post-mortem examination showed that the case was one of acute lymphatic leukæmia. The glands throughout the body were enlarged; the spleen, liver, and kidneys were infiltrated throughout with lymphoid cells; and the bone marrow was of a dark purple colour and was infiltrated with lymphoid cells. In the skin of the back and neck there were several lymphoid deposits similar to those which were present in the first case and the condition of the gums, the tonsils, the epiglottis, and the larynx was also identical with that in the first case. Some of the glands in the neck in the case under consideration were found on section to be green in colour. This case was undoubtedly a typical example of very acute lymphatic leukæmia with peculiar lymphoid infiltrations of the gums, the tonsils, the epiglottis, and, to a very limited extent, the skin. The two cases when taken together had, Dr. Bramwell thought, an important bearing upon the pathology of chloroma. That disease was very rare, but it was probably much more common than was usually supposed. Many cases were no doubt missed. A case figured in the *Medical Review of Reviews* for November, 1901, p. 695, and described as a "rapidly-growing tumour of the orbit," was, Dr. Bramwell had no doubt, a case of chloroma. Some years ago a friend in Barbadoes had sent him a photograph of a remarkable case of symmetrical sarcomatous growths of the orbits with exophthalmos which was probably a case of chloroma; it appeared to be merely an exaggeration of a case of chloroma recently published by Rosenblath.[1] It was probable that some of the rare cases of so-termed perforating sarcoma of the skull, of which he had reported a case a few years ago, were cases of chloroma. He had had the advantage in August last of discussing the whole subject of chloroma with

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[1] Deutsches Archiv für Klinische Medicin, Band lxxii., Heft 1, 1902.

Sternalis was found in Anencephalous Fœtuses. Throughout Europe it awakened interest, and by that single paper the section at once became an object of interest to anatomists. Discussions throughout the medical schools of the world took place on the subject and the views of the Dublin school were opposed strongly; but he was glad to say that the two papers of Eisler of Berlin and of Wilson of Melbourne supported the views put forward by Mr. Abraham. The cerebral wave was created by the remarkably beautiful exhibition of cerebral photographs prepared by Professor Alexander Fraser. For their general usefulness and beauty of finish they had never been excelled. Professor Fraser had also been engaged on the study of the topography of the sinuses of the cranium and under his hands the cerebral wave attained its highest point. The visceral wave included the splendid work done by Professor J. Symington of Belfast, and that of Professor Fraser, Professor A. Birmingham, and others.

The PRESIDENT (the chair being temporarily occupied by Professor Symington) then read a paper on the Inferior Parietal Lobule. He said that it had become the practice of a considerable number of continental anatomists to form an opinion of the sex, race, intelligence, and capability of the individual from an examination of the inferior portion of the parietal lobe of the cerebrum. He could not accept these views, although they had been supported by Retzius, Guzsman, Hauseman, and Ruge, and, indeed, he had been driven to a diametrically opposite conclusion. In a series of brains specially prepared to show the development of this lobule from those of the fœtus to those of advanced life he could find no reason to suppose that the higher intellectual powers were associated with a larger and more complex gyrated lobule. Professor Cunningham exhibited a series of screen pictures of cerebra in support of his views.—Professor D. J. COFFEY said that he considered the President's demonstrations of the surface anatomy of the inferior parietal convolutions a most interesting supplement to Flechsig's work on the development of association fibres in the same area. How far such an area could be termed a place of intellectual operations in the brain depended very much upon the exact signification to be attached to the term intellectual. Intellect itself, he thought, was a question of capacities not necessarily associated with any area, but deriving the matter through which it manifested its activities from both the primary sense areas and the association centres alike. He thought that the so-called intellectual areas in reality had to do with the conscious functions which were intermediate, so to speak, between primary sense representations in the brain and the higher psychical capacities. The latter had no place representation whatever.—Professor FRASER said that the brain of a lunatic was quite as complicated as that of a mathematician.—Professor SYMINGTON said that, like the President, he was doubtful of the localisation of special intellectual ability in the inferior lobule of the parietal lobe.

Professor COFFEY read a paper on Microscopical Preparations of Certain Nerve-endings in the Auditory Tract. He demonstrated the three typical forms of endings of the cochlear nerve in the pons cerebri, calyces, tree-root endings, and encapsuling fibres. The specimens were stained after the manner of Cajal of Madrid and Wehl of Leipsic.—Professor FRASER and the PRESIDENT discussed the paper.

Professor BIRMINGHAM read a note on the "Stomach Chamber." About two years ago, in a paper contributed to the *Journal of Anatomy*, he introduced the terms "stomach chamber" and "stomach bed." In order to make plain to the section that there were a "stomach chamber" and a "stomach bed" he had brought a specimen hardened *in situ* by formalin and gelatin. The anterior abdominal wall having been removed, the stomach, which was distended and hardened and had been cut free at both extremities, was lifted out, showing a distinct chamber, bounded superiorly by the diaphragm and inferiorly by the small intestines, the pancreas, the upper extremity of the kidney, and the transverse mesocolon. The viscus when distended filled this chamber; when it was in a condition of contraction a portion of the colon pressed up in front of the viscus into the chamber. In the healthy male adult he found that the stomach projected downwards, at an angle of 45°, inwards and forwards. When distended its pyloric extremity tilted upwards and its œsophageal opening was not directly on its lesser curvature but opened on the anterior surface.—Professor SYMINGTON said that he quite agreed with Professor Birmingham that the stomach projected forwards and downwards, but he could not see any advantage in the term "stomach bed" or "stomach chamber."—The PRESIDENT agreed with Professor Birmingham that the titles "stomach bed" and "stomach chamber" were useful and helpful. The transverse mesocolon divided the abdominal cavity into a gastric and an intestinal region.

Dr. T. G. MOORHEAD read notes on the Abdominal and Pelvic Viscera in a case of Advanced Pregnancy. The specimen was hardened *in situ* by the formalin process and photographed. The subject had reached the seventh month of pregnancy, and it was probably the first occasion of such a specimen being photographed for exhibition. The uterus extended well up into the abdomen and inclined to the right side; the left ovary came in contact with the anterior abdominal wall. The uterus was also rotated on its long axis which brought the right ovary in contact with the cæcum. The upper margin of the uterus lay at a point two inches above the symphysis pubis and was overlapped by the transverse colon and the great omentum.—The PRESIDENT, Professor SYMINGTON, Professor FRASER, and Professor BIRMINGHAM congratulated Dr. Moorhead on his unique and splendid specimen.

MANCHESTER MEDICAL SOCIETY.—A meeting of this society was held on Feb. 5th, Dr. Thomas Harris, the President, being in the chair.—Mr. F. A. Southam showed a female, aged 41 years, upon whom Cholecystectomy had been performed eight months previously. For four years she had suffered from attacks of biliary colic, unaccompanied by jaundice, and had frequently passed gall-stones in her motions. As the attacks were becoming very frequent and her health was beginning to suffer an exploratory operation was performed. The gall-bladder, which was found to be enlarged to the size of an orange, contained nearly four ounces of pus and 64 gall-stones. As its walls were thickened and indurated and the cystic duct was completely obliterated it was removed, together with a small portion of the liver substance, to which it was intimately adherent. The patient, who made a good recovery from the operation, had been free from any attacks of pain since its performance and was now in excellent health.—Mr. Southam also mentioned a case of Cholelithotomy where 260 calculi were removed from the gall-bladder of a male, aged 24 years, who had suffered from attacks of biliary colic, accompanied by jaundice, since he was 18 years of age. The patient made a rapid recovery from the operation.—Dr. H. Ashby brought forward a case of Gastro-enteritis in a boy, aged three years. There were persistent vomiting with rapid thready pulse and flattened abdomen, but there was no diarrhœa. Later there were "coffee-ground" vomiting and dark brown stools consisting of altered blood. There was no fever. There were convulsions and tetany before death, which took place on the sixth day. At the post-mortem examination a much-dilated stomach was found; the mucous membrane was markedly injected. The intestines were contracted and intensely hyperæmic, especially about Peyer's patches. The origin was obscure; irritant poisoning and milk- and meat-poisoning could be excluded with fair certainty.—Mr. W. P. Montgomery made a communication on two cases of Epiplopexy (Morison's operation) for Ascites. In the first case, a woman, 50 years of age, had noticed an increasing enlargement of the abdomen for six months. She admitted to a considerable indulgence in beer and spirits. She had been tapped once two months previously. The second patient was a man, 26 years of age, who had suffered from ascites for three years and had been tapped over 40 times. He gave no well-marked history of alcoholism. The diagnosis was chronic peritonitis with cirrhosis. In each case the omentum was fixed in the parietal peritoneum on either side of an incision made in the right semilunar line. It was then tucked up between the liver and the diaphragm, and fixed by a suture to the liver itself. After eight months the first patient remained free from any recurrence of the ascites. The second required tapping less frequently than before operation. An analysis of 38 collected cases was given.—Dr. Yonge showed two patients on whom he had performed Thyrotomy for Malignant Disease of the Larynx six months and five months ago respectively. In neither case was there up to the time of their being exhibited any evidence of recurrence. In the one case an excellent voice had been sporadic cretinism, of congenital syphilis, rickets, or tubercle. The only apparent cause for the condition was chronic diarrhœa, which had lasted for nine years and which was perhaps due, Dr. Bramwell had suggested, to defective pancreatic secretion. Dr. D. Young, house physician, had by an elaborate investigation, the details of which were communicated to the meeting, proved that the pancreatic secretion was deficient. Under the administration of pancreatic extract the diarrhœa had lessened, the patient had gained half a stone in weight, and had grown nearly half an inch in the course of six weeks. These facts suggested that in this case the arrested bodily development was due to defective pancreatic secretion. The condition of the pancreatic secretion in future cases of infantilism for which there was no apparent cause should be carefully investigated.

# EDINBURGH OBSTETRICAL SOCIETY.

*Exhibition of Specimens.—Symphysiotomy in Practice.—Diagnostic Help in Gynæcology.*

A MEETING of this society was held on Feb. 12th, Dr. JAMES RITCHIE, the President, being in the chair.

Dr. D. BERRY HART showed (1) a large Fibroid removed by supra-vaginal hysterectomy; and (2) a specimen of Transverse Rupture of the Fundus Uteri in a Full-time Pregnancy (the woman was not in labour and the rupture seemed to have taken place spontaneously).

Dr. F. W. N. HAULTAIN showed (1) a Fibroid Uterus affected with Carcinoma of the Body, removed by abdominal operation; (2) a Uterus with Adeno-carcinoma of the Body, with microscopical section, removed by the vaginal route; (3) two Ectopic Gestation Sacs at the third and fourth month respectively, removed from the same patient at different times within a year (the first sac had ruptured and the second was entire); (4) a Uterus with large Calcified Fibromyoma; and (5) a microscopical section from a case of Primary Tuberculosis of the Cervix.

Dr. J. W. BALLANTYNE showed (1) a Cephalometer for ante-natal mensuration; and (2) a Fœtus with Exomphalos and Adhesion of a Hand to the Chest Wall.

Dr. J. HAIG FERGUSON showed a Fibroid Uterus removed during menstruation.

Dr. R. C. BUIST (Dundee) read a paper on Symphysiotomy in Practice. Histories were given of four women, aged from 20 to 25 years. One patient had three labours with the loss of the infants and at her fourth labour had her pelvis permanently enlarged by Frank's method; the fifth labour resulted in an easily managed delivery of large twins. The second patient was rachitic and symphysiotomy was performed at her first and third confinements after forceps alone had failed; the second labour was spontaneous and natural. The third patient had had three difficult labours previously, with one child alive with a permanently dented head; in her fourth confinement symphysiotomy was performed. In the fourth case the patient had her first and second labours at the seventh month; at her third labour symphysiotomy was carried out after forceps had failed. Of the five children born after the operation four were alive and one died during labour owing to delay in sending for medical assistance. The conjugate diagonals varied from 8 to 9·5 centimetres (3⅛ to 3¾ inches). In two cases femoral thrombosis occurred during the puerperium. One patient, owing to an accident after the operation, had incontinence of urine, but this was cured by subsequent operation. The delivery after the operation was helped by forceps and the Walcher position. In none of the cases was there any subsequent impairment of gait and all of the patients had been able to do their work at home and two were at their work in the jute-mill within six weeks and three months after the operation respectively. The method followed in the last four operations was the subcutaneous method described by Ayres. Dr. Buist made an incision in the vestibule and passed a director up the front of the symphysis to its upper border; withdrawing the director he inserted a probe-pointed bistoury and cut through the symphysis, beginning at the upper border. The tissues behind were watched and guarded by a sound in the urethra and the finger pressing through the anterior vaginal wall. Sometimes there was difficulty in locating the symphysis and occasionally the osseous surfaces were not straight. Considerable hæmorrhage might occur after the operation and this could be met by packing. The after-treatment was simpler after the subcutaneous than after the open method. The paper was discussed by the PRESIDENT, Dr. HART, and Dr. FERGUSON, and Dr. R. JARDINE and Dr. J. M. MUNRO KERR (Glasgow) gave their experience of the operation.

A paper on Some Remarks on Diagnostic Help in Gynæcology was sent by Professor FEHLING of Strasburg and was read by the Secretary. Owing to the success attending gynæcological operations many operators, especially the younger gynæcologists, attached no great value to a thorough diagnosis. While in many cases a definite diagnosis was not essential to a successful operation, there were many cases in which an accurate diagnosis might assist in the selection of the best operation or in modifying the steps of the procedure. Their aids in diagnosis had been constantly improving. The clinical examination, both vaginal and rectal, was helped by placing the patient in the Trendelenburg position and might be enhanced by putting the patient under chloroform. The use of the uterine sound, traction on the uterus with a volsellum, and filling the bladder or rectum with air or water assisted diagnosis in difficult cases. But after all means had been tried cases occurred in which the diagnosis was not clear, and as an extreme measure a diagnostic laparotomy was carried out. In exploratory laparotomy some operators preferred small incisions sufficient only to admit two fingers, but an examination in the dark did not aid much in the diagnosis and a longer incision was preferable, so that sight might assist touch in the examination. The results were poor and many such explorations through further interference became incomplete operations. Even with careful antiseptic and aseptic precautions exploratory incisions might be followed by peritonitis or sepsis. In malignant cases rapid increase of ascites after the operation might often delay healing of the abdominal wound, and such exploration greatly tended to a fatal issue. Professor Fehling considered that an exploratory puncture with a large-sized hollow needle or aspirator through the vaginal roof was of very great value in determining the nature of the tumour and its contents when it lay near the vagina. The vagina should be carefully prepared for the puncture and the patient should be kept at rest for at least 24 hours afterwards. The fluid obtained should be examined for blood, pus, and serum; also for gonococci or pyogenic germs, and if necessary a culture on agar or in bouillon should be obtained to determine whether the cocci still retained vitality or not. These points would assist in determining the time and method of operation. The chemical examination of the fluid was not of so much value, but it might help to some extent. Thus Pfannenstiel had shown that the pseudo-mucin of the cysto-adenoma of the ovary was distinguished by the fact that boiled with dilute acids it was converted into a reducing agent, a glyco-proteid which reduced copper oxide like sugar in Trommer's test. The results of exploratory puncture in 81 cases were given, and he concluded that the puncture of small tumours, especially those of the adnexa, was a harmless procedure and was useful both for diagnosis and treatment. Exploratory laparotomy should be avoided as far as possible.—Dr. HAULTAIN, Dr. BUIST, and Dr. FERGUSON discussed the paper.

# ROYAL ACADEMY OF MEDICINE IN IRELAND.

## SECTION OF ANATOMY AND PHYSIOLOGY.

*Presidential Address.—The Inferior Parietal Lobule.—Nerve Endings in the Auditory Tract.—The "Stomach Chamber"—Abdominal and Pelvic Viscera in a case of Advanced Pregnancy.*

A MEETING of this section was held on Jan. 31st, Professor D. J. CUNNINGHAM, the President of the section, being in the chair.

The PRESIDENT briefly reviewed the work done by the members of the section during the 19 years of its existence—work which reflected great credit on the section both for thoroughness and originality. It seemed to him to have been marked by three great waves, which he would take the liberty of naming the morphological wave, the cerebral wave, and the visceral wave. One of the first papers produced at the section, and he thought the first printed, was that very excellent contribution of Mr. Abraham on the Frequency with which the Musculus

Atrophy; the seventeenth chapter, on Tabes and Syringomyelia; the twentieth chapter, on Affections of the Terminal Cone—i e., the lowest part of the spinal cord; the twenty-second chapter, on Polyneuritis of the Lower Limbs or Anterior Poliomyelitis; the twenty-seventh chapter. on Juvenile General Paralysis; and the thirtieth chapter, on Infantile and Other Forms of Myxœdema. The other lectures are also excellent, and, indeed, there is scarcely a page of the book that is not replete with original remarks and pregnant with suggestions. In all cases the chapters begin with a summary, then follow a description of the case under consideration, the differential diagnosis, and finally the prognosis and treatment.

The reader naturally thinks of Charcot and the work which he carried out from 1882 at this hospital. He has found a worthy successor in Professor F. Raymond, who has most laboriously carried on since Charcot's retirement the course of study so advantageously begun. Of course, these lectures are not for all time, but they do give to the busy practitioner the opportunity of reference to what is probably the most complete history and symptomatology of prominent nervous cases to be met with in practice, according to our present enlightenment. What makes for the completeness of the accounts is that the assistance of other experts has been called in to ascertain with accuracy such particulars as the determination of impaired sensory skin areas, the results of applied electricity and galvanism, the performance of surgical operations where indicated, &c.; in fact, each case is a complete *résumé* of expert evidence, consolidated into a harmonious whole by the clear remarks of the professor. Under the names of Friedreich's disease, of Little's disease, of Thomsen's disease, and of symptoms such as those of Romberg, Argyll-Robertson, &c., the general reader is apt to be confused, but here he will not only find the names used but also explained. No work on neurology would be complete which did not include hysteria, and in its relations with different affections of the nervous system we find chapters on myoclonia and hystero-traumatism, the latter involving a discussion on the nature of "railway spine" as first described in this country by Erichsen and adversely criticised by Charcot, Thomsen, and Oppenheim. The theory sustained by Strumpell is that there exists a central traumatic neurosis which is clinically confounded with hysteria and neurasthenia, but is rather varied in its shades and degrees and is only grafted upon a soil predisposed to it With this theory Professor Raymond agrees. They are not afraid of loss of blood in France. In one case a patient (page 12) was operated upon for a cerebral tumour. On the first occasion he lost 50 ounces of blood; the next operation cost about 66 ounces of blood; on the third occasion the hæmorrhage was "formidable," but a tumour of the size of half an orange was removed by M. Chipault. On page 528 is found a useful *résumé* of the anatomy of the cortex of the brain with special reference to the system of tangential and radiating fibres, the alteration in which is important in the lesions met with in general paralysis. Each lecture is so bristling with interesting deductions that it is not needful to do more than to insist upon the instruction to be derived from the perusal of any part of the book

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*Proceedings of the Society for Psychical Research.* Part XLI. Vol XVI. October, 1891 London: Kegan Paul, Trench, Trubner, and Co. Pp 649 Price 10*s.*

This volume is entirely devoted to a record of observations on certain trance-phenomena and comments founded upon them by Professor James Harvey Hyslop, Ph.D. It is divided into two parts. The latter half of the volume, roughly speaking (pp. 303 to 649), is made up of appendices containing a detailed report of the "sittings" which the writer had with a Mrs. Piper and on which he founded his papers. The record of the sittings is preceded by a brief preliminary note and is followed by Experiments on the Identification of Personality (Appendix IV.), Experiments in Communication through a Tube (Appendix V.), Experiments in Hypnosis (Appendix VI.), and quotations bearing on the mental condition of the communicator while communicating (Appendix VII.).

The subject of trance and the allied mental phenomena are of such interest to the medical profession and to the public that any genuine attempt to throw new light on them must be regarded with consideration. The whole subject of what is now called hypnotism has been of more or less general interest ever since the time of Mesmer, and there can be no doubt that "mesmerism" would have found a recognised place in surgical practice as an anæsthetic had not the use of chloroform been discovered just when it was. It unfortunately happened about this date that scientific problems of the greatest complexity were investigated by self-confident people of extraordinary credulity, and there were not wanting at that time a number of professional charlatans who reaped a rich pecuniary benefit from their *séances*. Of this period Carpenter in his "Mental Physiology" gave a good general account which can still be studied with profit. After the exposures of some flagrant cases of spiritualistic imposition, medical men, as a rule, thought it wiser to leave the whole subject severely alone. But the number and interest of the psychic problems which forced themselves upon people who would not shut their eyes to them made it impossible that they should be shelved entirely. The existence of a succession of peripatetic mesmerists who induced phenomena which could not be entirely explained as fraudulent served to keep these things before the public in the first place, and it therefore happened as a result of the general interest excited in the subject that medical men were often compelled to face scientific facts about which they had not been instructed in the course of their medical education. The Society for Psychical Research was inaugurated to investigate phenomena which had for so long, it considered, been unduly neglected and it has done a considerable amount of work. Some of the most energetic workers are now lost to it, and amongst them must be mentioned Professor Henry Sidgwick, Mr. Edmund Gurney, Mr. F. W. H. Myers, and Dr. A. T. Myers. The society, however, can still boast of having on its list of vice-presidents and council some few men of more than European reputation—for example, Mr. A. J. Balfour and Lord Rayleigh. The council has decided that "the responsibility for both the facts and the reasonings in papers published in the Proceedings rests entirely with their authors." Still, it must directly or indirectly rest with the council as to what it publishes. The names of the members of the council are printed on the cover of the Proceedings, and it must be held that they, or some persons acting for them, have decided that the book before us was worthy of being printed at the expense of the society. As to whether such an opinion is or is not well founded, we will not presume to say; it will be better to give a quotation of a report of one of the sittings in which Professor J. H. Hyslop took part, and to leave our readers to judge whether or not it was worth while to start "telepathic" or "spiritualistic" hypotheses to explain such like texts. On visiting Mrs. Piper the investigator, it should be said, had provided himself with a black mask "such as is used at masked balls," and "under this concealment" he was introduced to the lady, bowed without uttering a sound, and did not speak till she had gone into a trance, but he studied Mrs. Piper's reception of him. When she saw the mask she "broke into a laugh," and the laugh bore every external trace of sincerity. Mrs.

regained and in the other the vocal power, although not so good, was sufficient for all practical purposes

PATHOLOGICAL SOCIETY OF MANCHESTER —A meeting of this society was held on Feb 12th, Dr F Harris, the Vice President, being in the chair —Dr E F Trevelyan (Leeds) described the pathology of a very acute case of Meningitis secondary to Facial Cellulitis The staphylococcus aureus was obtained from a secondary abscess in the body and also from the exudation at the base of the brain The recorded cases of staphylococcus meningitis were briefly referred to —Dr A E Finney made a short communication on Myomalacia Cordis and its results —The Vice President and Dr F C Moore showed preparations from a case of Chloroma The patient was a boy, 14 years of age, whose illness commenced with symptoms believed to be those of sciatica The pain persisted in his left hip, and no further symptoms developed until a month before his death when he showed signs of orbital and intracranial growths He was admitted to the Manchester Royal Infirmary a fortnight before his death with partial paralysis of the lower and upper extremities, great pain in the left hip, marked exophthalmos of the right side, almost complete deafness, and bilateral facial paralysis He gradually became weaker and died about 13 weeks from the commencement of any indications of disease At the necropsy numerous nodular masses of new growth of a grass green colour were found in connexion with the inner aspect of the dura mater, with the periosteum of the orbits, of the vertebræ, the sacrum, and the iliac bones, and in the kidneys There was also a diffuse infiltration of the mesenteric lymphatic glands and of the connective tissue of the portal canals in the liver with a similarly coloured tissue The colour rapidly faded on exposure in the dark equally as in the light, becoming greyish green then greyish yellow The tumours histologically consisted of a fine fibrous reticulum with capillaries containing closely packed lymphocyte like cells The nature of the pigment had not so far been determined —Dr W Walter showed microscopical sections from a case of Primary Epithelioma of the Vagina in some of which the growth was seen to be of papillomatous origin and in others there was evidence of the epithelium having invaded the neighbouring tissues The patient from whom the specimens were taken was aged 37 years and was unmarried —Dr A W W Lea showed a series of Vaginal Growths, consisting of primary epithelioma, primary sarcoma papilloma, and fibroma

LEEDS AND WEST RIDING MEDICO CHIRURGICAL SOCIETY —A pathological meeting of this society, devoted to a discussion on the Pathology of Tuberculosis, was held on Feb 14th *Dr A G Barrs, the President*, being in the chair —Dr E F Trevelyan read a short paper on the Tubercle Bacillus In discussing its morphology he alluded particularly to the clubbed and branching forms Several acid fast micro organisms and some members of the streptothrix group were shown for comparison with the tubercle bacillus Dr Trevelyan said that he generally succeeded in getting a rapid growth (often in three or four days) on Heydenised media, especially when potato was added to them In examining sputum he used a pointed platinum spatula for making the film If after a careful examination of the sputum in cover glass preparations a negative result was obtained in a really suspicious case he preferred to employ the inoculation test at once, sedimentation methods had been of no real service to him A large number of bacteriological specimens prepared with the assistance of Dr Ursula Chaplin were shown in illustration of the various points alluded to —Dr S Long, Mr P J Cammidge, Dr Maule Smith, Dr T Churton and the President discussed the subject, and Dr Trevelyan replied —Dr F W Eurich (Bradford) dealing with the Anatomy of Tuberculosis, divided the tissue changes produced by the bacillus into the proliferative and inflammatory and showed how the manifold appearances of tuberculosis depended upon the relative proportions of these two factors —Dr E O Croft in describing a case of Tuberculosis of the Cervix Uteri said that the disease had developed in the cervical mucous membrane at the external os and had produced a localised growth of a papillary form (tuberculous papillary cervicitis) Sections through these papillæ and the adjoining mucous membrane showed typical tuberculous tissue The disease was apparently quite localised, the uterus and tubes being normal —Dr J B Hellier discussed the paper and Dr Croft replied —A large number of tuberculous specimens were shown, being arranged in various classes, including the nervous system, the respiratory system, the alimentary system, the genito urinary system and the bones and joints Animal tuberculosis was illustrated from specimens from the cow, pig, monkey, horse, and guinea pig A number of microscopic specimens illustrating tuberculous lesions were shown by Dr Maule Smith, Mr Cammidge, and Dr Eurich

BRITISH ORTHOPÆDIC SOCIETY —The seventh annual meeting of this society was held on Feb 15th, Mr John Poland being in the chair —The reports of the honorary secretaries and the treasurer showed that the society was in a sound condition —The following members were elected to the council Mr W Armstrong, Mr W E Bennett Mr J Carwardine, Mr J Jackson Clarke, Dr Percy Lewis, Mr T H Openshaw, Mr E Muirhead Little, Mr H A Reeves, and Mr Noble Smith Mr C R B Keetley was re elected treasurer and Dr A F Blagg and Mr Chisholm Williams were re elected honorary secretaries —An ordinary meeting of the society was then held —Mr Chisholm Williams showed a lad, aged 16 years and a girl, aged 19 years, with Rheumatoid Arthritis of the second, third, and fourth fingers of both hands He also showed a boy, aged 11 years, with entire Loss of the Power of Pronation and Supination due to congenital fusion of the bones of both forearms just below the bicipital tuberosity, one had been operated on and a false joint had formed just below the point of fusion, pronation and supination were slowly returning —Mr Jackson Clarke, Mr William Thomas, and Mr Poland commented upon the cases —Mr Jackson Clarke showed a case and a skiagram of Fracture Dislocation of the Head of the Radius in a woman aged 28 years He had operated and had removed the fractured part with excellent results —Mr Thomas read a paper on Excision of the Knee in Children —Mr Jackson Clarke read a paper on the Prevention and Treatment of Fracture Deformities —Owing to the lateness of the hour the discussion was adjourned to the next meeting

WEST KENT MEDICO CHIRURGICAL SOCIETY —The fourth meeting of the forty sixth session of this society was held on Feb 7th, Dr Thomas C Meggison, the President being in the chair —Dr R E Scholefield read a paper on Some Cases of Feigned or Functional Disease —The paper was discussed and cases were related by Dr F S Toogood, Mr L Clarke Dr L Ll B Williams Mr R V Donnellan, Dr J H Keay, Dr J P Henry, and Staff-Surgeon W W Pryn, R N

# Reviews and Notices of Books.

*Lessons on Diseases of the Nervous System, 1897-98* By Professor F RAYMOND Fourth series Paris Octave Doin With 59 Drawings and two Coloured Plates. Pp 606 Price 15 francs

THIS work consists of 18 chapters, most of them devoted to various special forms of disease involving the brain and the spinal cord These lectures, delivered at the Salpêtrière Hospital, form very complete clinical records of some of the most interesting and difficult subjects that engage the attention of neurologists, and for many reasons they deserve study Written in the most explicit French manner, expressed tersely and elegantly, they show a profound knowledge of the subject and an admirable capacity for analysis whilst in clearness and dignity of style they remind us more of the classical essays of Todd, Stokes, and Watson than of any other lectures in this country to which we can refer For thoroughness and up to date knowledge, for acuteness in differential diagnosis, and for detailed description of symptoms we have nothing but praise, and the work would probably repay translation For special prominence we select the first chapter, on Two Cases of Tumour in the Zone of Rolando, the third chapter, on Scleroses *en Plaques* in a Child, aged six years, the thirteenth chapter, on the Different Varieties of Progressive Muscular every convict contemplating photographs of his relations in his cell, both of which extremes of penology are combined in the system suggested by Mr. Whiteway. At the same time, his essays are not uninteresting, and, if they tend to stimulate thought and action upon what is really an important subject, will not be without usefulness. Their effect, however, would have been assisted if their author could have cultivated a terser and more concentrated style; moreover, he might have revised his proofs more carefully.

*Medical Diagnosis, with Special Reference to Practical Medicine.* By J. M. DA COSTA, M.D., LL.D., Physician to the Pennsylvania Hospital. Ninth edition, revised. London: Smith, Elder, and Co. 1901. Pp. 966. Price 24*s.*

A WORK which has reached the ninth edition requires but few words from the reviewer as to its object and scope. Suffice it then to say that the aim of the author has been to furnish advanced students and young graduates of medicine with a guide that might be of service to them in their endeavours to discriminate disease. He has sought to offer to those members of the profession who are about to enter on its practical duties a book on diagnosis of an essentially practical character, one neither so meagre in detail as to be next to useless when they encounter the manifold and varying features of disease, nor so overladen with unnecessary detail as to be unwieldy and lacking in precise and readily applicable knowledge. In these endeavours Dr. Da Costa has admirably succeeded. In plain and precise language he describes the various symptoms and signs which may be met with in the examination of patients and the conclusions which may be drawn from them. Physical signs can only really be learned and studied at the bedside or in the out-patient room; and not only must these signs be recognised but they must be carefully interpreted. It is in this latter direction more especially that a text-book of the nature of the one now under consideration is of value. The student should first examine patients under the direction of the physician and he may then turn to his books for a full consideration of the meaning of the physical signs which he has detected or which have been pointed out to him.

The present edition has been brought fully up to date, although there are still to be found certain statements which should have been omitted as having been disproved or rendered so doubtful as to make their repetition misleading, such, for instance, as that appendicitis may be caused by "cherry-stones." A large amount of new matter has necessarily been incorporated in this edition, especially in the chapters on the Diseases of the Stomach, on the Blood, and on Fevers. The most important advances in bacteriology have also been inserted under the headings of the various diseases concerned. The numerous illustrations considerably add to the value of the book and a very full and elaborate index greatly facilitates reference.

*The Criminal Mind.* Translated from the French of Dr. MAURICE DE FLEURY. London: Downey and Co. 1900. Demy 8vo. Pp. 196. Price 3*s.* 6*d.*

THIS is a translation from a popular account of the criminal as a subject for psychological and social study, written by Dr. Maurice de Fleury who states in the introduction that his object is to present a *résumé* of the most recent and clearly established ideas on the subject, the acceptance of which is calculated to modify current and popular ideas upon crime, the criminal, and penal legislation. The author starts from the scientific doctrine of determinism as opposed to the metaphysical (and legal) view of free will, and incidentally points out how the craving of the public for sensationalism has led newspapers generally to magnify or to distort criminal deeds in several notorious instances. The attitude of the public is thus changed into one of vengeful resentment rather than of judicial fair-mindedness to the accused and is liable to ignore the claims of justice. The crowd is readily provoked to brutality and to blind passion.

After a brief anatomical sketch of the brain, with illustrative diagrams of its cortical "centres," memory and consciousness are touched upon, and the "personality" is shown to be an aggregate of sensory centres inter-connected with, and reciprocally influencing, one another. The organic basis of emotions is emphasised, and looking upon education and bringing up as counter-agents to strong hereditary propensities, the author claims that the human organism may be capable of varying degrees of ethical and intellectual development. The true or natural criminal, it is argued, experiences little remorse because he is mentally defective. The habitual criminal, also, as Dr. de Fleury points out, often shows evidences of neurasthenia and incapacity for steady work and frequently is the bearer of a neurotic taint, and is more suitable for the hospital or asylum than for the prison. Regarding prophylaxis, Dr. de Fleury urges the need for dealing with such factors as overcrowding, slum life, and intemperance which are agencies in the production of criminality. Education may do much to reform both the *gamin* of the boulevard and the Hooligan of the slum. Philanthropic societies exist in many countries to carry out these ideas of reform and rescue. In these directions the outlook is hopeful.

The book is clearly and popularly written and, though a little diffuse in style, may be recommended as a helpful introduction to the subject, especially for lay readers.

*"Prosperous" British India: a Revelation from Official Records.* By WILLIAM DIGBY, C.I.E. London: T. Fisher Unwin. 1901. Pp. 661. Price 12*s.* 6*d.*

THIS very elaborate work, the preparation of which must have entailed an enormous amount of labour on the part of its author, is one which scarcely falls within the province of a medical journalist to review. It is due, however, to the author's labours and earnestness of purpose that we should state our impressions. *If* the pessimistic picture which the author paints of India and of the results of our government of that country be true, if our rule has been attended with all the evils depicted and has only been productive of such an increasing impoverishment and misery of the people as is represented, it is certainly time to set about some inquiry into the facts with a view to remove the delusion under which the statesmen and people of this country are labouring and to take some measures which may lead to the amelioration of the condition of many millions of British subjects. That India has an enormous population (miserably poor for the most part), and that it has of late years been terribly tried by plague, pestilence, and famine, there is no doubt; but are all the alleged facts set forth in the volume before us to be taken as established and, if so, have they been brought about by, and been attributable to, our misrule? That, as it seems to us, is the issue, and it amounts to a very big indictment

The author, as he confesses, writes "impassionately from a full heart," but also, he adds, from an "equally full mind." At page 64, after quoting an eloquent speech of Macaulay made some 70 years ago, on what should be the aim of our administration of India, the author alleges that the scheme of the upliftment of India as set forth by Macaulay no longer arouses interest among so humane a profession as THE LANCET represents. It is not, we should say, so much from any lack of interest in the well-being of the natives of India on the part of anybody as from want of any practical knowledge of how to give effect to it. In other portions of the

Piper, "after dusting some articles in the room ..... sat down upon her chair for the trance." Pillows had been placed in front of her for her head to lie upon "while entranced." The investigator closely watched the trance coming on. After an interval of quiescence he noticed a few slight jerks of the head and some twitching of the right eyebrow, "Mrs. P. picking the while at her finger nails." Afterwards she leant forward on the pillows, closed her eyes, rubbed them, &c., and later "returned to picking her finger-nails." At a later period the expression of her face changed and finally "she passed easily without a struggle into the trance." Then she wrote as follows: "Good morrow, friend of earth. We see old friend and we welcome thee here. We see all that thou hast done since we met thee last and we are pleased with all that is coming to thee." There are pages of trance literature, of which the above is the opening. That brief citation may suffice. The investigator's interpretation of the trance-phenomena the curious reader may be confidently left to discover for himself should he think fit. It would not be kind to spoil his pleasure by discussing it, and it need only be said in this connexion that the work is most seriously undertaken. There was one matter on which information would have been welcome. It is recorded more than once that Mrs. Piper picked her finger-nails, and we were led to hope that we might have learned something more of the present situation—or, in deference to Professor Hyslop, we will say the present "location"—of that "peck of pickled pepper" the mystery of which is connected with the memory of Mr. Peter Piper.

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*Tumours, Innocent and Malignant: their Clinical Features and Appropriate Treatment.* By J. BLAND-SUTTON, F.R.C.S. Eng., Surgeon to the Chelsea Hospital for Women; Assistant Surgeon to the Middlesex Hospital, London. New Edition, with over 300 Engravings. London: Cassell and Co. 1901. Pp. 570. Price 21*s*.

THE very remarkable reception which was accorded to this work on its first appearance must be in chief part attributed to the novel method in which the subject was treated. The frequent appeals to comparative pathology threw a light upon many obscure problems and the whole arrangement of the subject showed that the volume proceeded from the pen of an original thinker and one well acquainted with pathology. Many of the ideas were new and no small number of them at once met with a wide acceptance, though others have had considerable doubt cast upon them. We reviewed so fully the first edition of this work that but little remains to be said of this second edition. We may perhaps point out that the histological structure of growths is not very fully dealt with although it is frequently referred to. Into the difficult question of the causes of malignant tumours the author does not venture to enter; he tells us "they are unknown." This is doubtlessly true, but of recent years so much has been done in the investigation of this subject that we should have liked to have had Mr. Bland-Sutton's opinion of the present position of our knowledge. The references to the sources from which the author has drawn his materials are very numerous, and these are especially useful to those who wish to examine further into any of the many matters treated here. Very useful, also, are the two indexes, one containing the organs and the other the tumours

We should like to ask Mr. Bland-Sutton what authority he has for saying that compact osteomata, such as those in the frontal sinus or on the vertex of the skull, are capped with cartilage. He says that compact osteomata may occur on "almost any part of the skeleton." We believe that in this account the author is confusing two entirely distinct tumours. It is true that on the bones of the limbs and even on the skull growths may occur which consist of compact bone and are capped with cartilage by which they grow. These, no doubt, deserve the name of "compact osteomata," but there are other tumours chiefly affecting the frontal, parietal, and temporal bones, composed entirely of a much harder and denser form of bone. These are always sessile and never at any period of their growth contain any cartilage. These true "ivory" osteomata should certainly be distinguished from the ossified chondromata which consist of compact bone.

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*Recent Object-lessons in Penal Science.* With a Bibliographical Introduction. By A. R. WHITEWAY, M.A., Barrister-at-law, Corresponding Member of the Academy of Legislation of Toulouse. Third Series. London: Swan Sonnenschein and Co., Limited. 1902. Pp. 216. Price 3*s*. 6*d*. net.

MR. WHITEWAY in a brief preface ingenuously informs us that chapters written originally for magazines and reviews do not lend themselves over-kindly to revision for publication in book form—a fact which in any case would have been discovered by those who perused his work with any care, for there is repetition and even inconsistency, real or apparent, in the small volume before us which careful revision or re-writing would have prevented. A book the chapters of which are disconnected essays on kindred or identical topics is apt to be confusing and does not easily lead to a definite conclusion or excite the interest that its subject merits. The conclusion at which Mr Whiteway appears to have arrived is that England is behind America, France, Italy, and some other nations in the interest which it takes in the welfare of its criminals, but he does not, perhaps from lack of space, go so far as to satisfy us either that the criminal is, as a rule, better treated by the country that is most prolific in "penologists," or that in the country where the "penologist's" experiments have the widest and most varied scope crime is diminished and criminals are reformed into citizens to an extent without parallel elsewhere. In addition, Mr. Whiteway does not consider that the Prisons Act of 1898 has taken us far enough. He wishes to see wider distinctions made between criminals, so that our prisons may be to a large extent compulsory hospitals for moral cripples confined in them by indeterminate sentences—sentences, that is, varying in length in accordance with the time occupied by the moral cure. That more can be done in the direction indicated than is done under our present conditions is undeniable, nor is it to be gainsaid that in many cases it might be done successfully. The difficulty, however, of diagnosing moral disease and establishing moral cures upon the scale apparently contemplated by Mr. Whiteway is, perhaps, greater than he would be prepared to admit. Meanwhile the recent Prisons Act already referred to, if carried out in a liberal spirit and with a sufficient expenditure, may with the help of prisoners' aid associations take us some way in the right direction, while improved conditions of social life for the poorer classes are more likely to diminish crime by prevention than moral hospitals can ever hope to do by cure.

Those who are not aware of the extent to which penologists differ from one another will do well to turn from Mr. Whiteway's remarks upon the American penal institution known as Elmira to the work on "Penological and Preventive Principles" published by Mr. Tallack, secretary of the Howard Association. There they will find Elmira with its Turkish baths and massage dealt with under a chapter headed "The Social Crime of Cruel Laxity." A further study of literature of this class will cause them to hesitate to endorse Mr. Whiteway's aspiration that all judges and magistrates should be penologists. Such judges and magistrates might hold views varying between the desire to punish garotters by six months' imprisonment with 12 strokes of the "cat" every other month, and the wish to see recognising the advantages of closer inter-communication with the colonies, for which purpose authoritative lists of the medical men in the various principalities and dependencies of our empire are necessary.

*Where to Buy: A Guide to the Professions and Business Houses.* By C. M. KNOWLES. London: Simpkin, Marshall, Hamilton, Kent and Co., Limited. 1902. Pp. 192 Price 3*s.* 6*d.*—This silly little book purports on the title-page to be "a guide to the professions and business houses, showing what are their specialities and where all goods may be bought to the best advantage, with interesting notes." We have not found that it fulfils the author's promises. The omissions frequently are flagrant, the contents not seldom are incorrect, and the notes are dull or ridiculous. Under the heading "Professional and Educational" six unfortunate members of the medical profession are pilloried as eminent people in such company as Sandow "the patentee of a dumb-bell," and John D'Auban who "teaches ladies' skirt and fancy dancing." They are Sir William Broadbent, who is described as "Censor to the Royal College of Physicians"; Sir Francis Laking, who is stated to be "House Physician to St. George's Hospital"; Dr. W. A. Wills, of whom it is said that he was once "House Surgeon to Brompton Hospital"; Dr. J. Little, who "pays income-tax on £10,000 a year"; the late Sir William MacCormac; and Mrs. Scharlieb. A cursory glance through the book leads us to the belief that the rest of the information is of about equal value. Of hospitals, only three of the large general hospitals of London are mentioned in this professional guide, and, oddly enough, they are arranged in a sub-class under the heading "Where to Live," which includes the Athenæum Club, the Savoy Restaurant, the Piccadilly branch of the Aerated Bread Company, Limited, and Broughton Hall, Staffordshire. Under the head of "Literary" we learn that Mr. Waldroff (*sic*) Astor is rich, that Sir William Ingram owns a very fast dog, and that Mrs. Humphry Ward, author of "Manners for Men," writes "Girls' Gossip" under the *nom de plume* of "Madge." These, we presume, are examples of the "interesting notes." What conceivable purpose can such a book serve?

*Clinical Lectures on the Various Forms of Intra-abdominal Suppuration.* By A. H. TUBBY, M.S. Lond., F.R.C.S. Eng., Surgeon to Westminster Hospital and Senior Surgeon to the Evelina Hospital for Children. London: The Medical Publishing Company, Limited. 1901. Pp. 100. Price 3*s.* 6*d.*—These lectures were delivered to the students of the Westminster Hospital Medical School and have already appeared in the *Clinical Journal.* When we remember that at least two-thirds of the cases of abdominal suppuration are connected with inflammation of the vermiform appendix we need not be surprised that four out of the seven lectures contained in this book are concerned with appendicitis. The subject is treated very fully and carefully, but the account is very readable. The most difficult point to decide when a diagnosis of appendicitis has been made is when to operate. Mr. Tubby comes to the following conclusions: (1) if operation is necessary the sooner it is done the better and the greater are the chances of recovery; and (2) the basis of the decision should be the character of the attack and not the duration of the illness. Sub-diaphragmatic abscess is often a very perplexing condition and the chapter devoted to it should prove useful to those who are unacquainted with this variety of abdominal suppuration.

*The Sanitation of British Troops in India* By E. CARRICK FREEMAN, Major, R.A.M.C. Second edition, revised and enlarged. London: Rebman, Limited. 1901. Pp. 127. Price 2*s.* 6*d.*—A second edition of this little book having been called for the text has been revised and two appendices added—one relating to malaria and the other embodying some lessons gained from South African experience. It may be succinctly described as giving much useful elementary information about the systems and methods of procedure followed in India and how to turn them to the best account. As regards the seasonal prevalence of enteric fever we were under the impression that according to statistical evidence the periods of increasing prevalence of this fever were shortly before and after the rainy season. The author tells us that Mr. Ghadialli, Professor Hankin's assistant, claims to have discovered a micrococcus which has an inhibitive influence on the enteric fever bacillus. Further experiment is, however, required in the matter, although it is stated to have given good results at Lucknow when introduced into an infected well. It would be of interest to learn further particulars in regard to this micrococcus. The new chapters on Malaria—briefly outlining the modern theory and views—and on Active Service (South Africa)—setting forth some points bearing on the sanitation of troops in the field—are additions which have been called for by the progress of events. The work contains much information shortly put which is likely to prove serviceable to medical officers newly arrived in India.

*Use-inheritance, Illustrated by the Direction of Hair on the Bodies of Animals.* By WALTER KIDD, M.D. Lond., F.Z.S. London: Adam and Charles Black. 1901. Pp. 47. Price 2*s.* 6*d.*—This is an attempt to prove the inheritance of acquired characters from observations on the direction of the hairs on the bodies of animals and man. It does not deal at all with the general inclination of the hair, for "whether the hair should slope from the cephalic to the caudal end of the trunk of an animal or the reverse ...... is of extreme importance to the well-being and perhaps safety of the animal," and will therefore be determined by natural selection. It deals with the local variations of the general inclination of the hair, and the author considers that these local "whorls" of hair are produced chiefly by the action of muscles. He shows that many of them are peculiar to individual species and that they vary greatly in different individuals and therefore he claims that selection is incompetent to produce them. The work is of interest and is based on very careful observation of a large number of facts. Dr. Kidd's point cannot, however, be considered proved. Experimental evidence would be of very much greater value. Can the author modify the direction of the "hair-flow" in an animal so that it may be transmitted to its descendants? Along this line probably lies the proof of the transmission of acquired characters, if, indeed, they ever are transmitted. Still, the little work should be read by those interested in the problems of inheritance.

## JOURNALS AND MAGAZINES.

*The Journal of Hygiene.* Vol. II., No. 1. January, 1902. Cambridge: University Press. Price 5*s.* net.—Dr. T. E. Hayward, the medical officer of health of Haydock, Lancashire, contributes to this number of the journal a very helpful and suggestive paper on the Construction and Use of Life-tables from a Public Health Point of View. The publication of this article at the present time is very opportune seeing that the recent census figures will soon be available and that medical officers of health will hence be glad of assistance in life-table construction. Dr. Hayward first describes the construction of a complete, or what is technically known as an "extended," life-table, and he then points out the uses which may be made of such a table. Finally, he shows that by a modification of the late Dr. Farr's "short" method it is possible to reach results "which are practically identical with those worked out by the much more laborious extended method." We commend Dr. Hayward's article to all those who are contemplating the construction of life-tables for their volume Mr Digby refers to some famine statistics furnished by our Indian correspondent and published in this journal

After looking over some 640 pages of what may be termed destructive criticism we turned to that section of the book devoted to "The Remedy,' but we confess to a feeling of disappointment at finding that it consists of three pages to the effect that the statement of the evil is, for the moment, enough and that any consideration of the remedies is postponed until some agreement is arrived at as to whether any need for remedy exists Recognising the time and labour which must have been expended in the compilation of this work we cannot doubt the author's earnestness, but we should like to know how he proposes to deal with the alleged evils After all that has been said and written about Indian finance and the causes of distress in India there are matters connected with the climate and soil, over-population, and the habits, customs, and traditions of the people that are quite beyond our control, but which have, nevertheless, always to be borne in mind and taken into account

## LIBRARY TABLE

*Outlines of Anatomy* By EDMUND W HOLMES, M D, Demonstrator of Anatomy, University of Pennsylvania, 1892–1901 Lancaster, Pa The New Era Printing Co 1902 Pp 185 —This unassuming little book is simply a collection of notes for the student as to what to do in the dissecting room It should be found of great value, and we quite *agree with Dr Holmes in his remark in the intro*duction that "wet specimens and models should be largely used in the early days of the session for the novice" Anatomy as usually *taught* is *singularly* uninteresting, and we do not think that the reason for anatomical facts is sufficiently pointed out to the beginner The average student, for instance, who is beginning the study of anatomy does not know, or possibly does not think, why a limb should have bones, why the bones should have muscles, why the muscles should be supplied with nerves and arteries and veins, and so on If this is explained to him first on a wet specimen before he begins to dissect he will, at all events, have an idea of what he is going to look for

*The Röntgen Rays in Medical Work* By DAVID WALSH, M D Edin Third edition London Baillière, Tindall, and Cox 1902 Pp 316 Price 12*s* 6*d* —This is the third edition of Dr Walsh's valuable book, it exhibits one new feature in that the introductory portion—namely, that upon apparatus and methods—has been re written by Dr Lewis Jones The medical and surgical applications of the rays are described with great care and by means of an appendix the subject has been brought up to date There are plenty of illustrations which are admirably reproduced Altogether the book is an excellent treatise upon what is so far known of a comparatively modern development of natural forces

*Thoreau His Life and Aims* By H A PAGE A new edition London Chatto and Windus 1901 Pp 271 Price 2*s* 6*d* —We cannot say that a perusal of this book gives us the information which we should expect from its title Mr Page is *evidently* a *lover* of Thoreau, but his book consists of little more than excerpts from "Walden,' to which work we should prefer to refer anyone *who is anxious* to know what manner of man was Thoreau Shortly we may say that he was a natural philosopher with a good deal of mysticism in his nature He was bored by his fellow creatures and being able to get away from them he squatted in the Massachusetts woods and built him a house where, to use a phrase of Kipling he sat down and let the wild things run over him His experiences are recorded in "Walden, a book *which is not* read so much as it should be

*Rough Notes on Remedies* By WILLIAM MURRAY, M D Durh, F R C P Lond London H K Lewis 1901 Pp 176 Price 4*s* —We need do no more than recall to our readers the main points in Dr Murray's excellent little book The chapters upon Belladonna, Calomel, Old Liqueur Brandy, and Mercury in Heart Disease may be read over and over again with delight and profit Thus the fourth, edition contains an addition in the shape of a chapter upon Rothbury as a Health Resort Rothbury is a little-known village in the valley of Coquet It lies in a most interesting district and the jaded town dweller could scarcely do better than go there It is, of course, not suited for every case of disease, the air being too strong But for a holiday it is an ideal place, and apart from its own interests the neighbouring places, such as Belsay, Elsdon, and Scots Gap, are full of "objects of interest,' as guide-books say Dr Murray has done well to call attention to Rothbury, but we hope that his advocacy will not be the means of introducing there that offensive person, the speculative builder

*Official Year book of Scientific and Learned Societies of Great Britain and Ireland* London Charles Griffin and Co, Limited 1901 Pp 347 Price 7*s* 6*d* —This useful compilation gives lists of papers read from January, 1900 to June, 1901, before societies engaged in fourteen departments of research besides information as to the meetings, membership officers, and publications of the various societies mentioned It is a veritable "Whitaker" of scientific societies

*The Principles of Hygiene* By D H BERGEY, A M, M D, First Assistant, Laboratory of Hygiene, University of Pennsylvania 1901 Philadelphia and London W B Saunders and Co Pp 495 Illustrated, Price 13*s* —This book deals with the principles underlying modern practices in the department of public health and will be found suitable for the needs of medical officers of health and those interested in public health, engineering, and architecture. It deals with the chemistry of hygiene in general—with personal, military, naval, industrial, and school hygiene There are good chapters devoted to Quarantine according to the Laws of the United States of America, to the Vital Causes of Disease, to Disinfection, and to Statistics bearing on the Census the Birth rate and the Death-rate The book is not suitable for the needs of those students in our British Universities who are preparing for diplomas in public health and is not in the least likely to take the place of, or to be preferred to, the excellent text books at present in use At the same time, it is written in an able and interesting manner and is one which may be kept on the library bookshelf for reference Several of the subjects are treated in a somewhat novel manner and the whole work bears evidence of careful preparation and a good deal of deep thought and research In the United States a Bill is passing through Congress *which when enacted will make the employment of the metric* system of weights and measures compulsory in all Government departments The metric system has, therefore, been used throughout in this work except in quotations What few illustrations there are in the book are well executed, though far from being original drawings On the whole, the work deserves favourable notice and the new ideas are welcome

*Natal Medical Dental and Pharmacy Registers, 1900* Pietermaritzburg P E Davis and Sons Pp 80 —We have received the official registers of the Natal medical and dental professions, to which is also appended a list of the chemists and druggists admitted to practise in the Colony of Natal up to the date of July, 1901 It may be noticed also that the registers of medical practitioners and dentists are verified up to July 1st, 1901 although the publication is dated 1900 It is becoming of increasing importance to the medical profession at home that colonial registers should be carefully and accurately kept; the medical profession like all other sections of the British Empire is

THE LANCET.

*LONDON: SATURDAY, FEBRUARY 22, 1902.*

# The Midwives Bill.

THE Bill "to secure the better training of midwives and to regulate their practice" is down for second reading on Wednesday Feb 26th and it has obtained a place which makes it likely that it will be read for the second time. We publish the text of the Bill on page 542 of this issue and would remind our readers that it is imperative that they should make up their minds what course they desire Parliament to pursue, for they must bring without delay what influence they may possess to bear in the desired direction. For our own part, we have no doubt that the Bill to be read next week is a mischievous one, and we are certain that a vast majority of our readers will share this view, or perhaps we should not be so ready to counsel them to give effect to their feelings. In commenting upon the Midwives Bill, introduced by Mr TATTON EGERTON just two years ago, we pointed out, as one of the main difficulties of what is known as "the midwives question," the fact that both those who do and those who do not desire legislation for the regulation of the practice of midwives can, with equal force, maintain that their opinion is the right opinion on humanitarian grounds and no less on medical grounds. To leave the parturient poor to the mercies of the GAMPS is cruel, but to supply them with a semi-educated grade of medical attendants is no kindness. If the first course leads to disasters the second would seem as inevitably to make for tragedies True, in the various shapes in which a measure for the regulation of the business of midwives has been before Parliament and the public, conscientious attempts have been made to escape from the dilemma; but the attempts have not been successful, and the Bill which we publish to-day is worse than some of its predecessors. It is in several directions more likely to institute an inferior order of general practitioners and thereby to work in opposition to the public weal.

To begin with, the latest edition of the Midwives Bill contains no penalty whatever to be imposed upon any woman, whatever her absence of qualifications, for "habitually and for gain attending women in childbirth": any woman can attend confinements and charge fees for her services. Should this Bill ever become law it will be open, as far as we can see, to any woman to continue to pursue the vocation of a midwife, with the single disability that she will not be able to sue for fees. Has the fact that quacks are unable to obtain in the law-court payment for medical service rendered in any way contributed to keep down the number of quacks? Of course it has not, and so long as there is no pecuniary fine to stop the first female who chooses from calling herself a midwife and spreading puerperal fever in return for money we are certain that prospective difficulties about her fees before a county-court judge will never give her pause in her dangerous career. The last Midwives Bill contained a clause fining women who after the passing of the Bill practised midwifery save in conformity with the regulations of the Bill, and the alteration of this clause is a distinctly retrograde step. Again, the present Bill appears to take the control of the purely medical side of the question out of the hands of the General Medical Council by saddling the Lord President of the (Privy) Council with the responsibility of seeing to the formation of the Midwives Board. Two years ago the fourth clause of the Midwives Bill read: "On the passing of this Act the President of the General Medical Council shall take steps to secure the formation of a Central Midwives Board," upon which general statement followed the scheme for the constitution, duties, and powers of the Board. The fourth clause now substitutes "the Lord President of the Council" for "the President of the General Medical Council." Moreover, the framing of the rules with regard to the practice of midwives is now made subject to the approval of the Privy Council, while in the previous Bill the General Medical Council was responsible for the regulation of the course of training and the conduct of examination of candidates for the midwives' roll. It may be said that the Bill provides for the consultation of the General Medical Council by the Privy Council, but medical men, at any rate, will not be much impressed by this concession. Doubtless neither the Duke of DEVONSHIRE nor Sir JOHN GORST are permanent officials; but what guarantee have we that future Presidents and Vice-Presidents of the Privy Council will discharge their duties towards the medical profession in a more efficient manner? The two distinguished members of the Government whose names we have just mentioned, when a question of vital medical importance was under discussion, admitted that they did not know anything about the matter because they had not read the reports of the General Medical Council. What security has the medical profession that advice tendered to the Privy Council by the General Medical Council on the scope of the midwife's duties will not be treated with a like disregard?

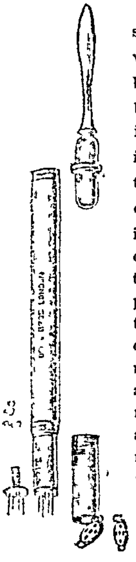
It may be remembered that just previously to the second reading of the Midwives Bill of 1900 we received at this office, in response to our invitation, 7250 communications from English medical men giving their attitude as to the proposed legislation. An analysis of these replies showed 1547 medical men to be in favour of the Bill, 640 to be indifferent, and the remaining 5000 odd to be opposed to it. Nothing has happened to make medical men change their opinions, and, as we have shown, such differences as exist between the Bill of 1902 and the Bill of 1900 are not for the better. We think that the time has come for interference on the part of the General Medical Council. The present Bill does not at all conform to previous directions of the Privy Council that certain points should be conceded by the promoters in deference to the views of the General Medical Council. The chief of these views may be summarised in the following words:—

The unlicensed practice of midwifery for gain as well a the false use of titles should be made illegal.

The functions of the Midwives Board should include the framing of the regulations for the conduct and practice of districts. Dr. Arthur Stanley, medical officer of health of Shanghai, furnishes some interesting notes on an Outbreak of Cattle-plague and of its control by the method devised by Professor Koch of injecting small quantities of the gall from an animal already dead from the disease into the cattle of an invaded herd. The results in the outbreak in question were eminently satisfactory, and the method possesses the advantage that the reaction produced by the injection of the gall has no disturbing influence upon the secretion of milk, a fact which will commend the practice to dairy-farmers and others. The Geographical Distribution of Anopheles and of Malarial Fevers in Upper Palestine is the subject of a communication by Dr. John Cropper. He found that malaria prevailed wherever anopheles represented the majority of the mosquitoes present in native dwellings, that the disease occurred mainly among children, and that it was absent or occurred in a sporadic form only in places where anopheles was not found. The *study of the Structures and Biology of Anopheles is carried* on in the current number of the journal by Dr. George Nuttall and Mr. Arthur Shipley, and many very interesting and instructive facts are brought forward. This is especially the case with regard to the musical appreciation of anopheles. Not only is it attracted by certain musical sounds, but the note produced by certain electrical vibrations has apparently a peculiar fascination for the males who seem to recognise therein the female insects. The volume under notice concludes with a paper by Dr. E. W. Ainley Walker on the Protective Substances of Immune Sera in which he discusses in the light of his own experimental work some of the recent developments of Ehrlich's theories.

# New Inventions.

## AN IMPROVED FORM OF VACCINATOR.



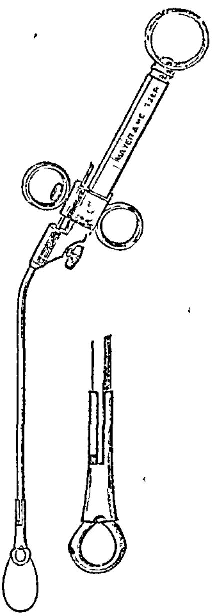
MESSRS. DOWN BROTHERS have at my suggestion made an improved form of vaccinator. Hitherto the Cooper-Rose has been one of the most popular in use, but the chief objection to it—the point, i.e., which the Local Government Board inspectors *invariably* find fault with—is the inablity thoroughly to asepticise the cap, where some material for microbic infection is bound to remain. Moreover, not being able thoroughly to cleanse the cap rust is apt to form, thereby preventing the needles from protruding through properly. To obviate these difficulties Messrs. Down Brothers have manufactured a cap which can be opened at once and the interior made thoroughly aseptic and dried, closing up again tightly, and thus fulfilling the requirements of a thoroughly aseptic vaccinator

MONTAGU H. C. PALMER,
M.R.C.S. Eng., L.R.C.P. Lond.

Newbury

## A SELF-LOOPING NASAL POLYPUS SNARE.

MESSRS. MAYER and MELTZER have recently made for me a snare that I have found very useful. It consists of a Krause's snare with a Y-shaped end-piece fitted; the two upper ends of the Y are joined by a curved surface and the polypus is caught between the wire and this surface. The loop is tightened in the usual way by approximating the finger-plates. By simply separating the finger-plates not only does the polypus drop off but the loop is re-made without any of the usual fingering. With this instrument polypus after polypus can be snared without once taking one's fingers from the finger-plates, without any assistant preparing loops, and with a great saving of time, which, from the patient's point of view especially, is a great gain. As there is no twist or knot in the wire it has not the usual tendency to break. In addition to its use for simple polypus it is particularly adapted for the removal of moriforms from the posterior end of the inferior turbinal, as the instrument can be passed without difficulty with the loop retracted and when in its right position the loop can be ejected, when it will take on any curve to which it has been previously bent. The instrument can be had with end-pieces of varying size and could be used for the larynx as well as for the nose. Messrs. Mayer and Meltzer can supply the instrument complete or will make the addition to a Krause snare for a small sum. Mr. Hunter F. Tod told me when I showed the instrument at the Laryngological Society of London that he had seen a somewhat similar instrument in Vienna, but judging from an illustration there are many differences.



Nottingham place, W. ATWOOD THORNE.

## ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on Feb 13th, Mr. H. G HOWSE, the President, being in the chair.

It was agreed, as recommended by the Court of Examiners, that one set of surgical instruments should be lent to the University of London for the purposes of the M.B. and B S. examinations.

The PRESIDENT reported that he had chosen Mr. Howard Marsh as Bradshaw Lecturer for the ensuing collegiate year.

A letter was read from the Clerk of the Privy Council stating that it had been determined to hold the Medical Congress at Cairo from Dec. 19th to 23rd next, instead of from the 10th to the 14th. Mr. Reginald Harrison was appointed as the delegate from the College to this Congress

THE COTTON DISTRICTS CONVALESCENT FUND —The above title seems to suggest an echo of the distant past, for those who remember the cotton-famine resulting from the American war of North and South belong to a former generation. A meeting of the governors of the Fund was held in Manchester on Jan. 30th, when the Hospitals and General Purposes Committee was appointed as were committees to represent the governors on the boards of management of the convalescent hospitals at Southport and Buxton. During the past year 2815 patients were sent to the convalescent hospitals at a cost of £4797.

will by no means give a corresponding increase to the amounts paid to the companies, for they are legally compelled to supply water for municipal purposes at a fixed and moderate price. Enough has been said, it may be hoped, to convince any unprejudiced person that it would be a monstrous injustice to the London people to handicap a new board, nominally appointed in their interest, by saddling it with the responsibilities of undertakings about the ins-and-outs of which it is ignorant.

It would be easy to criticise the details of the Government Bill. We have been content to show that it is vicious in principle, while we think that it may be useful to indicate in brief outline the way in which a board, fairly representing the whole of "Water London," might be properly constituted and with what duties it should be entrusted. The board should be essentially a Board of Control. It should exercise supervision over the working of the present water companies and should investigate the problem of the future requirements of the whole district for which it would be responsible. The board should ensure that the existing statutory provisions for the control of the companies are rigidly carried out. The provisions are stringent, but little attempt has hitherto been made to enforce them. The late vestries were as a rule very indifferent in the matter and the London County Council has done practically nothing. The Local Government Board has been content to issue periodical reports which few people read. A Water Control Board is much wanted in regard to the constitution of which the chief desiderata are (1) that the customers of each company should be represented, and (2) that the board should not have too many members. The privileges and duties assigned to this Board should include not only he powers of control at present in force, but its sphere of influence should be made to cover financial matters, as well as the recommendations of the Balfour and Llandaff Commissions, which have hitherto been entirely neglected.

## The Aerial Convection of Small-pox from the Hospital Ships in the Thames.

WHAT is known by the somewhat grandiloquent phrase "the march of truth" is liable under certain adverse circumstances to degenerate into a halting and wearisome perambulation. This is most likely to be the case when the acceptance of the truth involves the direct negation of preonceived ideas, and when the demonstration of the thesis t forward depends upon certain natural phenomena which occur but rarely in necessary association. When well-nigh a quarter of a century ago Mr. W. H. POWER, F.R.S., now Principal Medical Officer of the Local Government Board, made his memorable inquiry into the behaviour of small-pox around the Fulham Small-pox Hospital, and when, as the result of such investigation, he enunciated the proposition that the phenomena which he had observed could only be adequately explained on the view that the infection from the hospital had been air-borne, and not carried by human intercourse, a storm of something akin to derision greeted the announcement. The theory was not only new: it was inconvenient.

A Royal Commission considered the matter, but its members were so staggered by the proposal that they sought refuge upon the fence until more light should be forthcoming. No less an authority than Sir JOHN SIMON expressed his intention of waiting for "further confirmatory evidence." Such evidence was soon forthcoming. The staff of the Fulham Hospital, against whom there had some allegation of slackness in respect of the comings goings of certain persons connected with the institu decided to put their house in order. Unfortunat however, for those who believed that the spread of infect was due solely to personal contact with the hospital inf tion, on the next occasion when the hospital was used small-pox isolation a precisely similar spread of infe tion occurred, and this was repeated, not once, b many times. As the distance from the hospita decreased, even so did the incidence of small-pox upon the houses. The recurrence, indeed, was so marked that it was eventually decided to treat no more acute small-pox cases within the metropolitan area, and subsequently the metropolitan small-pox cases were banished to the hospital ships. Thereupon the area around the London hospitals showed no special incidence of small-pox, and all opportunities for further illustrating the truth of Mr. POWER'S thesis, in so far as London was concerned, came to an end. As, too, there was not much small-pox in the country the opponents of the thesis could still point to certain provincial hospitals and allege that there was no evidence of harm from their operations. But in 1887–88 the Sheffield epidemic occurred, and here again there was the same graduated incidence around the small-pox hospital, albeit the circumstances were regarded as too complicated to justify the inference that such incidence had not been by personal contact. In 1892 and 1893, however, there was an outbreak of small-pox at Oldham, and Dr. J. NIVEN, now medical officer of health of Manchester, who was then the medical officer of health of Oldham, came to the conclusion that the theory of aerial convection alone was capab of explaining the incidence of the disease in th neighbourhood of the hospital. Similar occurrences too place at Warrington, Bradford, and other places, wher again aerial convection was thought by the medical officers of health to be the only adequate explanation of the peculiar distribution of the disease. But still the opponents of the views pointed to the hospital ships, where they affirmed there was no evidence of harm. It is important, however, to note that there are but few houses in the immediate neighbourhood of the ships, and that the constant current of air, which the rise and fall of the tidal waters of the Thames must produce, renders the circumstances somewhat unusual. Moreover, the hospital ships were hardly likely to be the cause of mischief when they contained no small-pox. But these facts notwithstanding, there have been ugly rumours afloat in the basin of the Thames for several years as to the excessive incidence of small-pox in the vicinity of the ships, and at last the circumstances necessary to throw more light on the matter have occurred in the shape of crowded hospital ships, small-pox of the necessary type, and a county medical officer of health capable of collecting and marshalling the facts. The xtremely interesting but somewhat disquieting paper midwives, especially for restricting such practice to normal cases.

The rules of the Midwives Board should be subject to the approval of the General Medical Council.

Provision should be made by Act of Parliament for reimbursing the General Medical Council for any expenditure which they may incur in performing their duties under the Act.

The conditions under which licences to midwives are granted should include satisfactory evidence of character as well as of training and experience in the conduct of natural labour and in the after-care of lying-in women and newly-born infants.

Provision should be made securing that the midwife in cases of abnormality shall seek qualified medical assistance.

On a previous occasion when we published this summary we received from Mr. HEYWOOD JOHNSTONE, who is among the most eloquent and fair-minded supporters of the measure, a letter referring us to Clause 2 (2) and Clause 4 (1) of the Bill as proofs that the views of the General Medical Council were safeguarded in the proposed litigation. But Clause 2 (2) of the 1900 Bill has been modified so that unlicensed practice of midwifery for gain carries no penalty. And Clause 4 of the 1900 Bill is the clause the whole significance of which has been altered by the substitution of the Privy Council for the General Medical Council. So that it would seem that the promoters of the measure now before Parliament cannot pretend that their Bill satisfies the deliberate and expressed opinion of the General Medical Council—the governing body of the medical profession. And we can assure them that their Bill is equally objectionable to the medical profession at large.

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# The London Water Bill.

A BRIEF abstract of the London Water Bill was given in THE LANCET on Feb. 8th, p. 392, and in our remarks on the measure in a leading article at p. 384 we suggested that at first sight the Bill appeared to be an "'honest endeavour' to disembarrass the Local Government Board of some of the most useful and the most arduous of its present duties." A consideration of all the facts of the case confirms and strengthens this view, and leads us to point out that we do not consider the measure to be one which merits the support of those interested in the public health of the citizens of London. The responsibility of the President of the Local Government Board in the matter of the water-supply of London would practically cease if the Bill were passed, and he might congratulate himself that the matter was "finally settled" as far as he was concerned. But a responsibility, of the weight of which they are carefully kept in ignorance, would be shifted on to the shoulders of the London ratepayers. A Water Board with tied hands would be called into being. The board would be compelled by the very terms of its creation to buy the undertakings of the present metropolitan water companies. Does Mr. LONG seriously believe that the inhabitants of "Water London" wish to buy these businesses? If so surely he might allow his popularly elected Water Board to decide the matter as to whether purchase would be wise or not in the interests of its constituents. When we congratulated Mr. LONG on the ability he displayed in the speech in which he introduced his Bill into Parliament, we pointed out that he brought forward no serious arguments in favour of purchase of the present water businesses. He left his political opponents to attack the measure, which he expected would receive the general support of his own party, although he had previously said at a municipal-political "Smoking at home" that he thought that the Bill might not altogether please the London people in whose interests it was nominally brought forward.

There are certain obvious arguments in favour of the Bill, many of which will be found in the columns of our contemporary the *Spectator*. Briefly, it is urged in favour of purchase of the companies' undertakings that the dividends of the companies are likely to increase and that "therefore the companies were an adversary whom it was eminently expedient to agree with quickly." There are facts which point in the opposite direction. Enormous outlays will immediately be required to place and to keep the existing undertakings in an efficient state. Most of the facts proving this are already known to our readers, for we have more than once insisted upon them, but as they bear directly on the advisability of purchase it may be well to recall three of them :—

1. One of the companies has insufficient sources of water to supply its customers.
2. Several companies have at present inadequate provision for the storage and efficient filtration of the water which they distribute.
3. Constant water service is not given to all those who have the right to demand it.

It is, moreover, certain that an enormous outlay will soon be required to obtain increased supplies of water. The exact amount available from existing sources is not accurately known, because information has, as far as possible, been withheld by the companies which have declined to give particulars in regard to the water levels in their wells, or in regard to the effects which have been caused by persistent depletion of the underground water. It is, however, well known that evidence given before the Balfour Commission has turned out to be erroneous and that the amount of water which was stated to be available cannot be obtained. This matter was fully dealt with in the report of THE LANCET Special Commission on the Metropolitan Water Supply[1] and it need only be said now that the Balfour Commission was obviously misled by evidence which was not in accordance with facts. There can be no reasonable doubt that although some of the present sources of supply are failing the demand for water is increasing and will increase. In this matter the municipalisation of London will have a great effect. The reconstituted City of Westminster and the metropolitan municipalities have, as yet, hardly had time to get into thorough working order, or even, perhaps, to realise fully the greatness of the work which is before them. The City of London proper represents an ancient civilisation which is in thorough working order. Its cleanly streets are washed daily. The streets in the outside municipalities are still to a great extent unwashed. It is not likely that the people will much longer tolerate this state of things. It is certain that a very largely increased amount of water will be used daily for municipal purposes throughout "Water London." This will necessitate a corresponding increase in the amount distributed, but it present moment, his advice on all matters connected with its hygienic requirements should be of the greatest value to the architect. He will advise on questions of air-space, ventilation, drainage, and the means for the disposal of solid refuse from the wards. The last-named is a matter of peculiar moment in a hospital because of the infective character which such refuse often possesses, and which renders its retention in the vicinity of the patients a serious danger. Another of his duties will be that of frequent inspection of all drains and other sanitary appliances about the hospital. The ease with which these may become inefficient in a building occupied by a large number of persons is notorious. He may also be called upon to advise, in consultation with the medical staff, upon the nursing of infectious cases with the view of minimising risks of infection. Questions of practical disinfection of all kinds will further fall with propriety within his province. Measures of isolation and quarantine, when infectious disease chances to break out amongst the patients, will also require his attention and advice All these things and many more will be demanded of a sanitary officer, and it is plain that functions of such vital importance can only be efficiently performed by one who enjoys special qualifications in public health, and who has acquired by actual experience in the routine working of a hospital an intimate acquaintance with the subject. It cannot well be denied that the practical efficiency of a hospital and the welfare of its patients depend so largely upon its hygienic conditions that the status of the officer responsible for them may justly be placed higher than it has been in the past. It is for this reason that we welcome the step about to be taken by the Belgrave Hospital for Children, for we believe that it is one fraught with the best possible consequences for the future of hospital sanitation

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[1] THE LANCET, June 21st, 1900, p. 181.

## A GLIMPSE INTO THE NATURE OF THINGS.

THE momentous question, what is matter? has for long been put aside by many ardent investigators as probably for ever insoluble. But when we are told that we have actually touched the borderland where matter and force seem to merge into one another we may reasonably assume that we are on the eve of gaining a nearer insight into its nature. This was the subject which Sir William Crookes took the opportunity of discussing before His Royal Highness the Prince of Wales on the occasion of his formal admission to the Fellowship of the Royal Society on Feb. 6th. Sir William Crookes's declaration marks a very important epoch in the progress of science, and it was fitting that this epoch should have been associated with an interesting and historical Royal incident. The existence of a fourth state of matter has for a long time been indicated in radiant phenomena Sir William Crookes called it the "ultra-gaseous" state, and later "radiant matter," while more recently the latter phrase has given way in favour of the term "electrons" An electron is, so to speak, an atom of electricity which exists always in the presence of the atom of matter. The electron is the satellite of the particle which when liberated from it under the influence of electric discharge behaves not as a gas but more, as Sir William Crookes says, like a fog or mist, clinging to positively electrified bodies and thereby losing mobility and settling on the walls of the container if left quiet. In the radiant matter-tube, under the influence of the current the material atoms arrange themselves in groups, while the rushing swarms of electrons driven from the negative pole meet them. The effect of the bombardment is light and heat. The questions, what are x rays and what is radio-activity may soon in the light of these revelations receive a satisfactory answer. The basis of the electron is probably the same in all cases, the protyle of Crookes, from which the chemical atoms are assumed to be formed. A negatively charged chemical atom is one having a surplus of electrons, the number depending upon the valency, whilst a positively charged atom is one having a deficiency of atoms. Truly we have here a glimpse into the nature of things. Veil after veil is being lifted and, as Sir William Crookes said before the British Association at Bristol in 1898, the face of Nature grows more beautiful, august, and wonderful with every barrier that is withdrawn.

## SMALL-POX IN LONDON.

THE small-pox returns for the past week show but little improvement. On Saturday, Feb. 15th, 33 fresh cases were notified and removed; on Sunday, the 16th, there were 39 fresh cases; on Monday, the 17th, there were 71 fresh cases; on Tuesday, the 18th, there were 63 fresh cases; and on Wednesday, the 19th, there were 54 fresh cases.

## THE ETIOLOGY AND EARLY DIAGNOSIS OF GENERAL PARALYSIS.

DR. WILLIAM PICKETT opened an important discussion on the Etiology and Early Diagnosis of General Paralysis of the Insane at a recent meeting of the Philadelphia Neurological Society, an account of which appeared in the *Journal of Nervous and Mental Diseases* of New York for January, 1902. The observations of recent observers—notably Krafft-Ebing—had shown that an antecedent syphilitic infection could be ascertained in three-fourths of the patients examined, and that elderly general paralytics were immune to syphilitic infection. Dr. Pickett, basing his investigation on 149 cases of general paralysis admitted as patients to the Philadelphia Hospital, could only find signs of antecedent syphilis in 60 per cent. but he thought that the actual proportion of syphilitics was slightly higher and that most of the early cases were demented. In the discussion which followed Professor Charles K. Mills stated that an experience of 25 years in private practice combined with the study of the literature of the subject led him to conclude that from 85 to 90 per cent. of general paralytics had antecedent syphilis. Dr. F. X. Dercum said that the proportion of demented cases in early general paralysis was, in his experience, large—nearly as large as that given by Dr. Pickett and Professor Mendel. He did not believe that ther was any relationship between general paralysis and epileps and he denied any causal relation between alcohol and general paralysis. "Almost, if not all, male paretics," said Dr. Dercum, "drink to excess in the earlier period of their disease." He also pointed out that such patients were very prone to develop delusions of marital infidelity. Dr. Alfred Gordon referred to the almost invariable presence of congenital syphilis in juvenile paretics and cited the recently recorded observations of Regis, who in every one of five consecutive cases of juvenile paresis found congenital syphilis. In a discussion at the New York Medical Society[1] on the causation and early diagnosis of general paralysis Dr. Arthur Hurd of Buffalo stated that he found signs of antecedent syphilis in 68 per cent. of patients, but pointed to the fact that though syphilis was widely prevalent in Egypt and Japan paresis was rare in both countries. He argued that the overwork and keen stresses of western civilisation excited general paralysis in a brain weakened by syphilis and thought that in time to come the disease would increase in the two countries referred to. In America the disease was most common amongst military men, actors, stock-brokers, and men accustomed to mental overstrain, and rare amongst Quakers and the clergy. Dr. Dercum said that early diagnosis was important, the mistal made most often being to regard early general paralysi by Dr. J. C. THRESH which we publish in another part of the present issue unfolds the real story as to the influence of the ships. The map which accompanies the paper shows that on the Essex side of the ships there are practically no houses within the half-mile radius, but that the three-quarter mile radius embraces the hamlet of Purfleet, which, it must be noted, is divided into two portions, West and South. Confining our remarks mainly to the present epidemic a remarkable fact is brought out that up to Feb. 1st of this year there have been no less than 290 cases of small-pox in the Orsett Union, which is the Essex union nearest to the ships and which has a population of 33,721. In the whole of the rest of the county with a population of 782,700 there have in the same period been but 162 cases—i.e., the incidence on the population of the Orsett Union was 8·6 per 1000, as compared with 0·21 per 1000 on the rest of the county. The incidence on Purfleet, which is nearest the ships, was 88 per 1000, that on the remainder of the parish which comprises the hamlet 2·4 per 1000, and that on the remainder of the Orsett Union 2·8 per 1000—i.e., the nearer the population to the ships the greater the incidence. Now the prevailing wind, which was during the period in question north-west and west-south-west, blew over that portion of Purfleet known as South Purfleet, but very rarely over West Purfleet, and the bearing of this fact is shown in the incidence of small-pox on the South Purfleet population having been no less than 12·0 per cent., while that on West Purfleet was only 0·8 per cent. Such an incidence as the former is truly terrible to contemplate, and, as Dr. THRESH observes, there would at this rate have been in the London population over 500,000 cases within the last seven months. But even this does not complete the story, for the unvaccinated of South Purfleet have been laid low with merciless precision. There were in Purfleet 19 unvaccinated persons, of whom nine had had small-pox before the epidemic; of the remaining 10, no fewer than eight, or 80 per cent., have contracted the disease during the last seven months. No one who is at all familiar with the topography of the valley of the Thames near Dartford and of the rigid enforcement of the rule that no attendants at the ships shall visit Purfleet can do otherwise than agree with Dr. THRESH that personal infection from the ships is a very insufficient and, indeed, almost impossible explanation of this remarkable incidence of small-pox on the adjoining Essex coast.

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[1] New York Medical News, Feb. 1st, 1902.

We have in the pages of THE LANCET always supported the view that aerial convection alone explains certain of the remarkable outbreaks which are liable to occur, under given atmospheric conditions, in the neighbourhood of small-pox hospitals or of institutions being used for the isolation of acute small-pox cases. And it seems to us that in the present instance Dr. THRESH's view that aerial convection has again been operative is the only explanation consistent with all the facts. Obviously air-borne infection and human intercourse are at times both operative, but it has to be borne in mind that the one does not exclude the other. There are some who regard the cases of small-pox in the Essex districts as due to *water-borne* infection from the ships, but bathing in the Thames at this season is not very common nor are the inhabitants of the districts involved so hard up for drinking-water that they must needs resort to the saline and sewage-polluted solution of the Long Reach. The revelations as to the incidence of small-pox in South Purfleet are extremely inconvenient, and one of their results is likely to be violent opposition to any proposals for the erection of small-pox hospitals. Another result should be the recognition of the fact that we cannot by isolation hope to get rid of small-pox. The remedy is ready to hand and consists in placing revaccination on the same basis as primary vaccination. With the German method we shall avoid small-pox outbreaks, but with primary vaccination alone we can never hope to do so.

# Annotations.

"Ne quid nimis."

## SANITARY OFFICERS FOR HOSPITALS.

THE authorities of the Belgrave Hospital for Children are about to appoint a sanitary officer to the hospital. The qualifications required for the office include the holding of a Diploma in Public Health, and its duties comprise, not only the supervision of all the sanitary affairs of the hospital, but also consultation with the medical staff in the event of the outbreak of any infectious disease in the wards. It is true that the institution of such an office on the part of the Belgrave Hospital is not an entirely new departure; we know of at least one large general hospital which for some 10 years past has had the services of a specially appointed officer of the kind, while one well-known special hospital utilises in the same way those of the medical officer of health of the district in which it is situated. The importance of sanitation in hospitals is such a commonplace that its determining conditions are apt sometimes to be forgotten. It is requisite, not merely that the original planning of the building should be as perfect as sanitary science can make it, but that, when in working order, constant supervision should be exercised in order that its hygienic arrangements should work smoothly and efficiently. The most elaborately designed system of ventilation may at times work imperfectly and the most perfectly constructed drains become blocked. Despite the best sanitation, infectious diseases are inevitably imported into a hospital from time to time, and the limitation of their spread demands the most anxious consideration. It may safely be asserted, without any disparagement of the marvellous advances in surgery and medicine which the last 20 years have witnessed, that sanitation has played an enormous part in reducing hospital mortality. Those who are sick, and especially the subjects of surgical operations, are abnormally sensitive to insanitary conditions of every kind, and though bacteriology has in part explained this it has by no means completely done so. The horrors of the older hospitals are known by repute only to the present generation, but though hospital gangrene and phagedæna are practically things of the past we cannot believe that even our best-equipped modern hospitals are altogether insusceptible of sanitary improvement. And it is to sanitary experts who are in constant touch with the practical working of hospitals—to men who can be held responsible for the occurrence of preventable disease amongst the patients—that we may most safely look for improvements in hospital hygiene. The functions which the sanitary officer of a hospital may be called upon to fulfil are numerous and we can touch on them but slightly. Where a new building is being constructed, as in the case of the Belgrave Hospital at the right breast diminished, but when the patient left the hospital slight induration in the upper and outer quadrant could still be appreciated. There had been no previous disease or injury of the breasts. In 1874 Leudet recorded five cases in which one or both breasts became tender and swollen in typhoid fever and showed inflammatory masses.[1] In all resolution occurred. Curschmann states that transitory swelling of the breasts at the height of the fever is not uncommon and may be overlooked as the patient does not complain.[2] The writers alluded to above have been able to find records of only four cases of suppurative mastitis in typhoid fever. In one described by Charlotte P. West there was a general pyæmic condition.[3] At the beginning of the third week both breasts became swollen and tender, possibly from hypodermic injection of saline solution. At the beginning of the fourth week localised dusky red swollen elevations were discovered in both legs, both arms, and both breasts. Those in the right leg, the left arm, and both breasts suppurated and healed after incision. Recovery followed. In 1891 Destrée reported two cases of typhoid fever in which an abscess developed in the right breast at the end of the third week, but the pus showed only staphylococci. The fourth case is reported by Capellari and is almost exactly parallel to the one described above A girl, aged 15 years, developed pain and swelling in the right breast in the fourth week. The temperature, which had become normal, assumed a septic type. The abscess was opened and recovery followed. No bacteriological examination was made. Capellari lays stress upon the age of the patient, believing that at puberty the rapid development of the mammary glands predisposes to inflammation. In one of the cases of suppurative mastitis quoted above it is stated that the preliminary swelling and tenderness of the breasts were thought to be due to the hypodermic injection of saline solution. It has been pointed out in THE LANCET[4] that the typhoid bacillus (which is usually present in the blood in typhoid fever) may be localised at the sites of injuries received during the fever. Further, the injury in one of the cases there described was due to the hypodermic injection of saline solution. Hence it may be fairly concluded that in the case now quoted this was the exciting cause of the suppuration.

## DEATH FROM FISTICUFFS.

THE coroner's jury at Hackney which recently inquired into the death of a man named Barnett and returned a verdict of "Death by misadventure" showed more good sense and discrimination than are always exhibited on such occasions. The deceased and a man named Smith had a quarrel originating in a discussion over the meaning of the word "punter," and the discussion of this somewhat trifling matter—which perhaps makes the prevalence of betting the originating cause of the tragedy—seems to have aroused considerable ill-feeling in the mind of Barnett. After some preliminary scuffling it was arranged that the two men should formally fight later in the day, Barnett throughout being the aggressor and Smith showing himself unwilling to continue the quarrel. In the end, however, Smith proved himself the better man with his fists, and, after what appears to have been a perfectly fair fight in the presence of a number of his fellow workmen, Barnett received a blow on the jaw which rendered him insensible. Very soon afterwards he died. The medical evidence was to the effect that Barnett had been severely punished about the head and face and that the blow on the jaw had probably caused concussion of the brain, while the fall had ruptured a blood-vessel on the brain. In such circumstances men before now have been committed for trial for manslaughter and indicted for that they did "feloniously kill and slay" their opponents. The verdict of the jury, found under the direction of Dr. Wynn Westcott, coroner for North-east London, seems to recognise the fact that if rough men choose to settle their disputes with their fists a fatal occurrence is not necessarily chargeable against the survivor as a crime. It is for the pistol, the knife, and the attack by an organised gang as modes of settling quarrels between men or boys that the criminal law should be set in motion. The fist, as the occurrence we are commenting on shows, may, guided by an unhappy chance, be a deadly weapon when wielded against a man possibly not in the best physical condition and not trained to receive or to avoid blows dexterously; but the annals of the prize-ring are sufficient to show the extraordinary amount of battering with the bare fist that the head and body of a man will take without injury when he is in sound health, practised, perhaps, to avoid the more dangerous strokes, and inured to receive blows as well as skilled to deliver them. It no doubt weighed with the Hackney jury that the man whose fate was in its hands had not been the aggressor but must be taken to have had no choice between submitting to be bullied and fighting in self-defence.

## THE AUDITORY APPRECIATION OF MOSQUITOES.

THE science of electricity has within the last quarter of a century made enormous strides, and this force is now utilised in America to put what is alleged to be a painless end to a criminal existence. But the idea of destroying mosquitoes by this means is a novel one. It seems, however, according to a paper on the structure and biology of anopheles which has been contributed to the current number of the *Journal of Hygiene* by Dr. George Nuttall and Mr. Arthur Shipley, that the mosquito is peculiarly susceptible to sounds of a certain character. It is stated, for instance, that persons are more liable to be bitten when engaged in conversation than when silent, and that when a stringed instrument is played the mosquitoes in the room become extremely active, and those outside enter the room through the open window. So, too, when music is played in the open, whether in the dark or in presence of a lamp, the mosquitoes tend to congregate around the performer. It is also reported by an electrical engineer that when he was engaged on some experimental work on harmonic telegraphy he found that when the note given out by the instrument was raised to a certain pitch all the mosquitoes, both those inside and those immediately outside the room, crowded together near the apparatus. The ingenious engineer converted the apparatus into a fly-catching machine by covering it with fly paper, and having attracted and captured the insects proceeded to electrocute them. In this connexion it may [illegible]ed that towards the end of last year a letter [illegible] in the *Times* from Sir Hiram S. Maxim in which he narrates that while erecting an electric light apparatus at Saratoga Springs, New York, one of the lamps, which was of a somewhat peculiar type, gave off a constant musical note. One evening on examining this lamp he found that everything in the immediate vicinity of the box below the globe which was emitting the sound was covered with mosquitoes. An examination led to the discovery that all were males, and this in spite of the fact that there was in the neighbourhood an enormous preponderance of females. Sir Hiram Maxim states in graphic language that "when the lamps were started at the beginning of the evening every male mosquito would at once turn in the direction of the lamp and, as it were, face the music, and then fly off in the direction from which the sound proceeded." That the male mistook the buzzing of as neurasthenia. "The paralytic," said Dr. Dercum, "seldom came of himself to consult a physician; he was brought by his friends, and unlike the neurasthemac [or hypochondriac] he had no long story to tell." The paretic in the early stages of his disease was liable to lapses of memory, of decency, and of ability for work. The neurasthemac after brief and light sleep had a wakeful morning, felt depressed on rising, and did not care to face the day, while he felt at his best in the evening. The paretic, on the other hand, tossed in bed with little or no sleep during the night and only slept a little in the morning. He felt at his best in the forenoon and was quite exhausted in the evening. Dr. Charles Wagner said that general paralysis had increased steadily in America since 1850, being first noticed in the period 1850 to 1860. At present 10 per cent. of all patients in American asylums were paretics. It was especially prevalent among native born Americans, whereas *the alien population was more liable to* develop psychoses. Dr. Edward Cowles declared that anti-syphilitic treatment did not benefit paretics and argued that the disease was a toxæmia like myxœdema.

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[1] Clinique Médicale de l'Hôtel Dieu de Rouen, 1874, pp. 96–99 and 113–118.

[2] Der Unterleibstyphus, Vienna, 1898, p. 184.

[3] Philadelphia Polyclinic, 1898, vol. vii., pp. 253–256.

[4] THE LANCET, Feb. 15th, 1902, p. 464.

## THE WORKING OF PLAGUE MEASURES IN INDIA

THOSE of our readers who have been in the habit of referring to the "Notes from India" furnished by our special correspondent will have been enabled to keep themselves fairly abreast with the progress of plague in that country. From the increase of the plague mortality which has been taking place of late and the high general death-rate of Bombay it may safely be inferred that the city of Bombay will not escape the usual epidemic rise of the disease which, according to past experience, occurs at this season. This very naturally has *given rise to increased* vigilance and efforts on the part of Dr. J. A. Turner, the health officer, and the medical and municipal authorities concerned. The organisation and methods of procedure are fully set forth in some articles which appeared in the *Times of India* of Feb. 1st. It goes without saying that all systems of sanitary organisation and public health measures must be circumscribed within the limits of what is practically attainable and their methods of working should be such as are not calculated to arouse a general spirit of antagonism on the part of those to whom they have to be applied. If this be the case even among educated people who are willing to make some sacrifices and to submit to personal inconvenience in the public interest it is still more so in the case of Oriental races who are tied and bound by religious and social traditions and who are intensely conservative where these are concerned. The aim in view *is not so much* perhaps, what is sound and logical in theory or what might be applicable to a small and relatively isolated population where all the conditions are known—like that of a rural village *for example*. Large and populous cities and towns have to be dealt with where the health conditions are unfavourable and complicated, and preventive measures cannot be pushed to a logical conclusion without causing much discomfort and even hardship. What seems to be the most suitable course under such circumstances is the organisation of some good, simple, and uniform sanitary system on a practical working basis, the establishment of some method for the early notification of disease and death together with arrangements for promptly evacuating infected and overcrowded localities and buildings by the selection and provision of sites and encampments suitable for immediate occupation. Such measures will not only allow of the removal of people in anticipation of an outbreak and the thinning of overcrowded localities, but will permit also of a thorough disinfection of the evacuated houses being carried out and of their being subsequently ventilated and freely exposed to the air and sunshine. Owing to the action of the health officer and the local authorities in Bombay there seems to be every prospect of the suitable machinery being present and ready for carrying out these objects. We need scarcely add that, as far as practicable, recourse should also be had to the use of Haffkine's method of preventive inoculation *against plague*.

## CHELSEA CLINICAL SOCIETY

THE annual clinical debate of this society is fixed for March 11th and 18th next at the Jenner Institute of Preventive Medicine, Chelsea Gardens, *Grosvenor road*, S.W., at 8.30 P.M. The subject selected for discussion is "Cancer—its Nature, Origin, and General Principles of Treatment." The debate will be opened by Dr. J. F. Payne and full particulars will be shortly announced. The debate will be open to all members of the medical profession.

## THE CASE OF THE LATE MR. R. B. ANDERSON

MR. WALTER MONNINGTON, the honorary secretary of the fund in aid of the widow and children of the late Mr. R. B. Anderson, F.R.C.S. Eng., writes to us as follows:—

> The committee formed to appeal for aid for the widow and sons of the late Mr. R. B. Anderson, F.R.C.S. Eng., beg to announce that the subscriptions now received amount in all to £202 5*s.* 6*d.* and to request intending subscribers to kindly forward their donations *at once* marked "For the Anderson Fund" to the manager of the Union Bank of London, Chancery-lane, London, as it is definitely proposed to close *the account on the 28th inst.* A *strong hope was entertained of collecting at least* £500—the sum, it might well be remembered, fixed by the jury by their verdict in Mr. Anderson's favour in "Anderson *v.* Gorrie and Others." It is still desired that the £202 now in hand may be largely augmented before the fund closes on the last day of this month.

We need not again expatiate upon Mr. Anderson's wrongs or upon the needs of his widow and children. It is not a large sum which is wanted now—only £300. Surely those medical practitioners who have not yet subscribed—there are many such—will not hesitate in making up the comparatively small sum required.

## TYPHOID MASTITIS

IN the *American Journal of the Medical Sciences* for December, 1901, Dr. I. Davis, jun., Dr. H. S. Patterson, and Dr. A. W. Hewlett have published a case of this very rare complication of typhoid fever. A woman, aged 34 years, was admitted to hospital on May 25th in the third week of an attack of typhoid fever. The temperature was 105·1°, rose spots were present, and Widal's reaction was obtained, but blood cultures made on May 27th and 31st did *not yield* the typhoid bacillus. On June 9th, the thirty-sixth day of the disease, the temperature became normal. Three days *later the patient complained of pain in the left breast.* On June 14th the breast was swollen, a hard and tender lump was felt on its outer side, and the axillary glands were enlarged and tender. On June 15th the right breast was also tender. Lead and opium compresses were applied and the breasts seemed to improve, but the temperature, which began to rise on the 15th, showed wide daily oscillations of the septic type between 99° and 102°, and not the "staircase" character of a typhoid relapse. On the 20th the swelling and tenderness of the left breast had become much more marked and involved the two upper and the outer lower quadrants. The skin was freely moveable and the nipple was not bound down. On the 24th the temperature reached 104° and fluctuation was detected. Under chloroform an incision was made and 150 cubic centimetres of thick pus containing the typhoid bacillus in pure culture were obtained. The abscess cavity consisted of many loculi which were broken up with the finger. After the operation the temperature at once fell to normal and healing was uninterrupted. The swelling in the a minute or two he commenced to cry and complained of abdominal pain. This occurred on several occasions, and as he was a frank and manly little fellow no doubt was entertained of the reality of the pain. Exploration was therefore performed. The umbilicus was included in an elliptical incision and removed in its entire thickness. No adhesion or other abnormality could be found. The ascending colon was drawn out of the wound until the appendix appeared. Suspicion fell upon the latter which was very long and tortuous and appeared to be distended. It was removed and the abdomen was closed. Recovery was uneventful and the boy was completely and permanently relieved. The lumen of the appendix was dilated, the mucous membrane was thickened and congested, there was considerable excess of lymphoid tissue, and the cavity contained a large number of thread-worms. On inquiry it was ascertained that all the children of the family, of whom the patient was the eldest, were infested with thread-worms.

## THE DANGEROUSLY INFLAMMABLE NATURE OF CELLULOID

Despite the fact that quite a crop of serious accidents have been recorded for the past 10 years in The Lancet arising from the use of celluloid ornaments little or nothing appears to have been done to render celluloid less fiercely inflammable In an article printed elsewhere in our present issue Professor Ogston records some further cases illustrating the dangers of this substitute for ivory and horn and these cases afford a complete endorsement of all that we have said in our columns upon this subject from time to time. Although he refers to a number of instances of burns due to celluloid which have been published in The Lancet as well as to some experiments which our laboratory commissioners conducted in 1892 in regard to the inflammability of celluloid he omits to mention the experiments which were made by our commissioners in 1898—experiments which are in striking accord with those which Professor Ogston now records. In The Lancet of March 5th, 1898, p. 661, will be found the results of some experiments in which the danger of placing a celluloid comb in the hair was amply demonstrated. The actual experiments consisted in placing a celluloid comb in position in a wig at varying distances from a glowing fire and the results were absolutely convincing as to the probability of most serious consequences ensuing to the wearers of these celluloid ornaments. Further, it was found that a curling iron heated to the temperature necessary for curling purposes would readily start the evolution of dense and highly inflammable fumes if brought in contact with a celluloid comb or hairpin. The proximity of a naked light adds to the danger enormously, for the fumes of celluloid will ignite fiercely at some considerable distance from the flame. Later, we demonstrated the danger of exposing celluloid toys in shop-windows close to electric lamps. Professor Ogston suggests that all celluloid articles for personal wear should have the word "ignitible" conspicuously imprinted upon them. We suggested, now nearly four years ago, that the manufacturers of these dangerous articles should be compelled to stamp plainly upon them the words "highly inflammable." The danger is no imaginary one. We remember an instance in which a gentleman with a lighted cigar in his mouth was playing upon an "American organ" furnished with celluloid keys Of course, he was wrong to be smoking at such a moment, and he was convinced of this by the fact that when some red hot ash dropped upon the keys they instantly burst into fumes and flame which could only be extinguished with the greatest difficulty. Surely some means could be devised to impregnate the material with an inert or deterrent substance and so to render celluloid less liable to decomposition and consequent fierce ignition.

## THE GENERAL MEDICAL COUNCIL.

A special session of this Council will begin on Tuesday, Feb. 25th, at the office of the Council, 299, Oxford-street, at 3 P.M., under the presidency of Sir William Turner. The question at issue between the Council and the Royal Colleges of Physicians of London and Surgeons of England will constitute the business of the session.

Mr. Pearce Gould delivered the first of his Lettsomian Lectures before the Medical Society of London on Monday, Feb. 17th, his subject being "Certain Diseases of the Blood-Vessels." We shall publish these lectures in full in our columns.

His Highness the Khedive has bestowed on Mr. Harry Crookshank (Pasha), F.R.C.S. Edin., the Grand Cordon (first class) of the Imperial Order of the Medjidie in recognition of his signal services in Egypt.

In a Convocation held on Feb. 18th the University of Oxford conferred the degree of Hon. M.A. upon Mr. Alfred Winkfield, F.R.C.S. Eng. Mr. Winkfield is medical officer of health of Oxford.

# Looking Back.

FROM

## THE LANCET, *SUNDAY, FEB.* 22, 1824.

### HOSPITAL REPORTS.

### Guy's Hospital, Feb. 21.

### PHYSIOLOGICAL EXPERIMENT.

The following curious experiment has been lately tried by Dr. Blundell, lecturer on midwifery at this hospital. This gentleman opened the common carotid of a dog, and allowed the artery to bleed till the animal appeared dead; when Dr. B. immediately injected into the jugular vein, the blood that had been drawn off, which had the effect of resuscitating the dog. From the result of this experiment, Dr Blundell infers that when the vital powers appear to be extinguished in a woman during parturition from uterine hæmorrhage, there is a chance of restoring animation by the immediate injection of blood into the jugular vein. Whether the blood to be injected is that of the patient herself, or of some animal which is to be killed for the purpose, we are not exactly certain, but we believe the former.

### COLLEGE of PHYSICIANS.

We have received communications from some members of this body, complaining of the inequality that exists between the privileges of the Licentiates and Fellows of the College. and requesting us to take up the subject. The fact is, that the regulations of the College complained of aim at this one object, viz. the keeping up an aristocratic distinction between the Graduates of the English Universities and those educated elsewhere, without any reference to the respective merits of the different individuals. We shall therefore feel it our duty, at some future time, to comply with the request.

### EFFICACY OF THE SULPHATE OF QUININE IN AGUE.

Dr. Michaelis, of Berlin, has recently had an opportunity of trying the efficacy of this new medicine, in a great number of cases of intermittent fever, which has chiefly attacked children in a particular district. He has given it in doses of three grains to children, during the remission, with the greatest success,—this quantity being sufficient to prevent a return of the fever.—*Journal der Chirurgie von Grafe und Walter.*

the instrument for the buzzing of the female is probable, seeing that the notes emitted were practically identical Here, then, is a new phase of sexual selection which is likely in the hands of the electrician to lead rather to the extinction than the perpetuation of the species But doubtless there would arise some discriminating males who, refusing to be attracted to electrocution, would survive to impregnate the superabundant females Sir Hiram Maxim suggests an interesting experiment "If," he says, "you obtain a tuning fork which emits a note as near to that of a female mosquito as possible [and strike this fork within 20 feet of a male mosquito he will at once turn about, face the music, and erect the two little feathers of his head, something after the manner of a cockatoo"

## THE DISTRIBUTION OF PLAGUE

As regards Egypt, during the week ending Feb 9th 8 cases from plague and 8 deaths from the disease have been reported from all Egypt. 4 cases and 6 deaths occurred at Tantah 3 cases and 1 death at Abousir, and 1 case and 1 death at Kafr Enan near Ziftah Tantah has shown a marked improvement during the week, as only 4 of the cases mentioned above were fresh cases, 2 being admitted to hospital and two being found dead out of hospital As regards The Mauritius a telegram from the Governor received at the Colonial Office on Feb 14th states that for the week ending Feb 13th there were 15 cases of plague, of which 9 proved fatal

## SOME DISADVANTAGES ATTENDING ELECTRIC SYSTEMS

WE anticipated at the time when the electric underground railways were started in London that sooner or later, owing to their peculiar construction, better means would have to be devised for providing these 'tubes" with fresh air We were pretty freely criticised by those responsible for the construction of these railways for entertaining such "exaggerated" notions We are face to face with the fact now that the air at least of one "tube —namely, the Central London Railway—is fœtid and poisonous Numerous letters have appeared recently in the daily press complaining of this objectionable and growing characteristic, so that, in spite of the undoubted convenience of the "tube, many persons are being deterred already from travelling by it on account of the nauseating effect of the air in the tunnels and even at the booking offices To not a few the preliminary greeting of bad air as each lift discharges its load at the ground level is enough There is no doubt that the management of this railway is face to face with a difficulty which, in the interests of the public and therefore of themselves and their shareholders, must be overcome Under the present conditions, and especially in a time of epidemic, the tube may easily become a disease disseminating channel There can be no difficulty in providing a remedy—namely, by pumping fresh air through the tunnels We are glad to note that some efforts are being made to avoid the possibility of danger connected with short circuiting on electric railways It appears however that at present there seems to be no sure way of preventing short circuiting, so that the next best thing is to provide against its effects when it happens Insulation apparently may be perfect at the start but there are countless agencies which conspire to break it down, at any rate as it is carried out at the present time There is no doubt that for their own sakes those whose business it is to distribute the electric current would prefer to do it safely and free from the chances of short-circuiting Short circuiting is a source of danger to the public and a decided loss to the electric companies We cannot help thinking, however, that in view of so many short circuiting occurrences electrical engineers must own that it is a contingency which baffles them This week, at about 10 A M on Monday, an accident occurred in connexion with the electric lighting cables close by our offices By some it was attributed to the upsetting of a spirit lamp during repairs, although what followed was analogous to previous outbreaks of fire in electric boxes in which short circuiting was the undoubted cause Dense black fumes suddenly belched forth from a "box" in the pavement just outside the Adelphi Theatre and later the dense fumes were accompanied by fierce flames several feet high The event was evidently sufficiently alarming to bring a large number of fire engines upon the spot within a few minutes of the outbreak Subsequently the outbreak was subdued by choking the cavity with sand and closing the crevices with sacking We noted that the intelligence of the firemen was displayed in the fact that not until the current was cut off was water poured into the hole, otherwise it is possible that an inflammable mixture would have been generated and a serious explosion might have ensued No great damage appeared to have been done and by prompt work the company was able to supply the current to its consumers again before dark It was fortunate that the accident did not happen on a dark foggy day We still believe that short circuiting would happen less frequently if greater and better attention were given to the requirements of efficient insulation

## THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE ROYAL COLLEGE OF SURGEONS OF ENGLAND

THE following resolution of a special committee was unanimously adopted by the Council of the Royal College of Surgeons of England on Feb 13th, and at an extraordinary meeting of the Comitia of the Royal College of Physicians of London on Feb 18th, namely —

> This Committee recommends the two Royal Colleges to consider and develop a scheme for investigation into the causes, prevention the treatment of cancer and that for this purpose delegates be appointed by the two Royal Colleges (who shall have power to add to their number) to draw up a detailed scheme.

In pursuance of this resolution the following delegates were appointed to draw up a detailed scheme for systematic investigation into the causes, prevention, and treatment of cancer, viz —As representing the Royal College of Physicians of London Sir William Selby Church, Bart, President, Sir William H Broadbent, Bart, K.C V.O ; Dr P H Pye Smith Dr Whipham, Dr Payne, Dr J Rose Bradford and Dr J F W Tatham As representing the Royal College of Surgeons of England Mr H G Howse, President, Mr I Langton Mr H Morris, Mr H T Butlin, Mr W Watson Cheyne, C B, and Mr R. J Godlee

## APPENDICULAR COLIC FROM THREAD-WORMS IN THE VERMIFORM APPENDIX.

IN the *Intercolonial Medical Journal of Australasia* for December Mr R Hamilton Russell has recorded a case of this rare and interesting condition A boy, aged nine years, was taken to hospital with the following history From two to three years before he began to complain of abdominal pains which appeared to be excited or aggravated by going up and down stairs Sometimes the pains were so severe that he was carried by his companions He was also frequently seized with abdominal pains when in bed and was sometimes awakened by them. He was unable to run about and to play with his schoolfellows and a day rarely passed without an attack of pain which he always referred to the umbilicus, where there was a small hernia He was admitted with a view to operation on the latter but as he had no attacks of pain in hospital the operation was not performed Seven months later he was readmitted with the history that the symptoms had become worse There was no tenderness in the region of the appendix, but after the abdomen had been under examination for disabled from work, or who are at hospital or in prison, are taken in here to be cared for and protected by the State until their parents are in a condition to receive them again. Your indefatigable guide leads you to the receiving-room where you see the latest of these little visitors just brought in and witness their delight as a necklace of blue-and-red beads is clasped round the neck of each. This necklace is the mark of the child's identity. To it is suspended a small silver pendant stamped with a number which corresponds with a similar number kept in the register. Your guide takes you through the dining-rooms, kitchens, gardens, and hospitals, and convinces you, by her appearance, by her words, and by what she shows you, of the care and devotion with which the institution provides for the welfare of its adopted children.

Of the children permanently abandoned there is not much to be seen. These children, mostly babies, are removed as soon as possible to the country and seldom remain for more than a day or two at the town house. What is to be seen of them, however, is a wonderful sight. You find them in a large and airy room—long rows of babies in cots, babies being washed, dressed, fed—baby jargon, baby lamentation filling the air; stacks of baby garments and pyramids of baby bottles standing about the place. Most marvellous amongst them are the newcomers, identical in form, size, raiment, and expression—laid out on their backs in a row, contorting their foolish faces, and waving their comical limbs. They are awaiting baptism. Side by side they lie, indifferent to the birthright which they have lost, full of beseeching demands which they cannot utter. But in France all voices speak for them.

# THE MIDWIVES BILL, 1902.

THE following is the text of the Midwives Bill, 1902, which was issued on Feb. 13th. It is prepared and brought in by Lord Cecil Manners, Mr. Tatton Egerton, Mr. Schwann, Mr. Parker Smith, Sir Savile Crossley, Mr. Eugene Wason, Mr. Tennant, and Mr. Heywood Johnstone.

## MIDWIVES BILL.

### ARRANGEMENT OF CLAUSES.

Clause.

1. Short title and commencement.
2. Certification.
3. Provisions for existing midwives.
4. Constitution and duties of the Central Midwives Board.
5. Fees and expenses.
6. Midwives roll.
7. Appointment of secretary and supplemental provision as to certificate.
8. Local supervision of midwives.
9. Delegation of powers to district councils.
10. Notification of practice.
11. Penalty for obtaining a certificate by false representation.
12. Penalty for wilful falsification of the roll.
13. Prosecution of offences.
14. Appeal.
15. Expenses of local supervising authority.
16. Act not to apply to medical practitioners.
17. Extent of Act and action by English Branch Council.
18. Definitions.

### A BILL TO SECURE THE BETTER TRAINING OF MIDWIVES AND TO REGULATE THEIR PRACTICE.

Be it enacted by the King's Most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

1. *Short title and commencement.*—This Act may be cited as the Midwives Act, 1902. It shall, except as otherwise provided by this Act, come into operation on the first day of April, one thousand nine hundred and three.

2. *Certification.*—(1) From and after the first day of January, one thousand nine hundred and five, no woman shall be entitled to take or use the name or title of midwife (either alone or in combination with any other word or words), or any name, title, addition, or description implying that she is certified under this Act, or is recognised by law as a midwife unless she be certified under this Act.

(2) Any woman who, after the first day of January, one thousand nine hundred and five, not being certified under this Act, shall take or use the name of midwife or any other such name, title, addition, or description as aforesaid, shall be liable on summary conviction to a fine not exceeding five pounds.

(3) No woman shall be certified under this Act until she has complied with the rules and regulations to be laid down in pursuance of this Act.

(4) No woman certified under this Act shall employ an uncertified person as her substitute.

(5) The certificate under this Act shall not confer upon any woman any right or title to be registered under the Medical Acts or to assume any name, title, or designation implying that she is by law recognised as a medical practitioner, or that she is authorised to grant any medical certificate, or any certificate of death or of stillbirth, or to undertake the charge of cases of abnormality or disease in connexion with parturition.

3. *Provision for existing midwives.*—Any woman who within two years from the date of this Act coming into operation claims to be certified under this Act shall be so certified provided she holds a certificate in midwifery from the Royal College of Physicians of Ireland, or from the Obstetrical Society of London, or such other certificate as may be approved by the Central Midwives Board, or produces evidence satisfactory to the Board, that at the passing of this Act she has been in *bonâ-fide* practice as a midwife and that she bears a good character.

4. *Constitution and duties of the Central Midwives Board.*—On the passing of this Act the Lord President of the Council shall take steps to secure the formation of a Central Midwives Board, which shall consist of—

(1) Four registered medical practitioners—one to be appointed by the Royal College of Physicians of London, one by the Royal College of Surgeons of England, one by the Society of Apothecaries, and one by the Incorporated Midwives Institute;
(2) Two persons (one of whom shall be a woman) to be appointed for terms of three years by the Lord President of the Council; and
(3) One person to be appointed for a term of three years by the Association of County Councils.

After two years from the commencement of this Act the members appointed under sub section (1) shall retire, but shall be eligible for re-appointment annually. Any vacancy occurring by resignation or death shall be filled up in the case of a member appointed under sub-sections (1) and (3) by the body which appointed him, and in the case of a member appointed under sub-section (2) by the Lord President of the Council.

The duties and powers of the Board shall be as follows:

I. To frame rules, subject to the approval of the Privy Council, after consultation with the General Medical Council,
  (*a*) regulating the issue of certificates and the conditions of admission to the roll of midwives;
  (*b*) regulating the course of training and the conduct of examinations;
  (*c*) regulating the admission to the roll of women already in practice as midwives at the passing of this Act;
  (*d*) regulating, supervising, and restricting within due limits, the practice of midwives;
  (*e*) deciding the conditions under which midwives may be suspended from practice;
  (*f*) defining the particulars required to be given in any notice under *Section 10 of this Act*.
II. To appoint examiners.
III. To decide upon the places where, and the times when, examinations shall be held.
IV. To publish annually a roll of midwives who have been duly certified under this Act.
V. To decide upon the removal from the roll of the name of any midwife for disobeying the rules and regulations from time to time laid down under this Act by the Central Midwives Board, or for other *misconduct, and also to decide upon the restoration* to the roll of the name of any midwife so removed.
VI. To issue certificates.

And generally to do any other act or duty which may be necessary for the due and proper carrying out of the provisions of this Act.

5. *Fees and Expenses.*—There shall be payable by every woman presenting herself for examination or certificate such fee as the Central Midwives Board may, with the approval of the Privy Council, from time to time determine, *such fee not to exceed the sum of 10s.* All such fees paid by midwives in practice at the passing of this Act and by candidates for examination shall be paid to the Central Midwives Board. The said Board shall devote such fees to the payment of expenses connected with the examination and certificate and to the general expenses of the Board. The Board shall, as soon as practicable after the thirty-first day of December in each year, publish a financial statement made up to that date, and certified by a chartered accountant as correct, showing the receipts and expenditure, including liabilities of the Board during the year. *The Board may apportion* between the councils of the several counties and county boroughs any balance against the Board shown in the financial statement in proportion to the number of midwives who have given notice during the year of their intention to practise in those areas respectively, and may recover from the councils the sum so apportioned.

6. *Midwives roll.*—There shall be a roll of midwives containing

(1) The names of those midwives practising at the date of the passing of this Act who have been certified under this Act;
(2) the names of those not already in practice as midwives at the passing of this Act, but who have been certified under this Act.

The entry on the roll shall in every case indicate the conditions in virtue of which the certificate was granted.

7. *Appointment of secretary and supplemental provision as to certificate.*—The Central Midwives Board shall appoint a secretary who shall be charged with the custody of the roll, and every person so appointed shall be paid such salary as the Board shall think fit, and shall be removable at the pleasure of the Board.

A copy of the roll of midwives purporting to be printed by the authority of the Board or to be signed by the secretary to the Board shall be evidence in all courts that the women therein specified are certified under this Act; and the absence of the name of any woman from such copy shall be evidence, until the contrary be made to appear, that such woman is not certified under this Act. Provided always, that in the case of any woman whose name does not appear in such copy, a certificate under the hand of the secretary of the entry of the name of such woman on the roll shall be evidence that such woman is certified under this Act.

8. *Local supervision of midwives.*—Every council of a county or county borough throughout England and Wales shall, on the commencement of this Act, be the local supervising authority over midwives within the area of the said county or county borough. It shall be the duty of the local supervising authority—

(1) To exercise general supervision over all midwives practising within their area in accordance with the rules to be laid down under this Act.
(2) To investigate charges of malpractice, negligence, or misconduct

# FOUNDLING CHILDREN IN FRANCE.

By CHARLES GORING, M.B., B.Sc. LOND.

> "All voices must speak for him Every child that is born must have a just claim for his bread"—EMERSON.

THE simple and admirably arranged system by which that service of justice—the protection of foundling children—is conducted in France is briefly as follows. There is a principal depôt in Paris with subsidiary depôts in the other principal towns of France into which the foundling children are first collected from all over the country. So severe in France is the punishment for ill-treating or exposing children, and so great is the facility to abandon them to the public care, that this preliminary collection presents but little difficulty. In the majority of cases mothers who wish to abandon their children bring them to the depôt themselves and voluntarily resign their parental rights. The service is open to all; none are denied the right to make use of it. In addition to the children thus voluntarily abandoned the State also demands the care of all children who are being physically ill-treated or morally corrupted by their parents. Received into the depôt the child is kept there for as short a time as possible. It is fed, clothed, and baptised, and every attention is given by medical treatment and nursing to correct physical ailment and to obtain a vigorous state of health. When these preliminaries are fulfilled the child is immediately removed to the country by an appointed *nourrice* (nurse) who forthwith incorporates the newcomer into her own family as one of its natural inmates. This placing of the children in the home of a *nourrice* is not undertaken without careful forethought. Each child is considered as an individual and particular attention is given to possible heredity in weighing the decision as to its future home. At the same time the welfare of the families about to receive the children is also taken into account. All weakly children and those who are known to be the offspring of vicious parents are specially placed and closely watched during development in order that other children may be protected from physical or moral infection and contamination. No woman is accepted as a *nourrice* unless she is either personally known to the authorities or can afford credentials of honesty, respectability, and capability for the office which she undertakes to fulfil. A register of women who are certified as fit to become nurses is kept at the principal depôts. The supply is in excess of the demand; consequently, as occasion arises, a selection amongst them is possible to meet the special requirements of the children. Each nurse, when a child is handed over to her care, receives definite instructions as to the duties and obligations for the fulfilment of which she is to be held responsible. She has to take the child into her home, to suckle it for the proper term, to clothe and to feed it, and at the proper age to supervise its attendance at school; in short, she is in every way to act as a natural mother should to her own child.

In the way described above, then, each child abandoned in France may find a new home, a natural home, and may grow up under normal conditions. The nurse becomes its mother, her husband its father, and her children its brothers and sisters. Not only physical wants, but the imperative demands of childhood for love, tenderness, and companionship are thus satisfied The child remains in the family till the age of 14 years Apart from home training it has received the free education of the schools which the law allows for all children. After this age the child is apprenticed to some trade, craft, or business, and is not finally released from the public surveillance and protection until it has been made good for something and can begin life with an "open field and fair play."

This is the machine as it exists in principle. The machine at work has possibly other aspects. Many defects may then appear that require constant reparation and attention. A multitude of weaknesses is inseparable from all machinery. The corruption of moth and dust, the possibility of abuses arising from rival interests can never be eliminated. The machine here described is the machine as an ideal—the machine of glorified record from blue-book and hearsay; and when all has been said of human institutions the ideal is the only final criterion. With our institutions, at any rate, it is better to fall beneath a high ideal than to approximate a low one. This at least can be said of the French system for assistance to helpless children—that the ideal is the right one, however it works out in practice; that the effort to administer the highest justice is noble and good, whatever infirmity the results may possess. To estimate these results personally would be a long and difficult task, involving an intimacy with families all over France and the surveillance of children through many years. This is impossible, and we must therefore rest content with the reports of the inspectors—reports based on personal observation, optimistic, telling of practical issue in adequate proportion to the lofty theoretical aim. And that such reports are not widely exaggerated (if exaggerated at all), that the mechanism seems practicably workable and full of vitality, can be deduced from a limited personal observation possible to everyone—by "a seeing with the eyes and touching with the hand" the very heart of the whole mechanism as it throbs and works every day at the headquarters of the institution in Paris.

A visit to the hospice of the *enfants trouvés* leads the imagination to think of the emotions that must have been witnessed at its threshold. Standing in the Boulevard Rochereau, a quiet road on the outskirts of the Quartier Latin, where the never-ceasing roar of a great city reaches only as a distant murmur, this unobtrusive stone building has taken part in every variety of anguish which maternity can produce in woman. What a motley show would be the long procession of mothers who have passed over this threshold—mothers from all classes and of every type of womanhood, possessed by every degree of maternal conflict from all but indifference to heart-broken despair; vagabonds, prostitutes, criminals, young and old, virtuous and depraved—all with the same intent, to give up to the public care their rights to the precious burden each carries in her arms

This quiet unobtrusive building in the Boulevard Rochereau is the town house of the family of foundling children whose country residences are scattered over France The main structure, and many smaller buildings behind it, stretch over a wide area. Gardens surround the buildings; their trees appearing above a long, high wall attract the passer-by to inquire what is this snug and peaceful refuge so securely inclosed. Despite the formidable wall and a massive door admission is readily obtained by the stranger. Here, as at all hospitals or public institutions in Paris, the stranger is welcomed; his curiosity is understood and never maliciously interpreted and every obliging effort is made to give it honest satisfaction. There is cordiality even in the *concierge* who refers you to the manager; in the manager who is delighted to see you and summons a guide; in the guide who forthwith takes you in hand and leads the way. You feel at ease and you know you are to see the machine at its normal daily work, at no exceptional performance specially prepared for visitors or patrons.

Once inside you are struck by the bustle of business about you—a business suggestive of play rather than work—hardness, weariness, and care are all absent from the scene. There are women in uniform rushing to and fro, groups of women excitedly talking, their faces serious and preoccupied and every one of them good-humoured and light-footed A gigantic nursery the place seems to be with children and babies everywhere. You come across them at each turning; on every landing women are seen in every direction with human bundles in their arms. The children cling to you, they roll on the floor under your feet, files of them in pretty uniform march by in procession A number of babies are set out on shelves like bales of merchandise, sorted and ticketed. Through this maze of children you pick your way, preceded by your guide A marvellous creature is this guide, overflowing with energy, with a fine stride and a voluble tongue. With the air and voice of a proprietor she unfolds the mystery of the business and displays her living ware. There is a certain condescension in her voice as she replies to your questioning—a certain pity for the merely masculine and its inevitable ignorance of baby ware. Her explanations are as eloquent and as detailed as a mother's of her offspring. She tells you that this building is not only the town house of the *enfants trouvés*, that it has a second and still more important function. Its chief function is to serve as a temporary refuge and *crèche* for children whose parents, on account of some misfortune, are unable temporarily to provide for them. Thus babies prematurely born and the babies of women who are sick are sent here to be provisionally suckled, and the children of parents who are out of employment, or who have been temporarily three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 357, 375, and 486 in the three preceding weeks, further rose last week to 681, and were 213 above the corrected average. The causes of 89, or 1·4 per cent., of the deaths in the 76 large towns last week were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Hull, Newcastle, and in 35 other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Aston Manor, Liverpool, St. Helens, Rotherham, Middlesbrough, Sunderland, and Gateshead.

### HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·3, 21·8, and 23·9 per 1000 in the three preceding weeks, declined again to 23·6 per 1000 during the week ending Feb. 15th, but was 1·0 per 1000 above the mean rate during the same period in the 76 large English towns. Among these Scotch towns the death-rates ranged from 12·5 in Perth and 19·5 in Aberdeen to 25·1 in Leith and 25·2 in Glasgow. The 761 deaths in these towns included 20 which were referred to whooping-cough, 16 to diarrhœa, 12 to measles, 10 to "fever," three to scarlet fever, three to diphtheria, and two to small-pox. In all 66 deaths resulted from these principal zymotic diseases last week, against 66 and 83 in the two preceding weeks. These 66 deaths were equal to an annual rate of 2 0 per 1000, which was 0·2 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had been 19 and 17 in the two preceding weeks, rose again last week to 20, of which 10 occurred in Glasgow, three in Paisley, and three in Leith. The deaths from diarrhœa, which had been 20, eight, and 23 in the three preceding weeks, declined again to 16 last week, and included six in Dundee, five in Glasgow, and two in Edinburgh. The fatal cases of measles, which had been 31, 23, and 19 in the three preceding weeks, further decreased last week to 12, of which eight were registered in Glasgow and two in Dundee. The deaths referred to different forms of "fever," which had been three and five in the two preceding weeks, further rose to 10 last week, and included five in Glasgow, three in Edinburgh, and two in Greenock. The fatal cases of scarlet fever, which had been four, seven and 10 in the three preceding weeks, declined again last week to three, of which two were registered in Greenock. The deaths from diphtheria, which had been five and eight in the two preceding weeks, decreased to three last week, and included two in Glasgow, where the two fatal cases of small-pox were also registered. The deaths referred to diseases of the respiratory organs in these towns, which had been 128, 141, and 173 in the three preceding weeks, further rose last week to 211, and were 58 in excess of the number in the corresponding period of last year. The causes of 26, or more than 3 per cent., of the deaths in these eight towns last week were not certified.

### HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 20·9, 22·7, and 23 8 per 1000 in the three preceding weeks, rose again to 25 7 per 1000 during the week ending Feb. 15th. During the past four weeks the death-rate has averaged 23·3 per 1000, the rates during the same period being 21·3 in London and 21·4 in Edinburgh. The 187 deaths of persons belonging to Dublin registered during the week under notice showed an excess of 14 over the number in the preceding week, and included 11 which were referred to the principal zymotic diseases, against eight, four, and five in the three preceding weeks; of these [illegible] three resulted from measles, three from whooping-cough, [illegible] two from "fever," two from diarrhœa, and one from scarlet fever. These 11 deaths were equal to an annual rate of 1·5 per 1000, the zymotic death-rates during the same period being 2·4 in London and 1·1 in Edinburgh. The deaths from whooping-cough, which had been one and two in the two preceding weeks, further rose last week to three. The 187 deaths in Dublin last week included 22 of children under one year of age and 60 of persons aged upwards of 60 years; the deaths of infants showed a slight decline from the number in the preceding week, while those of elderly persons were considerably in excess. Five inquest cases and seven deaths from violence were registered; and 71, or nearly two-fifths, of the deaths occurred in public institutions. The causes of 12, or more than 6 per cent., of the deaths in Dublin last week were not certified.

### VITAL STATISTICS OF LONDON DURING JANUARY, 1902.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality in each of the cities and boroughs in the county of London. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of *the nine diseases specified in the table* was equal to an annual rate of 11·4 per 1000 of the population, estimated at 4,579,107 in the middle of this year. In the three preceding months the rates had been 13 8, 11·6, and 10 6 per 1000 respectively. The rates were considerably below the average in Kensington, Chelsea, Hampstead, Wandsworth, and Woolwich, while they showed the largest excess in St. Pancras, Holborn, Bethnal Green, Stepney, Poplar, and Deptford. During the five weeks ending Feb. 1st, 1385 cases of small-pox were notified, showing a further considerable increase over the numbers in recent months; the greatest proportional prevalence of this disease was in the City of Westminster, St. Pancras, Holborn, Shoreditch, and Stepney. The number of small-pox patients under treatment in the Metropolitan Asylums hospitals, which had been 284, 427, and 666 at the end of the three preceding months, had further risen to 1135 at the end of January; the weekly admissions averaged 297, against 72, 110, and 173 in the three preceding months. The prevalence of scarlet fever during January showed a marked decline from that recorded in any recent month; among the various metropolitan boroughs this disease was proportionally most prevalent in Stoke Newington, Poplar, Battersea. Camberwell, and Deptford. The Metropolitan Asylums hospitals contained 2501 scarlet fever patients at the end of the month, against 3281, 3186, and 3080 at the end of the three preceding months; the weekly admissions averaged 266, against 392, 352, and 297 in the three preceding months. Diphtheria was slightly less prevalent during last month than in any of the three preceding months; the greatest proportional prevalence of this disease occurred in Fulham, St. Pancras, Islington, Hackney, Bethnal Green, and Lewisham. There were 1231 diphtheria patients under treatment in the Metropolitan Asylums hospitals at the end of last month, against 1570, 1504, and 1369 at the end of the three preceding months; the weekly admissions averaged 167, against 243, 200, and 160 in the three preceding months. The prevalence of enteric fever showed a considerable decline from that recorded in the preceding month; among the various metropolitan boroughs this disease was most prevalent in the City of Westminster, Islington, Holborn, Shoreditch, Stepney, Poplar, and Bermondsey. The number of enteric fever patients under treatment in the Metropolitan Asylums hospitals, which had been 291, 245, and 195 at the end of the three preceding months, had further declined to 128 at the end of January; the weekly admissions averaged 18, against 38, 32, and 21 in the three preceding months. Erysipelas was proportionally most prevalent in Hammersmith, Hackney, Shoreditch, Southwark, and Deptford. The 42 fatal cases of puerperal fever included five in Lambeth, five in Hackney, four in St. Marylebone, four in Wandsworth, three in Stepney, and three in Lewisham.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various metropolitan boroughs, the deaths occurring in the public institutions of London having been distributed among the boroughs in which the deceased persons had previously resided. During the five weeks ending Feb. 1st the deaths of 8021 persons belonging to London were registered, equal to an annual rate of 18·3 per 1000, against 15·4, 20·0, and 18·8 per 1000 in the three preceding months. The lowest death-rates last month in the various metropolitan boroughs were 12·0 in Hampstead, 13·6 in Wandsworth, 15·1 in Battersea, 15·2 in Lewisham, 15·4 in Kensington, and 15·5 in Stoke Newington; the highest rates were 21·2 in Shoreditch, 21·3 in Bermondsey, 22 4 in Bethnal Green, 22·8 in the City of London, 23·9 in Holborn, and 24 0 in Finsbury. The 8021 deaths from all causes included 839 which were referred to the principal zymotic diseases; of these 201 resulted from small-pox, 234 from measles, 67 from scarlet fever, 132 from diphtheria, 111 from whooping-cough, 36 from enteric fever, and 58 from diarrhœa. The lowest death-rates from these on the part of any midwife practising within their area, and should a *primâ facie* case be established to report the same to the Central Midwives Board.

(3) To suspend any midwife from practice in accordance with the rules under this Act, if such suspension appears necessary.

(4) To report at once to the said Board the name of any midwife practising in their area convicted of an offence.

(5) During the month of January of each year to supply the secretary of the Central Midwives Board with the names and addresses of all midwives who have notified their intention to practise within their area and to keep a current copy of the roll of midwives accessible at all reasonable times for public inspection.

(6) To report at once to the Central Midwives Board the death of any midwife or any change in the name or address of any midwife in their area so that the necessary alteration may be made in the roll.

(7) To give due notice of the effect of the Act to persons at present using the title of midwife.

The local supervising authority may delegate, with or without any restrictions or conditions as they may think fit, any powers or duties conferred or imposed upon them by or in pursuance of this Act to a committee appointed by them and consisting either wholly or partly of members of the council and the provisions of subsections one and two of Section 82 of the Local Government Act, 1888, shall apply to every committee appointed under this section and to every council appointing the same, and women shall be eligible to serve on any such committees.

9. *Delegation of powers to district councils.*—A county council may delegate with or without any restrictions or conditions as they may think fit any powers or duties conferred or imposed upon them by or in pursuance of this Act, to any district council within the area of the county, and the powers and duties so delegated may be exercised by a committee appointed by such district council, and consisting either wholly or partly of members of the district council and women shall be eligible to serve on any such committee. Any expenses incurred by a district council in the execution of any powers or duties so delegated shall to an amount not exceeding such sum as may be prescribed by the county council be repaid to such district council as a debt by the county council and any excess above the sum so prescribed shall be borne by the district council as part of their ordinary expenses.

The provisions of this section shall apply to the administrative county of London in like manner as if each metropolitan borough were a county district and the borough council were the district council of that district.

10. *Notification of practice.*—Every woman certified under this Act shall, before holding herself out as a practising midwife or commencing to practise as a midwife in any area, give notice in writing of her intention so to do to the local supervising authority, or to the body to whom for the time being the powers and duties of the local supervising authority shall have been delegated under this Act.

Such notice shall be given to the local supervising authority of the area within which such woman usually resides or carries on her practice and the like notice shall be given to every other local supervising authority or delegated body within whose area such woman at any time practises or acts as a midwife within 48 hours at the latest after she commences so to practise or act.

Every such notice shall contain such particulars as may be required by the rules under this Act to secure the identification of the person giving it, and if any woman omits to give the said notices or any of them, or knowingly or wilfully makes or causes or procures any other person to make any false statement in any such notice she shall be guilty of a misdemeanour and shall on conviction thereof be liable to a fine not exceeding £5.

11. *Penalty for obtaining a certificate by false representation.*—Any woman who procures or attempts to procure a certificate under this Act by making or producing or causing to be made or produced any false and fraudulent declaration, certificate, or representation, either in writing or otherwise shall be guilty of a misdemeanour and shall on conviction thereof be liable to be imprisoned, with or without hard labour, for any term not exceeding 12 months.

12. *Penalty for wilful falsification of the roll.*—Any person wilfully making or causing to be made any falsification in any matter relating to the roll of midwives shall be guilty of a misdemeanour, and shall be liable to be imprisoned with or without hard labour for any term not exceeding 12 months.

13. *Prosecution of offences.*—Any offences under this Act punishable on summary conviction may be prosecuted by the local supervising authority.

The expenses of any such prosecution shall be defrayed by the council of the county or county borough in which the prosecution takes place.

14. *Appeal.*—Where any woman deems herself aggrieved by any determination of any court of summary jurisdiction under this Act, such woman may appeal therefrom to the court of quarter sessions.

15. *Expenses of local supervising authority.*—Any expenses under this Act payable by the council of a county or county borough shall be defrayed out of the county fund or out of the borough fund or borough rate, as the case may be.

16. *Act not to apply to medical practitioners.*—Nothing in this Act respecting midwives shall apply to legally qualified medical practitioners.

17. *Extent of Act and action by English Branch Council.*—This Act shall not extend to Scotland or Ireland.

The General Medical Council shall act by the English Branch Council, which for all purposes of this Act shall occupy the place of the General Medical Council.

18. *Definitions.*—In this Act—

The term "midwife" means a woman who is certified under this Act.

"Central Midwives Board" means the Board constituted under this Act for the purpose of carrying out the provisions of this Act.

# ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN extraordinary meeting of the Comitia was held on Tuesday, Feb. 18th, Sir WILLIAM SELBY CHURCH, the President, being in the chair.

A gracious reply was received from His Majesty the King, thanking the President and Fellows of the College for the resolution adopted at the last meeting and for the loyal words in which they alluded to His Majesty.

The PRESIDENT announced that in consequence of the Coronation the Croonian Lectures would be given a week earlier than was announced in the calendar (the revised dates are June 10th, 12th, 24th, and 26th). The President also announced that an intimation had been received from the Privy Council to the effect that the Egyptian Medical Congress would be held from Sept. 19th–23rd.

The following communications were received: (1) From the Secretary of the College of Surgeons reporting certain proceedings of their Council on Feb. 13th; (2) from the Sanitary Institute, inviting the College to send delegates to the annual congress to be held at Manchester on Sept. 9th (the President nominated Dr. G. V. Poore and Dr. W. H. Corfield); and (3) from the Clerk to the Management Committee of the Chelsea Physic Garden, inviting the College to appoint a member of the committee for a term of four years (the President nominated Dr. W. Cayley).

The PRESIDENT then dissolved the Comitia.

# VITAL STATISTICS.

## HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8456 births and 6451 deaths were registered during the week ending Feb. 15th. The annual rate of mortality in these towns, which had been 17·7, 17·9, and 20·6 per 1000 in the three preceding weeks, further rose last week to 22·6 per 1000. In London the death-rate was 25·9 per 1000, while it averaged 21·2 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 11·7 in Hornsey, 12·2 in Handsworth, 12·5 in East Ham, 13·4 in Barrow-in-Furness, 13·9 in Walthamstow, and 14·1 in Portsmouth and in Reading; the highest rates were 26·7 in Norwich, 26·8 in Liverpool, 27·3 in South Shields, 27·5 in Preston, 29·7 in St. Helens, 29·9 in Rhondda, 31·0 in Merthyr Tydfil, and 31·3 in Burnley. The 6451 deaths in these towns last week included 525 which were referred to the principal zymotic diseases, against 444 and 584 in the two preceding weeks; of these 525 deaths 134 resulted from whooping-cough, 124 from measles, 76 from diphtheria, 60 from small-pox, 52 from scarlet fever, 46 from "fever" (principally enteric), and 33 from diarrhœa. No death from any of these diseases occurred last week in Hastings, Portsmouth, Ipswich, Devonport, Handsworth, Smethwick, Bury, Rochdale, or Barrow-in-Furness; while the highest zymotic death-rates were recorded in Tottenham, Hanley, Birmingham, Leicester, St. Helens, Burnley, Stockton-on-Tees, and South Shields. The greatest proportional mortality from measles occurred in Croydon, Southampton, St. Helens, Warrington, Burnley, Blackburn, Huddersfield, Sheffield, and York; from diphtheria in Hanley and St. Helens; from whooping-cough in Leyton, Birmingham, Aston Manor, Liverpool, Leeds, Stockton-on-Tees, South Shields, and Rhondda; and from "fever" in Sunderland. The mortality from scarlet fever showed no marked excess in any of the large towns. Of the 60 fatal cases of small-pox last week 54 belonged to London, three to Tottenham, and one each to West Ham, East Ham, and Plymouth. There were 1185 cases of small-pox under treatment in the Metropolitan Asylums hospitals on Saturday, Feb. 15th, against 870, 1135, and 1102 at the end of the three preceding weeks; 390 new cases were admitted during the week, against 204, 499, and 287 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had decreased from 3137 to 2500 on the seven preceding Saturdays, further declined to 2455 at the end of last week; 260 new cases were admitted during the week, against 299, 226, and 277 in the three preceding weeks. *Influenza was certified as the primary cause* of 51 deaths in London last week, against 18, 26, and 40 in the diseases were recorded in Chelsea, Hampstead, Wandsworth, Deptford, Greenwich, and Lewisham; and the highest rates in Fulham, St. Pancras, Islington, Holborn, Finsbury, and Stepney. The 201 fatal cases of small-pox considerably exceeded the numbers in recent months; the greatest proportional mortality from this disease occurred in the City of Westminster, St. Pancras, Holborn, Finsbury, and Stepney. The 234 deaths from measles showed a slight decrease from the average number in the corresponding periods of the 10 preceding years; among the various metropolitan boroughs this disease was proportionally most fatal in Paddington, Kensington, Hammersmith, Fulham, and Islington. The 67 fatal cases of scarlet fever showed a marked decline from the corrected average number; the greatest proportional fatality from this disease occurred in Fulham, St. Pancras, Southwark, and Bermondsey. The 132 deaths from diphtheria were 87 below the average number in the corresponding periods of the 10 preceding years; among the various metropolitan boroughs this disease was proportionally most fatal in Fulham, St Pancras, Islington, Hackney, Finsbury, and Bethnal Green The 111 fatal cases of whooping-cough were equal to only about one-third of the corrected average number; this disease showed the highest proportional fatality in Shoreditch, Bethnal Green, Stepney, Poplar, and Lewisham. The 36 deaths referred to enteric fever were 30 below the average in the corresponding periods of the 10 preceding years; among the various metropolitan boroughs the "fever" death-rate was highest in St. Marylebone and St. Pancras. The 58 fatal cases of diarrhœa showed a considerable decline from the corrected average number; the greatest proportional fatality from this disease occurred in Hammersmith, Chelsea, the City of Westminster, Finsbury, Shoreditch, and Bermondsey. In conclusion, it may be stated that the aggregate mortality in London last month from these diseases was nearly 15·6 per cent. below the average.

Infant mortality in London during January, measured by the proportion of deaths among children under one year of age to registered births, was equal to 121 per 1000. The lowest rates of infant mortality were recorded in Fulham, St. Marylebone, Hampstead, Camberwell, Deptford, and Lewisham; and the highest rates in Paddington, Stoke Newington, the City of London, Shoreditch, Poplar, and Southwark.

## THE SERVICES.

### ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Staff Surgeons: E. H. Meaden to the *Bulwark* and A. J. Pickthorn to the *Ganges*. Surgeons: J. A. L. Campbell to the *Bulwark*; R. A. Kirby to the *Vernon*; A. Gaskell to Chatham Hospital, and C. R. Rickard to the *Boscawen*.

### ROYAL ARMY MEDICAL CORPS.

*1st Life Guards:* Major Nicholas C. Ferguson, C.M.G., from Royal Army Medical Corps, to be Surgeon-Major. Dated Feb. 15th, 1902

Lieutenant-Colonel John McLaughlin retires on retired pay on account of ill-health. Dated Feb 19th, 1902.

The undermentioned Majors to be Lieutenant-Colonels (dated Feb. 4th, 1902):—William Dick, Francis John Jencken, Francis Harper Treherne, Samuel Foster Lougheed, C.M.G., John Courtenay Haslett, Herbert James Barratt, Herbert Ellison Rhodes James, Henry Octavius Trevor, Alexander Fraser Russell, C.M.G., Robert James Leech Fayle, D.S O., John William Jerome, William Watson Pike, D.S.O., Lewis Haywood, James Murray Irwin, Ernest Octavius Wright, Francis Henry Merceron Burton, Charles Edward Nichol, and William Albert Morris.

Surgeon-Captain J. H. Stacey, Army Medical Reserve, assumes the duties of assistant to the medical officer in charge at Norwich. Lieutenant W. J. S. Harvey has been posted to the depôt at Aldershot for duty. Surgeon-Lieutenant Davies has left Aldershot for South Africa for duty with mounted infantry.

### IMPERIAL YEOMANRY.

Dorset (Queen's Own) Surgeon-Captain W. Rendall resigns his commission, and is granted the rank of Surgeon-Major, with permission to wear the uniform of the regiment, on retirement. Surgeon-Lieutenant Lloyd John Hollis Oldmeadow, from 2nd Volunteer Battalion the Royal Fusiliers, to be Surgeon-Lieutenant. Charters James Symonds to be Surgeon-Lieutenant.

### VOLUNTEER CORPS.

*Royal Garrison Artillery (Volunteers):* 1st Ayrshire and Galloway: Surgeon-Major J. Thomson to be Surgeon-Lieutenant-Colonel. 1st Worcestershire: Surgeon-Lieutenant A. C Oldham to be Surgeon-Captain. *Rifle:* 1st Dumbartonshire: Surgeon-Lieutenant J. R. Foulds resigns his commission. 1st Volunteer Battalion the Buffs (East Kent Regiment): Surgeon-Lieutenant L. A. E. Larking to be Surgeon-Captain. 2nd Cadet Battalion the King's (Liverpool Regiment): the appointment of Henry James Bailey as Surgeon-Lieutenant, announced in the *London Gazette* of Jan. 17th, 1902, is cancelled at his own request.

### SOUTH AFRICAN WAR NOTES.

Lieutenant M. F. Foulds, R.A.M.C. (invalided), Lieutenant-Colonel S. Townsend, R.A.M.C., Civil Surgeon W. B. Bannerman, Civil Surgeon R. Brown, Civil Surgeon A. J. Knowlton, Civil Surgeon Ganvie (invalided), and Civil Surgeon I. Blore (invalided), are returning to England in the *Avoca* which left Port Natal on Feb. 7th.

Civil SurgeonPenn is reported to be improving (Feb. 13th).

### A FRENCH SURGEON'S VISIT TO THE EXPEDITIONARY FORCE HOSPITALS AT PEKING.

In the course of what he modestly styles "une simple promenade" through the several hospital establishments of the international expeditionary force at Peking in January, 1901, Dr. Machenaud, principal medical officer of the French military hospital in the Chinese capital, took note of many interesting details, and has recorded his impressions in a paper which appears in the *Archives de Médecine Navale* for last December. The first hospital visited was that belonging to the American troops who were cantoned in the Palace of Agriculture, opposite the Palace of Heaven, which was occupied by the British, the terminus of the Peking and Tientsin railway separating the two cantonments. The American hospital was accommodated suitably enough in one of the pavilions of the palace, and contained 100 beds, the staff consisting of Chief Surgeon-Major Yves and two assistants. On the day Dr. Machenaud paid his visit there were 43 patients, and among them he was told that there was not a single case of typhoid fever. The establishment and everything connected with it seem to have met with the visitor's unqualified admiration, the installation and equipment being as near perfection as possible. In the first place Dr. Machenaud was shown the dispensary, and the drugs, which were all compressed, were found to be in perfect condition; chloral and salol alone, amongst a complete assortment of medicines, being found liable to deterioration after the opening of their flacons. In a little case, the same size as the volume containing the Regulations for his service, Dr. Machenaud saw the pharmaceutical and surgical supply of a battalion for three months. In addition to thermometer, hypodermic syringe, "and all the usual instruments," there were about 40 little flasks full of compressed tablets, besides "pastilles" for subcutaneous injection. Nothing could be more portable. The case might be carried in the pocket of the medical officer who could not but feel satisfaction at having an adequate armament available at the shortest notice. Compressed tampons, sterilised silk and catgut, an apparatus for distilling and aerating water on a large scale, a portable kitchener, portable table equipment, a petroleum stove for keeping foods and drinks warm, folding chairs, besides several other things which struck the visitor as exceptionally meritorious, are described at considerable length but can only be alluded to here. Dr. Machenaud was also favourably impressed by a hypodermic syringe which certainly seems well adapted for the rough usage of military service. It consists of two metal cylinders, one hollow and the other solid. The latter fits the former accurately and is graduated to show the amount of fluid injected. There is no glass to break or piston to get out of order, and perfect disinfection can be assured by plunging into boiling water. The British "ambulance," which was the objective of Dr. Machenaud's second visit, had the advantage of being splendidly housed, but the visitor has little to say that is complimentary. It is true that he deals chiefly in generalities, but evidently our hospital at Peking was far from perfect in his estimation. The material sent from India appeared to him to be incongruous (*disparate*) and to be

## ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING JANUARY, 1902.

(*Specially compiled for* THE LANCET.)

| CITIES AND BOROUGHS. | Estimated population in the middle of 1902 | NOTIFIED CASES OF INFECTIOUS DISEASE. | | | | | | | | | | | DEATHS FROM PRINCIPAL INFECTIOUS DISEASES. | | | | | | | | | | | Deaths from all causes. | Death rate per 1000 living. | Deaths of Infants under one year to 1000 births. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Small pox. | Scarlet fever. | Diphtheria * | Typhus fever. | Enteric fever. | Other continued fevers. | Puerperal fever. | Erysipelas. | Cholera. | Total. | Annual rate per 1000 persons living | Small pox. | Measles. | Scarlet fever. | Diphtheria.* | Whooping-cough | Typhus fever. | Enteric fever. | Other continued fevers | Diarrhœa. | Total. | Annual rate per 1000 persons living. | | | |
| LONDON... ... ... ... ... ... ... | 4,579,107 | 1385 | 1718 | 1144 | — | 210 | — | 42 | 527 | — | 5026 | 11·4 | 201 | 234 | 67 | 132 | 111 | — | 36 | — | 53 | 839 | 1·9 | 8021 | 18·3 | 121 |
| *West Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Paddington ... ... ... ... ... ... | 145,107 | 21 | 31 | 40 | — | 5 | — | — | 15 | — | 112 | 8·0 | 2 | 21 | 1 | 3 | — | — | 2 | — | 2 | 31 | 2·2 | 222 | 16·0 | 173 |
| Kensington ... ... ... ... ... ... | 177,605 | 17 | 40 | 27 | — | 8 | — | 2 | 23 | — | 117 | 6·9 | 2 | 21 | 4 | 5 | — | — | 2 | — | — | 34 | 2·0 | 263 | 15·4 | 132 |
| Hammersmith ... ... ... ... ... | 114,210 | 29 | 29 | 14 | — | 1 | — | — | 18 | — | 91 | 8·3 | 6 | 14 | — | 2 | — | — | — | — | 3 | 25 | 2·3 | 213 | 19·5 | 128 |
| Fulham ... ... ... ... ... ... ... | 143,102 | 21 | 38 | 48 | — | 2 | — | — | 8 | — | 117 | 8·5 | 2 | 15 | 5 | 7 | 2 | — | 2 | — | 3 | 36 | 2·6 | 242 | 17·6 | 105 |
| Chelsea ... ... ... ... ... ... ... | 74,018 | 5 | 17 | 5 | — | 3 | — | — | 2 | — | 32 | 4·5 | — | 1 | — | 1 | 1 | — | 1 | — | 2 | 6 | 0·8 | 137 | 19·3 | 106 |
| City of Westminster ... ... ... ... | 180,800 | 92 | 40 | 27 | — | 11 | — | 1 | 17 | — | 188 | 10·8 | 16 | 14 | — | 3 | 1 | — | — | — | 5 | 39 | 2·2 | 336 | 19·4 | 125 |
| *North Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| St. Marylebone ... ... ... ... ... | 132,009 | 41 | 29 | 31 | — | 5 | — | 4 | 20 | — | 130 | 10·3 | 4 | 6 | 2 | 2 | 1 | — | 3 | — | 2 | 20 | 1·6 | 243 | 19·2 | 88 |
| Hampstead ... ... ... ... ... ... | 83,743 | 3 | 35 | 9 | — | 4 | — | 1 | 3 | — | 55 | 6·3 | 1 | — | 1 | 1 | — | — | 2 | — | 1 | 6 | 0·7 | 96 | 12·0 | 71 |
| St. Pancras ... ... ... ... ... ... | 235,596 | 102 | 107 | 85 | — | 9 | — | 2 | 26 | — | 331 | 14·7 | 17 | 13 | 6 | 11 | 5 | — | 4 | — | 2 | 58 | 2·8 | 417 | 18·5 | 137 |
| Islington ... ... ... ... ... ... ... | 337,263 | 45 | 142 | 134 | — | 18 | — | 1 | 29 | — | 369 | 11·4 | 7 | 33 | 7 | 20 | 8 | — | 4 | — | 5 | 84 | 2·6 | 620 | 19·2 | 123 |
| Stoke Newington ... ... ... ... ... | 61,700 | 15 | 30 | 14 | — | 1 | — | 1 | 4 | — | 65 | 13·1 | 2 | 1 | 1 | — | 1 | — | — | — | 1 | 6 | 1·2 | 77 | 15·5 | 169 |
| Hackney ... ... ... ... ... ... ... | 221,926 | 58 | 85 | 73 | — | 11 | — | 5 | 37 | — | 269 | 12·6 | 11 | 9 | 1 | 10 | 5 | — | — | — | 1 | 37 | 1·7 | 363 | 17·1 | 116 |
| *Central Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Holborn ... ... ... ... ... ... ... | 58,535 | 109 | 13 | 15 | — | 4 | — | 1 | 9 | — | 151 | 26·9 | 27 | — | 2 | 2 | 2 | — | 1 | — | — | 34 | 6·1 | 134 | 23·9 | 130 |
| Finsbury ... ... ... ... ... ... ... | 100,487 | 44 | 34 | 31 | — | 4 | — | — | 9 | — | 122 | 12·7 | 8 | 9 | — | 4 | 3 | — | 2 | — | 2 | 28 | 2·9 | 231 | 24·0 | 124 |
| City of London ... ... ... ... ... | 25,693 | 7 | 12 | 3 | — | — | — | — | 2 | — | 24 | 9·8 | 2 | — | — | 1 | — | — | — | — | — | 3 | 1·2 | 56 | 22·8 | 220 |
| *East Districts* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Shoreditch ... ... ... ... ... ... | 117,980 | 83 | 29 | 20 | — | 7 | — | — | 19 | — | 158 | 14·0 | 3 | 10 | — | 1 | 7 | — | — | — | 4 | 25 | 2·2 | 240 | 21·2 | 169 |
| Bethnal Green ... ... ... ... ... | 129,889 | 53 | 53 | 57 | — | 5 | — | 2 | 19 | — | 194 | 15·6 | 5 | 7 | 3 | 5 | 8 | — | 1 | — | 1 | 30 | 2·4 | 279 | 22·4 | 134 |
| Stepney ... ... ... ... ... ... ... | 300,551 | 235 | 76 | 82 | — | 21 | — | 3 | 34 | — | 451 | 15·6 | 33 | 10 | 5 | 10 | 12 | — | 3 | — | 3 | 76 | 2·6 | 608 | 21·1 | 106 |
| Poplar ... ... ... ... ... ... ... | 169,214 | 73 | 92 | 48 | — | 20 | — | 2 | 13 | — | 248 | 15·3 | 11 | 3 | 1 | 6 | 14 | — | 2 | — | 1 | 38 | 2·3 | 323 | 19·9 | 143 |
| *South Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Southwark ... ... ... ... ... ... | 206,825 | 79 | 96 | 52 | — | 10 | — | — | 41 | — | 278 | 14·0 | 13 | 7 | 5 | 7 | 5 | — | 1 | — | 3 | 41 | 2·1 | 397 | 20·0 | 140 |
| Bermondsey ... ... ... ... ... ... | 130,218 | 42 | 61 | 20 | — | 10 | — | 2 | 16 | — | 151 | 12·1 | 3 | 3 | 4 | 3 | 4 | — | — | — | 3 | 20 | 1·6 | 266 | 21·3 | 136 |
| Lambeth ... ... ... ... ... ... ... | 305,102 | 61 | 90 | 49 | — | 17 | — | 5 | 23 | — | 245 | 3·4 | 11 | 10 | 4 | 6 | 5 | — | 2 | — | 4 | 42 | 1·4 | 552 | 18·9 | 120 |
| Battersea ... ... ... ... ... ... ... | 171,401 | 45 | 94 | 28 | — | 5 | — | 2 | 17 | — | 191 | 11·6 | 6 | 7 | 3 | 1 | 2 | — | — | — | 1 | 20 | 1·2 | 249 | 15·1 | 109 |
| Wandsworth ... ... ... ... ... ... | 241,810 | 24 | 68 | 54 | — | 7 | — | 4 | 25 | — | 182 | 7·8 | 5 | 6 | 1 | 7 | 2 | — | — | — | 2 | 23 | 1·0 | 315 | 13·6 | 118 |
| Camberwell ... ... ... ... ... ... | 262,775 | 26 | 166 | 58 | — | 8 | — | — | 33 | — | 291 | 11·5 | 1 | — | 5 | 7 | 10 | — | 2 | — | 4 | 29 | 1·2 | 409 | 16·2 | 79 |
| Deptford ... ... ... ... ... ... ... | 111,577 | 16 | 82 | 27 | — | 4 | — | — | 26 | — | 155 | 14·5 | — | — | 2 | 2 | 1 | — | 2 | — | 1 | 8 | 0·7 | 167 | 15·6 | 93 |
| Greenwich ... ... ... ... ... ... | 93,013 | 11 | 45 | 20 | — | — | — | — | 12 | — | 88 | 9·4 | — | 3 | 2 | 2 | 2 | — | — | — | — | 9 | 1·0 | 109 | 18·0 | 137 |
| Lewisham ... ... ... ... ... ... | 132,432 | 2 | 51 | 49 | — | 5 | — | 3 | 16 | — | 126 | 9·9 | — | 1 | — | 2 | 8 | — | — | — | 1 | 12 | 0·9 | 193 | 15·2 | 104 |
| Woolwich ... ... ... ... ... ... ... | 119,566 | 22 | 28 | 23 | — | 3 | — | 1 | 11 | — | 88 | 7·7 | 3 | 10 | 2 | 1 | 2 | — | — | — | 1 | 19 | 1·7 | 204 | 17·8 | 123 |
| Port of London ... ... ... ... ... | — | 4 | — | 1 | — | 2 | — | — | — | — | 7 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

* Including membranous croup.

is probable that the prognosis in this variety of valvular disease depends as much upon the condition of the heart-wall as upon the size of the mitral orifice. If the cardiac muscle remains healthy it is possible not only for life to be prolonged, but for the man or woman in whom the mitral orifice is narrowed to live an active life. For example, in an ostler, aged 64 years, who was busy at his work to within a few days of his death, which was caused by acute bronchitis, I found a mitral orifice which would only admit one finger.

I am, Sirs, yours faithfully,

THEODORE FISHER.

Feb. 18th, 1902.

*To the Editors of* THE LANCET.

SIRS,—The "preliminary note" suggesting the probable advisability of treating certain hopeless cases of mitral stenosis by dividing the constriction, which Sir Lauder Brunton published in THE LANCET of Feb 8th, p. 352, merits, I think, serious consideration at the hands of experienced surgeons. In THE LANCET of April 2nd, 1898 (p. 927), I concluded a communication on Cardiac Peristalsis with these words, "I anticipate that with the progress of cardiac surgery some of the severest cases of mitral stenosis will be relieved by slightly notching the mitral orifice, and trusting to the auricle to continue its defence." Believing, as I there maintained, that the auricle, in cases of mitral stenosis has an important rôle in preventing regurgitation at the mitral, it seems to me probable that slightly notching the valve, though increasing the incompetence at the orifice, would not result in a greurgitation comparable in evil to the advantages gained by facilitating the onflow. It is, however, very important that the orifice should not be cut too freely. Sufficient stenosis should remain to render a prolonged contraction of the auricle necessary to fill adequately the ventricle, so that the auricular contraction may continue into ventricular-systolic time and help to prevent regurgitation at the mitral orifice. The question which Sir Lauder Brunton raises whether to elongate the natural opening or cut the valves transversely is a problem somewhat similar to "which foot should be drawn down in podalic version?" Probably in practice they may be congratulated who succeed with either.—I am, Sirs, yours faithfully,

Mentone, Feb. 12th, 1902. D. W. SAMWAYS.

## UREA IN THE TREATMENT OF TUBERCULOSIS.

*To the Editors of* THE LANCET.

SIRS,—The communications from Dr. H. Harper in THE LANCET of March 9th (p. 694), June 15th (p. 1672), and Dec. 7th (p. 1567), 1901, detailing his experience in the use of urea in tuberculosis have greatly interested me, especially as this same treatment was suggested, and to a certain extent employed, by Dr. Samuel G. Dixon of this city several years ago. Like Dr. Harper, Dr. Dixon appreciated the fact that certain animals and persons that had not had tuberculosis and that were not inoculated against it possessed a positive immunity to this disease and in seeking the reason for this independently observed that gout and tuberculosis do not often occur simultaneously in the same subject. That this latter fact had already been noted by Sir Dyce Duckworth, and perhaps by others, seems to have escaped the attention of both investigators at the time they were respectively convinced of the antagonism between the tuberculous and the gouty or rheumatic diathesis, though it must be remembered that Dr. Dixon referred to the first results of his experiments based on the theory of this antagonism very soon after the publication of Sir Dyce Duckworth's "Treatise on Gout," from which Dr. Harper quotes, and that in these experiments he used in turn each member of the group—creatin, urea, uric acid, taurin, &c.[1] Later, and because of its close resemblance to urea in formula, he used a vegetable derivative, thiosinamin, in combination and alternation with the above-mentioned nitrogenous metabolic products. It may be interesting to Dr. Harper and other readers of THE LANCET to know that Dr. Dixon always administered these substances subcutaneously and in comparatively small doses. Whether the larger amounts which seem to have been necessary when the urea was given by the mouth to Dr. Harper's patients were partially wasted in the economy because of the action of the digestive juices or of changes during absorption is a question for future investigation.

In addition to his successful experiments upon animals most favourable results were secured in several cases of long-continued and intractable disease, such as psoriasis, acne pustulosa, and lupus.[2] Unfortunately, the only cases of pulmonary tuberculosis in which he ventured to administer the nitrogenous substances were far advanced and of mixed infection, consequently negative rather than positive results were noted. This serves to confirm Dr. Harper's opinion concerning the administration of urea in such cases. Just at this time the election of Dr. Dixon to the presidency of the Academy of Natural Sciences of Philadelphia and other important offices and his consequent duties compelled him to postpone his experimental studies and up to the present time no leisure or opportunity for resuming them has come to him.

The above statements and the references noted will, I trust, be sufficient to establish the priority of Dr. Dixon in this line of work, though I am sure that the following quotation from one of his papers[3] will convince your readers not only of his appreciation of the breadth and extent of the problems involved, but also that no one is more ready than he to congratulate Dr. Harper upon his apparent success and to encourage his future labour in this direction:—

> However, I think that sufficient has been said to open up the very broad question as to whether the conditions that predispose to or favour the development of tuberculosis are not those of faulty, deficient, or abnormal nitrogenous metabolism, and whether the truly scientific method of obtaining immunity against this dread malady will not necessarily come through a thorough understanding of the processes involved and the changes that take place in the various cells and tissues of the body in so far as they are related to the assimilation, secretion, and excretion of nitrogen and nitrogenous compounds. Believing that this is largely so I would, therefore, suggest that future work carried on along the following lines promises to return good results and to lead to substantial ground on which we may base our hopes of eventually securing positive immunity. Such work should include, I think—
>
> 1. A systematic investigation as to the amount of nitrogen secreted by the healthy, the tuberculous, and the lithæmic, and the relative proportions of the various nitrogenous products in each case.
> 2. A tabulation of the clinical results from the systematic *hypodermic* administration of tuberculin, nucleins, and members of the amide group of metabolic products to healthy, tuberculous, and lithæmic subjects, preferably the same, if possible, as those in the first series of experiments; the results to include full reports as to temperature, secretion and excretion of nitrogen and nitrogen compounds, increase or decrease in white blood corpuscles, condition of subject, &c. A considerable amount of this work has been done but far more is needed. Collateral experiments upon animals would also have their place here and would be of value.
> 3. Experimentation as to special treatment or diets as would be indicated by a study of the results of the above series of experiments.
>
> Confident that such a work as indicated will be rich in returns to those that undertake it, and trusting that others may be induced by these remarks to join with me in carrying it out, either in general or in detail, I am sure that in whatever way immunity against tuberculosis is eventually secured it will be in very truth a blessing to humanity almost inconceivable and which will be measured least of all by the undying fame of its discoverers.

I am, Sirs, yours faithfully,

SENECA EGBERT, M.D.,

Professor of Hygiene in the Medico-Chirurgical College of Philadelphia, U.S.A.

Philadelphia, Jan. 11th, 1902.

## THE DECEASED WIFE'S SISTER BILL.

*To the Editors of* THE LANCET.

SIRS,—I beg to urge the medical profession to show more interest in the Deceased Wife's Sister Bill. The influence of the profession is an acknowledged factor in public life, and I feel it to be a public duty to press for the removal of an awkward and useless clause in matrimonial law where, there being no blood relationship, conjugal union would be not only desirable but beneficial to the community, and to place the bar of prohibition against all blood-marriages—cousins within the third and fourth degree. I believe we should thus improve the status of the step mother and secure more satisfactory results from second marriages. Furthermore, by abolishing blood-marriages the constitution of many families would become amended.

I am, Sirs, your faithfully,

Stockport, Feb. 11th, 1902. J. GOOD.

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[1] Reaction of the Amide Group upon the Wasting Animal Economy, Philadelphia Times and Register, September and October, 1890; also Proceedings of the Philadelphia Academy of Natural Sciences, Nov. 18th 1890

[2] Proceedings of the Academy of Natural Sciences of Philadelphia Feb. 21st, 1893.

[3] Proceedings of the Academy of Natural Sciences, Philadelphia Nov. 6th, 1894; reprinted in the Therapeutic Gazette, Dec. 15th, 1894.

composed of old trash (*vieilleries*). The ventilation of the wards was defective and the warming by means of stoves could not be commended. Dr. Machenaud also says that there was no operation room (*salle de chirurgie*), and adds that no one showed him a bath-room, or a kitchen, or any reserve of material In the Japanese hospital, with a strength of 3500 men, there were only 33 patients, mostly convalescents from typhoid fever and bronchitis. The equipment, surgical as well as medical, was very complete. all the instruments and appliances having been manufactured in Japan, although the drugs were imported from Hamburg. Hory's apparatus for detecting cheating in recruits by means of prismatic glasses and coloured letters was included in the ophthalmic armament, which in other respects was very well supplied. When leaving the hospital Dr. Machenaud and his companions were much interested in the care their Japanese *confrères* took to wipe their feet on wet mats at the doors of the building. These mats, it seemed, were impregnated with a germicide solution, and the object of the attrition was to free the feet from any noxious microbes that might have been picked up while walking the hospital. The fourth and last establishment on the list was the German Field Hospital, No. 2. Here, in the opinion of the French visitor, everything was comparatively good, although not equal to the perfection of the American ambulance.

### INDIAN MEDICAL SERVICE.

The following is a list of the candidates for His Majesty's Indian Medical Service who were successful at the competitive examination held in London on Feb 10th and following days 30 candidates have been passed, instead of 17 as previously announced.

| | Marks. | | Marks. |
|---|---|---|---|
| Macpherson, J. | 3210 | Halliday, H. | 2629 |
| Ross, W. C. | 3086 | Wilson, F. E. | 2610 |
| Kunhardt, J. C. G. | 3051 | Paymaster, B. B. | 2577 |
| Franklin, G. D. | 3026 | Crossle, H. | 2560 |
| Gill, J. H. | 3011 | Cook, L. | 2546 |
| Lloyd, R.A. | 2878 | Forrest, J. | 2490 |
| Barnardo, F. A. F. | 2870 | Scott, L. B | 2483 |
| Gourlay, C. A. | 2853 | Ferriss, J. H. | 2456 |
| Walker, E. A. | 2750 | Patton, W. S. | 2445 |
| Sime, F. W. | 2746 | Mackworth, N. W. | 2409 |
| Hirsch, L. L. | 2713 | Trafford, W. L. | 2393 |
| Ross, H. | 2684 | Rundall, L. | 2365 |
| Batty, H. E. J. | 2666 | Maunsell, E C. C. | 2342 |
| Davys, G J. | 2656 | Robertson, G. C. I. | 2277 |
| Betts, A. J. V. | 2650 | O'Keefe, D. S. A. | 2062 |

### THE NEW DESIGNATION FOR THE VOLUNTEER MEDICAL STAFF CORPS.

A correspondent writes: "There are, according to the Army List (January), one artillery volunteer medical officer, one engineer volunteer medical officer, one yeomanry medical officer, and eight regimental volunteer medical officers serving with the Royal Army Medical Corps, as against two only of the Volunteer Medical Staff Corps. Surely if the services of the Volunteer Medical Staff Corps merits its new designation and change of titles the other medical officers have earned for themselves and their colleagues—if the change from a professional to a combatant title is a compliment—a right to omit, if only for the sake of uniformity, the prefix of 'surgeon' when describing their rank."

### MEMORIAL TO THE LATE SURGEON-GENERAL HARVEY, C B.

It has been decided to start a subscription list for a memorial to the late Surgeon-General Robert Harvey, C.B. Director-General, Indian Medical Service, but the exact form of the memorial will not be decided till the subscription list is complete In the meantime subscriptions should be sent to the Editor, *Indian Medical Gazette*, care of Messrs. Thacker, Spink, and Co., Calcutta, by whom they will be duly acknowledged.

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SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH.—The annual meeting of the subscribers to this institution was held on Feb. 7th, under the presidency of Mr. J. C. Williams The medical report stated that 1349 in-patients had been admitted during 1901, an increase of 67 as compared with 1900 The out-patients numbered 2795, as against 2654 in the previous year. During the year 51 nurses and 282 patients were sent to the Pearn Convalescent Home. The average daily number of occupied beds in the hospital was 109. The financial statement showed that the total income amounted to £7453 and the total expenditure to £7706

# Correspondence.

"Audi alteram partem."

## SURGICAL OPERATION FOR MITRAL STENOSIS.

*To the Editors of* THE LANCET.

SIRS,—I should feel very keenly the disapprobation of my suggestion which your leading article of Feb. 15th seems to express were it not that it seems to me that it has been written under a certain amount of misapprehension in regard both to my object and experiments. I fear my preliminary note to THE LANCET of Feb. 8th has not been sufficiently explicit, for I have no intention whatever of leaving to other workers to prove or disprove the value of the treatment I have suggested I have just obtained a renewal of my licence and certificates and hope ere long to put my idea to experimental proof on the living animal, but "art is long and time is fleeting," and in the meanwhile many patients are suffering and dying from mitral stenosis. I cannot hope from my own experiments alone to prove the advisability of an operation against which, as stated in your leader, so many *a priori* arguments can be brought, and therefore hope that others will take up the subject as well as myself. I am quite aware of the responsibility that rests upon me for my suggestion, but I must state that while my experiments on the valves were made only on dead animals my knowledge of the manipulation of the living heart and of the effect upon it of wounds and punctures is based upon very numerous experiments made at intervals during the last 35 years. Some of these at least have, as I believe, borne good fruit. I do not wish to claim any credit which does not belong to me, and if I am wrong I shall be glad to be corrected, but I believe that the use of strychnine as a cardiac stimulant which is now so common in this country, although still neglected abroad, dates from an experiment made by Dr Cash and myself on the injection of strychnine into the interior of the frog's heart.[1] This showed so clearly the stimulating effect of the drug upon the heart that I have lectured upon it in my course of pharmacology and therapeutics at St. Bartholomew's Hospital every year since, and I think it is from this hospital that the practice of using strychnine both as a cardiac and respiratory stimulant has spread, with the result, as I believe, of saving many lives. I am, Sirs, yours faithfully,

Stratford place, W., Feb. 15th, 1902. LAUDER BRUNTON.

*To the Editors of* THE LANCET.

SIRS,—Referring to the preliminary note on the possibility of treating mitral stenosis by surgical methods by Sir Lauder Brunton in THE LANCET of Feb. 8th, p. 352, it may interest your readers to know that this suggestion was made by me to my colleague, Dr Lauriston Shaw, some years ago. I then went into the matter fully, both as to the surgical measures to be adopted and the physical conditions of the valve which seemed most suitable for such interference, and was quite prepared to act as soon as Dr. Shaw succeeded in finding a case likely to derive benefit. It was entirely due to his perhaps wise caution that the operation has not yet been performed by me. The method by which I proposed to divide the contracted valve through the ventricle was practically identical with that described by Sir Lauder Brunton. Personally I believe that the operation is feasible and, under certain circumstances, justifiable.

I am, Sirs, yours faithfully,
W. ARBUTHNOT LANE.

Cavendish-square, W , Feb. 15th 1902.

*To the Editors of* THE LANCET.

SIRS,—In your leading article upon the suggestion by Sir Lauder Brunton that it may be possible to operate upon some cases of mitral stenosis you give several reasons why such an operation is likely to fail. It seems to me that another may be added. Marked fibrosis of the cardiac muscle is found after death in many cases of mitral stenosis and it the recommending of a medical man save by another medical man. On this point, Sirs, I know that I cannot expect to obtain the agreement of a medical journal—*ex officio* you are bound to be against me; but you have many lay as well as professional readers, and to them I would say: Can you honestly think that it is not for the public interest—not for the "greatest good of the greatest number"—that information should be obtainable by uninstructed persons as to who are leading specialists, or, in the ordinary phrase, the "best people to go to" in this or that medical emergency—I will not even say the *best*, but *good* people? To whom could such information do harm? And is it not the case that the single argument against it is the unworthy argument above commented on—the argument that such information might not be unprejudiced. That, Sirs, can be urged against every kind of information whatsoever which is given to the public. It appears to me that each of such cases must be judged on its merits. Where a writer of reputation states publicly, assuming full responsibility for the statement, that such and such a fact is the case in his own personal experience he has a right, not, possibly, to his hearers' credence in the validity of his judgment, but to their belief in his *bona fides*

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[1] St. Bartholomew's Hospital Reports for 1881, vol. xvi.,

In all human probability I shall never write another word concerning the medical profession in the strain to which objection has been made; I trust, however, that you will allow me to put on record the above, I fear, rather lengthy expression of my views and the intention by which the passage in question was actuated.

I am, Sirs, yours faithfully,
HARRY QUILTER.
Manchester-square, W., 1902

### *To the Editors of* THE LANCET.

SIRS,—Will you be good enough to reprint in your columns the inclosed letter which I have received from the Editor of "What's What"? I am, Sirs, yours faithfully,
H. W. ALLINGHAM
Feb 14th, 1902

[INCLOSURE.]

*To Herbert William Allingham, Esq.*

DEAR SIR,—I am very sorry to learn that certain references to you by name in my work entitled "What's What" have caused you annoyance and that you consider them "calculated to damage you with the public and the medical profession' I sincerely regret their insertion and shall omit from any future edition any such references, and indeed all mention of your name whatsoever. I wish also to state that the references referred to were absolutely unauthorised by you or anyone on your behalf and that you were in no way whatever responsible for or a party to such reference I need hardly say that it was very far from my intention to cause you damage or vexation, and, as it appears that my words have unwittingly done so, I authorise you to make any use of this expression of regret which you may think fit.

Yours obediently,
HARRY QUILTER
Manchester-square, W., Feb. 12th, 1902.

### *To the Editors of* THE LANCET.

SIRS,—My attention having originally been drawn to a reference to me in "What's What" by a visitor dining in my own house, I of course at once took steps to obtain redress for the annoyance. I drew the attention of the Registrar of the Royal College of Physicians to the book in question with the statement that the reference to me had been inserted without my previous knowledge and consent and to my very great annoyance I further placed the matter in the hands of the Medical Defence Union to obtain either a withdrawal of the article, or, if that were not possible, an apology from the publishers and an undertaking that the objectionable article should not appear in any future issue of the book.

I have this morning received a letter from the solicitor to the Medical Defence Union stating that he had received from the publishers "what amounts practically to an undertaking that the paragraph shall not appear in any further edition," and also that he had after correspondence with Mr. Quilter received from him a letter giving "the same assurance that I gave to Mr. Watson Cheyne," and expressing his regret for the notice respecting myself.

With regard to the remarks which appeared in the *Medical Times and Hospital Gazette* of Feb 8th, in which the suggestion is made that the sympathy of their professional brethren can only be extended to those whose names were unwarrantably made use of after they have dissociated themselves 'from what the public at all events is certain to regard as professional advertisement," I may say that all the members of the medical profession whom I have met who have been aware of the publication in question have expressed their sympathy in advance and have not taken part in the unworthy insinuations of the editor of the *Medical Times and Hospital Gazette*.

I am, Sirs, yours faithfully,
R. PERCY SMITH.
Queen Anne-street, W., Feb. 19th, 1902.

### *To the Editors of* THE LANCET.

SIRS,—As one of the medical men referred to in the publication called "What's What," to which attention has been called by Mr. W. Watson Cheyne in THE LANCET of Feb. 15th, p. 475, I shall be obliged if you will afford me the opportunity of saying that as soon as the paragraph in question was brought to my notice I wrote to the editor (Jan. 2nd) asking him to withdraw my name from any subsequent edition or reprint. Mr. Quilter replied (Jan. 6th): "I am quite disposed to act in the manner most agreeable to you and shall therefore most probably delete the paragraphs in question." I am, Sirs, yours faithfully,
PERCY FLEMMING.
Wimpole-street, W., Feb. 15th, 1902.

### *To the Editors of* THE LANCET.

SIRS,—Mr. W. Watson Cheyne's letter in THE LANCET of Feb 15th, p. 475, demands some reply from me. I cannot congratulate Mr. Watson Cheyne upon the choice of language which he deems it dignified to employ. In my humble judgment he might with more effect have utilised argument rather than abuse He could, for example, instead of three verbose epistles, have stated the following salient facts.

"What's What" was published some two months ago. It professes to be a popular compendium of general information. It contains an appendix (B) headed "London Medical Men" This begins: "This paragram (*sic*) is medically speaking an unforgivable sin. For the strictest rules of etiquette forbid a doctor to advertise. ...... We do not suggest that the doctors named hereafter are superior to their fellows; we simply state that we have had experience of them as capable men in the various maladies alluded to." Then about two columns are devoted to recommending about a dozen physicians and surgeons, with their addresses, as "having a most wonderful ear for diagnosis"; as "second to none for general disease of a grave character"; as "a first-rate man"; as "most fashionable"; as "kind and genial"; as having "an enormous reputation"; and as being "a long bony Scotchman with a grey moustache and beard"; while "Mr —— and Mr. Watson Cheyne are both undoubtedly first-class surgeons, and especially known in abdominal surgery," and so on.

In the first place, then, Mr. Watson Cheyne's attempt to excuse his friend on the ground that he acted in "ignorance" is clearly baseless, except that his friend is evidently ignorant of the Addisonian meaning of a "paragram." Some weeks ago the medical press condemned this appendix. For weeks medical men have been writing to the *Medical Times*, and doubtless also to you, Sirs, on the subject of this blatant advertisement. As it became evident that the gentlemen named were unaware of the invidious position in which they had been placed the *Medical Times* called their attention to the matter. Far from implying that they had any "knowledge of, or complicity in, the publication"—an extraordinary misstatement on the part of Mr. Cheyne—we said that it was "of course to be expected that the persons puffed in this unsavoury manner are altogether innocent of any participation in it" Confident of that fact, we also spoke of 'the gross liberty that has been taken in thus, without their knowledge or sanction, recommending them and their addresses in this pitiably patronising production."

I believe that the other gentlemen referred to are grateful that their attention has been called to the matter. One of them has just sent me a printed and ample apology which he at once obtained from the editor of "What's What"—a dignified vindication which may be commended to Mr. Watson Cheyne who, while condoning his friend's "ignorance," considers it offensive and evidence of a "jealous and dirty mind" that his attention has been directed to the matter; and this in the face of his admission to his friend that the "paragram" may cause him "irreparable damage" Verily Mr Watson Cheyne has a humorous method of expressing his gratitude to those who have saved him from his friend.

I refrain from further comment, but there is a great principle underlying this particular case—that there cannot be one law of right or wrong for Cavendish-square

## ACUTE SUFFOCATIVE PULMONARY ŒDEMA.

*To the Editors of* THE LANCET.

SIRS,—Under the title of "Acute Suffocative Pulmonary Œdema" some cases have been described by Dr. J. L Steven and Mr. T. Lissaman in THE LANCET of Jan. 11th (p. 73) and Feb. 8th (p 366) respectively. Dr. Steven states that with the exception of Dieulafoy he is unable to find in medical literature any adequate or satisfactory description of the condition. Mr. Lissaman states that he could find no description in any of the works at his disposal. The purport of this note is to point out that the characteristic symptoms have been very clearly described by Laennec. I cannot do better than give the quotation in full:—

"*Acute Suffocative Catarrh of Adults and Children.*—This variety does not appear to me to have hitherto sufficiently engaged the attention of physicians. It is very rare in adults. In young children it is more common and is often in them confounded with croup. It is recognised by the tracheal rhonchus perceptible by the naked ear, and by the imminent suffocation and frequent lividity of the face. The stethoscope detects, over the whole chest, a loud mucous (and very liquid) rhonchus, and a very frequent and usually irregular action of the heart. The disease is an acute catarrh affecting the whole, or a very large portion, of the mucous membrane of the lungs. Its duration is from 24 to 48 hours, or at most some days. At the end of this time either the patient dies or expectoration commences and puts an end to the suffocation, and the disorder then follows the progress of a simple acute catarrh. When the suffocation lasts there is but little cough, and the expectoration, if any, is altogether pituitous or fluid: it retains this character for some days at least, and then becomes more abundant; but recovery sometimes takes place without its ever becoming properly mucous, in which case the disease is only a variety of the acute bronchial phlegmorrhagy or pituitous catarrh. When, on the other hand, the expectoration becomes mucous, the disease is simply an ordinary acute catarrh, in which the suffocative character of the invasion is caused by the extent of tumefaction of the bronchial membrane and *by the great quantity of fluid secreted at once.*"

In this description we note more especially the extreme rarity of the condition in adults, the imminent suffocation and lividity, the very frequent pulse, the short duration of the symptoms, and the expectoration of a fluid secretion with but little cough. These are the points on which the writers of the articles have laid stress.

I am, Sirs, yours faithfully,
A. G. AULD.
Henrietta-street, W., Feb 11th, 1902.

## THE DANGERS OF A COMMON COLD.

*To the Editors of* THE LANCET.

SIRS,—The letter on "The Dangers of a Common Cold" by Dr. R P. White, in THE LANCET of Feb. 8th, p. 402, sets forth the common experience of the profession with regard to its rapid spread whatever its real nature may be. But how can we explain the fact that some are so susceptible while others never suffer? Since I began to study diet I have been astonished at the number of cases of which I have heard, even of medical men, who, by eating less and not so often, have found that their susceptibility to colds has quite gone Such facts as I have met with point to the conclusion that it is the system overcharged with the products of food which was not required and can act only as a poison to every organ in the body, which is most susceptible to colds. If such be a correct conclusion it may help us to understand susceptibility as well as immunity, and it is a subject worthy of investigation.

I am, Sirs, yours faithfully,
JOHN HADDON, M.D. Edin.
Denholm, Hawick, Feb 11th 1902.

## "WHAT'S WHAT."

*To the Editors of* THE LANCET.

SIRS,—As you have devoted a column of your valuable journal to the exposition of Mr. W. Watson Cheyne's point of view, and the correspondence he had with me with regard to the Appendix on London Medical Men in "What's What," I trust that you will have the fairness to allow me a brief space in which to state my own point of view in this matter. And this is the more desirable since the question appears to be one which greatly exercises the medical profession, and concerning which, not Mr. Cheyne only, but several other surgeons have addressed to me complaints.

First allow me to state the exact offence complained of. It is that I have printed a favourable opinion, which I state is derived from personal experience, concerning some twelve surgeons and doctors, most of them being well-known specialists. I have expressly limited my words by the following qualifications: "We do not suggest that the doctors named hereafter are superior to their fellows; we simply state that we have had experience of them as capable men in the various maladies alluded to, and that we should not hesitate to employ them ourselves."

Now, Sirs, I venture to assert that a similar statement, so limited, made concerning the members of any other occupation or business known to men would not have been considered annoying, improper, or in any way objectionable. It must be remembered that with regard to none of the gentlemen mentioned *is* there a word calculated to give pain or to express disapproval. My remarks are entirely confined to saying—I have had experience which justifies me in stating that those who go to A, B, or C for the cure of such and such diseases will go to men who are capable in their profession.

Can it be maintained—excluding the question of medical etiquette, with which at present I have nothing to do, and with which, indeed, a layman has no right to concern himself,—can it be maintained, I say, that to afford the public such information is in itself improper? Consider the record of any great man's illness and the newspaper comments on the skill and devotion of this or that medical attendant. Has anyone ever asserted that such comments were objectionable? Consider the biographical sketches of men such as Sir Henry Thompson or the late Sir Andrew Clark, in which are recorded, not only their abilities, but the steps by which they attained eminence. Has any objection ever been taken to the publication of these, though their very essence is laudation? Why, then, should it be taken to the Appendix of "What's What," which is clearly conceived in the interests of the public? The answer is to be found in the last letter which you publish from Mr. Watson Cheyne—that to the *Medical Times*. In that letter Mr. Cheyne states, with pardonable heat, that he has been unjustly suspected of self-advertisement, and he asserts that there is no reason why he should be so suspected. I most heartily agree with him; I go still further and say that such suspicion is as ridiculous as it is unjust—is absolutely incorrect and entirely unwarranted. There is no shadow of ground which could justify such assertion.

But, Sirs, I must go a step further: not only is this the case with regard to Mr. Watson Cheyne, it is also the case with regard to Mr. Harry Quilter. I am not a stranger to the public; it is more than a quarter of a century since I began to write continuously in books and newspapers, and opportunities have not been lacking to me, if my bent had been in that direction, of advertising my friends or calumniating my enemies. As a writer on the most important daily and weekly journals in England, as the editor of a well-known review, and as a constant contributor to magazines and newspapers of high standing, my words have been continually before the public, my opinions have been plainly expressed, frequently challenged, and as frequently defended. But no critic, however bitter, no adversary, however unjust, has ever said during the last quarter of a century that I wrote in the interests of advertisement, that I stated as facts what I did not believe.

Surely, Sirs, *I* have a right, with such a record, to resent this accusation even more strenuously than Mr. Watson Cheyne. Indeed, I have more ground for resenting it, for my whole life has afforded proof that it is false. In truth, it *is* a "dirty" suspicion, unworthy of a decent newspaper, and one for which there is no redress. It is true that no one who knows the gentlemen referred to would believe that they *paid me to praise them, and no one who knows me will believe that I was so paid. But the* majority of readers will know neither of us, and so this "pseudonymous anonymuncule," as Charles Reade would have called him, and his malicious insinuations will doubtless prejudice the minds of many envious and suspicious persons.

One last word, on the question which lies at the root of this matter—that of the medical etiquette, [illegible] forbids.

highest skill has designed for those in present use, or that a scheme of management by one authority would remove the stigma. It is also a question which is by no means capable of one answer whether the county council or guardians of the Poor-law district be the most efficient authority. There is no doubt, however, of the ability and of the power of the county council to take over this scheme, but, on the other hand, the "burden of insanity" in the maintenance of over 20,000 insane persons at a cost of considerably more than £500,000 a year is considerably lightened by the guardians who, through an already existing channel, collect the payments made by the relatives and those legally bound to them according to their means. If the guardians are to be superseded then considerable changes in the present Poor-law system become a necessity, but the trend of public opinion seems to be in opposition to the further centralising authority of lay officials. Your leader writer does not appear to appreciate that what may be suitable and to the point in the case of Edinburgh with its population of only 300,000 may be, and possibly will be, very inappropriate, if not impracticable, for the county of London with its area of 120 square miles and a population of nearly 5,000,000.

The Poor-law infirmaries have done much to lessen the stigma of insanity and Dr. Toogood's statistics support his assertion to this effect, but he admits that it may be in part unavoidable, as county asylum accommodation was not possible; but is the "stigma of insanity" less poignant than the "stigma of pauperism," neither of which would, I venture to think, be removed by the establishment of rate-aided "reception houses"? A strong reaction is setting in against the superfluous outlay which has characterised public asylum construction in the past, and the present tendency to spend for the cure of those who may recover is adequately reflected in the last report of the Lunacy Commissioners who emphasise their determination to advise the Secretary of State to refuse his approval of all plans in which there is an obvious departure from this principle.

As supplementing the scheme which Dr. Toogood, in THE LANCET of Feb. 8th, p. 403, recommends for the Poor-law infirmaries I am of opinion that a much wider question is involved than is now under consideration for London, and I should suggest adding to the pathological and clinical staff of our present asylums, and the construction for every asylum of a "hospital" with every "suitable appliance for a psychiatric clinic" into which the acute and the recoverable cases can be received and from which—after a reasonable interval—those deemed incurable can be removed into a less expensive, but still "safe, bright, secure, and adequate" home. In this way interest and hope can be instilled into the work of those whose lot lies in ministering to those afflicted with this most distressing disease and whose incessant intercourse with this class leads not infrequently to painful consequences.

I remain, Sirs, your obedient servant,

Feb. 18th, 1900. EFFICIENCY.

## NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

*Further Increase of the Plague Epidemic.—Increase in the Indian Medical Service.—The Population of Bombay.—Memorial to the late Surgeon-General Harvey, C.B.—A Parsi Sanatorium for the Sick Poor.—Antidotes to Snake Poison.—Small-pox in Simla.*

THE increase in plague mortality this week is general throughout India. The total is 11,445, against 9204 for the previous seven days. Bombay city returns 311, against 296, and a general mortality of 1118, equal to a death-rate of over 70 per 1000 per annum. The Presidency returns 4622 deaths from plague, an increase of over 1000; the Madras Presidency 622, against 590; Bengal Presidency 829, against 593; Mysore 604, against 653; North-west Provinces and Oudh 972, against 829; the Punjab 3040, against 2379; and Kashmir 316, against 257. Calcutta returns 61 deaths and Karachi 41. The epidemic is still raging in Poona where the deaths are nearly 50 each day, but for some unknown reason the weekly figures are not published. The figures for the past few weeks show that the disease is spreading in Bengal and Calcutta, in the Punjab, in Bombay city, in the Madras Presidency, and in the North-west Provinces. If previous experience is of any avail the next month or so will show the highest mortality from plague that has occurred since its introduction in 1896.

An increase of 26 officers has been sanctioned for the Indian Medical Service to meet civil requirements.

The final report on the census in Bombay city has been issued and shows a population for the island of 776,006. It is estimated that 114,000 persons have died from plague during the past five years. The density of the population is shown by the districts of Kumbarwhada having 598 persons to the acre and the district of Khara Talao 536 persons to the acre. The district of Mandvi, where plague started and where it has always been so virulent, is chiefly occupied by Jains, and it is estimated that whereas formerly they formed 3 per cent. of the population they now form only 1 per cent. It is a peculiar feature of their religion that they will not destroy any living thing and it is this district of Mandvi which has been overrun with rats, probably on account of the large number of its grain stores. Deaths from kala-azar in Assam have diminished considerably. The district of Sylhet, where the malady first made its appearance in 1893, is suffering from a mild type only, and in Nowgong the deaths have fallen from 12,012 in 1897 to 4661 last year.

It has been decided to start a subscription list for a memorial to the late Surgeon-General Harvey, C.B., Director-General of the Indian Medical Service, but the exact form of the memorial has not yet been fixed.

The Parsis of Bombay city have lately opened a sanatorium on Camballa Hill for their sick poor. The building will accommodate 36 families—12 on each floor, and each will have a sitting-room and bedroom with bath-room and kitchen. It has been constructed on modern principles and with the best sanitary appliances, and a special feature consists in the adoption of bacteriological tanks for the disposal of sewage sullage and waste water upon the plans of the installation which have been so successful at the Matunga Leper Asylum. The sick poor from the congested and unhealthy parts of the city will thus have the benefit of a change of air and healthy surroundings.

According to the researches of Captain Lamb we possess an antidote to cobra poison in Dr. Calmette's antivenin, but the latter is quite useless against the Daboia poison.

A severe outbreak of small-pox has occurred in Simla.

Calcutta, Jan. 30th.

## DENGUE AND PLAGUE IN THE NEAR EAST: THE PLAGUE IN BAGDAD.

(BY THE BRITISH DELEGATE TO THE OTTOMAN BOARD OF HEALTH.)

REPORTS from the sanitary officers of Beirut and Tripoli show that in both these Syrian ports dengue has recently been rather severely epidemic. In Beirut the outbreak lasted some two months, and by the middle of December had almost completely disappeared. The large majority of the inhabitants were attacked, but the disease was most troublesome in old people and in persons the subject of malarial cachexia or of gastro-intestinal troubles. The number of deaths attributed to it were not large. Relapses appear to have been remarkably and unusually common, and in the hospitals some examples were seen in which the acute symptoms reappeared not only for the second but even for the third time after quite short intervals. The outbreak at Tripoli appears to have been equally general. In many families every member of the household was attacked and in most houses there were multiple cases. This epidemic appears to have synchronised with that at Beirut. The last report, dated Nov. 24th, stated that the outbreak was on the wane. In connexion with these outbreaks it is of interest to note that in Constantinople itself a few isolated cases clinically resembling dengue have recently occurred, but there has been no general epidemic.

Since the date of my last letter to THE LANCET[1] plague has shown but little activity in the Near East. In Constantinople itself, after the fatal case at Yakadjik on Nov. 5th, no other case occurred until near the end of that month. The patient in this instance was a Caucasian student, aged 16 years, who lived in a room over a casino called "The Caucasus," in the Karabash quarter at Top-Khané. He was said to have been taken ill on Nov. 25th, but he only sought advice on the 27th. The symptoms, as and quite a different law for Camberwell. It is no more justifiable for outsiders to advertise the former than it is for the latter to advertise themselves. That is the only argument which the *Medical Times* has emphasised, and I submit that it is irrefutable.—I am, Sirs, yours faithfully,

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[1] THE LANCET, Nov. 30th, 1901, p. 1533.

The Editor of the "Medical Times."

Adam-street, Strand, London, W.C., Feb. 17th, 1902.

## THE SCHOTT TREATMENT OF CHRONIC CARDIAC DISEASE.

*To the Editors of* The Lancet.

Sirs,—In an annotation in The Lancet of Jan. 11th, p. 110, in speaking of a pamphlet entitled, "Personal Observations and Comments on Bad Nauheim and the Schott Treatment," written by Dr. O. Turner of Butte City, Montana, which first appeared in the *Chicago Clinic* (December, 1900), you say, "We understand that this pamphlet *has been widely distributed, and we think that* Professor Schott should, in justice to himself and the many English physicians who send patients to Bad Nauheim to be placed under his care, at once take steps to challenge, and we feel sure to refute, the grave professional charges which are brought against him." Had you known the facts in this case I do not think that you would have considered it important for Professor Schott to answer Dr. *Turner's attacks on his professional character* You could not have been aware, however, that a mutilated fragment of my challenge and refutation of the grave professional charges brought against Professor Schott had appeared in the *Chicago Clinic* a short time before your notice was published

My letter as published was so much abridged that some important corrections of Dr. Turner's statements were entirely omitted. This will be rectified in a *pamphlet* shortly to appear where full justice will be done to Dr. Turner's statements, and the methods which have been pursued in distributing the same. The character of Dr. Turner's violent personal attack upon Professor Schott is unworthy of a professional gentleman, even were it supported by facts. Resting as it does, however, upon false statements, it cannot be deemed an effort to enlighten the profession and add to medical accuracy by sound and temperate criticism of error, but is a base attempt to darken council and destroy the reputation of a professional colleague who is doing curative work of great value. Were Dr. Turner not safely hidden in the far-off mountains of Montana, the best answer Professor Schott could make would be an action for criminal libel against the inventor and circulator of this precious pamphlet. My faith in the traditional fairness and justice of The Lancet which have never failed is my excuse for addressing you.

I am, Sirs, yours faithfully,

Rome, Feb. 8th, 1902. W. W. Baldwin, A.M., M.D.

## A POINT FOR PUBLIC VACCINATORS.

*To the Editors of* The Lancet.

Sirs,—I inclose a further communication from the General Post Office, *re* my last letter asking for further details of the regulations under which I am forbidden to wire for vaccine in an emergency or scare, free. As you will perceive, the Board of Agriculture takes more care over its swine and policemen than at present our Local Government Board does over small-pox and its medical officers, for surely it *does* appear monstrous that the Board of Agriculture by arrangement with the General Post Office pays for all reports sent by its policemen on wire, and yet the Local Government Board does not recognise our efforts to re-assure the public in a time of "official notices *re* small-pox" scares, &c., by endeavouring to obtain lymph quickly when the distance is great from London. As in your editorial comment on my letter, I admit that the law is against me, and knowing the futility of kicking against the pricks, I have paid for the telegram. All through I have been only actuated by *the fact that I* thought that my brother practitioners might not know the point which I have endeavoured to elucidate, and not having before seen the point raised might feel, as I do, that the Local Government Board would arrange facilities for quick transit of lymph when small-pox is spreading. Hoping that perhaps my feeble efforts to find out the true position may one day bear fruit, and thanking you for your kind consideration in sparing me space in The Lancet,

I am, Sirs, yours faithfully,

Henry T. Whitling, M.B., B.S. Durh., &c.

Husband Bosworth, Rugby, Feb. 14th, 1902.

[Inclosure].

General Post Office, London, Feb. 12th, 1902.

Sir,—With reference to your further letter of the 2nd instant respecting the question of payment for telegrams sent by you to the Local Government Board, I am directed by the Postmaster-General to explain that, as already stated, only officers of Government departments are entitled to send telegrams free of charge. You are under a misapprehension in supposing that telegrams sent by the police to the Board of Agriculture are dealt with by this department free of charge. By arrangement with the Board, such telegrams are accepted without payment at the time of despatch, but they are subsequently paid for by the Board.

Similarly the postage upon unpaid letters addressed to the Board of Agriculture is charged against the Board in the official account, and only such letters are entitled to pass without prepayment of postage under this privilege as are sent upon the public business. It is not considered that letters of application to the Local Government Board for lymph, such as you mention, are letters entitled to the privilege in question, and they should be prepaid with postage, therefore, in the ordinary way. I am, Sir, your obedient servant,

H. F. Whitling, Esq., M.B., B.Sc. John Ardron,

## "AUDI ALTERAM PARTEM."

*To the Editors of* The Lancet.

Sirs,—It is due to me that it should be known that I replied fully to Dr. Latham's last communication, and that my letter was returned to me for further consideration, its tone not commending itself to the editors. I decline to modify its tone and cannot help feeling that as no editor is expected to accept responsibility for the statements of his correspondents the right should have been conceded to me of supporting my case by all fair and reasonable means.

I am, Sirs, yours faithfully,

Nottingham, Feb. 19th, 1902. Edward Dean Marriott.

⁂ Our correspondence columns are headed with an avowal of the impartiality which we strive to maintain. Mr. Marriott's letter was returned not because it contained statements for which we declined to take responsibility, but because both from its tone and its contents it invited an acrimonious discussion for which we did not care to find space.—Ed. L.

## THE EDINBURGH SCHEME FOR A PSYCHIATRIC CLINIC.

*To the Editors of* The Lancet.

Sirs,—The writer of your leading article on "The Edinburgh Scheme for a Psychiatric Clinic," in The Lancet of Feb 1st, p 318, somewhat fails to realise that *mental disease* has its bodily aspect, and that marked physical impairment is an almost inevitable accompaniment of acute mental disorder. To collect the insane either together in one "reception house" or in groups of houses for the purpose of a psychiatric clinic would (at least for London) mean the compulsory sale of Bethlem and St. Luke's Hospitals, or, failing this, the erection of new buildings upon land, both of which would be equally costly and undesirable. Those who are interested in the welfare of the insane have repeatedly advised the removal of these institutions from the heart of London into some more salubrious district where light and air, outdoor exercise, and healthy occupations could be indulged in daily—which is impossible during many days of winter fog and mist such as now enshroud the city; yet the influence of The Lancet is cast in a contrary direction

It is probably not known to the great bulk of your readers that the present asylums of London are already the "psychiatric clinics" of the medical schools, that they are situated upon healthy sites in the environs at not inconvenient distances from the centre of London, and that they have ample and extensive park-like grounds for recreation These institutions received over 3500 new admissions last year, so that the total accommodation of *Bethlem and St. Luke's Hospitals with their aggregate of* only 350 beds—and I assume that they or an equivalent could be taken over as "reception houses"—would be totally inadequate. Further, if the anxiety be for the lot of the acutely insane and if consideration be felt in regard to the stigma appertaining to insanity, it is questionable whether more suitable sites and buildings could be obtained than the be seen how infinitely small the proportion of small-pox cases is to the number of inhabitants. Meanwhile the ill wind blows and the good follows in the prevalence of vaccination both by public vaccinators and by general practitioners throughout the country. The chairman of the Health Committee has shown a laudable example in being vaccinated himself, and it is noticeable that a large number of public functionaries have also submitted to the same precautionary measure. The medical officer of health has suggested also that the committee should recommend that the Infectious Diseases (Notification) Act, 1889, shall apply within the city to chicken-pox as if such disease had been specifically mentioned in the Act. No doubt this recommendation will be adopted as a wise provision for discrimination and prevention of the spread of disease.

### *Unqualified Dentists*

Some discussion has arisen on the question of the registration of all who practise dentistry. Birmingham suffers, as most towns do, from the presence of a large number of advertising dentists. There are difficulties in placing the names of those upon the Register who have not gone through the necessary curriculum; but the number of those practising before the adoption of the Register is now yearly getting fewer, and in time the question will largely settle itself. The mechanical part of dentistry must often be worked out under the direction of some superior; the surgical part is inevitably only to be acquired by long and patient study in a recognised school of teaching. The Birmingham School of Dentistry is an exceedingly good one and abounds in very able and competent teachers.

Feb. 18th.

## LIVERPOOL.

(From our own Correspondent.)

### *The Liverpool School of Tropical Medicine: the Anti-mosquito Campaign.*

Arrangements have been made for Major Ronald Ross, F.R.S., late I.M.S., Walter Myers lecturer in the Liverpool School of Tropical Medicine, to proceed for the third time to Freetown, Sierra Leone, to assist in the work which is being vigorously undertaken in West Africa against malaria and mosquitoes. Major Ross will sail from Liverpool on Feb. 22nd. The expedition which he is going to rejoin, the fifth to be organised by the Liverpool School of Tropical Medicine, went out early in last year under Major Ross's direction with Dr. A. Logan Taylor. The work of the expedition is being carried on with energy. Dr. Latchmore, the medical officer of the Princess Christian Hospital in Sierra Leone, in his report, says that it is at present too early to say anything about the decrease of disease there, because the members of the expedition have only been at work eight months, and because it is very difficult to know whether such cases of fever as have occurred are simply relapses in old cases or fresh cases in which infection had been contracted since the beginning of operations. He adds that it can only be said guardedly that during this time there have been very few cases of malaria reported and that the health of the Europeans in the town has improved. He also says that there can be absolutely no doubt that the expeditions are doing a great work for the health of West Africa. Dr. Logan Taylor has succeeded in destroying a large area of the breeding ground of mosquitoes, and in consequence there has been a great decrease in the number of mosquitoes in the houses. Some houses have been practically free from anopheletes for weeks, whilst others contain very few. He also states that anti-malaria work is being pushed on up country.

### *The Royal Southern Hospital: the Ward for Tropical Diseases.*

The ward in the hospital devoted to the reception of patients suffering from tropical diseases in connexion with the Liverpool School of Tropical Medicine continues to do much useful work. 130 cases were admitted in 1901. The following nationalities were represented: English, Irish, Scotch, Welsh, Australian, Canadian, Spanish, Portuguese, French, West Indian, African, Swedish, Norwegian, Danish, Dutch, and East Indian. 18 were Lascars. There were 94 cases of malarial fever, 10 of dysentery, six of beri-beri, one of (tropical) abscess of the liver, and one of enlarged spleen. There were 11 deaths. In order to enhance still further the value of the work an out-patient department has been opened which is under the care of Major Ross and Dr. H. E. Annett. The sixtieth annual report of the committee of the Royal Southern Hospital states that the debit balance stands now at £5186 11*s.* 4*d.* £2139 had been received from the ex-Lord Mayor's Hospital Century Fund, and £2010 from the Hospital Saturday and Sunday Fund. The number of patients treated in the hospital during 1901 was 12,964, of which 2351 were in-patients and 10,613 out-patients. The total number of attendances was 46,343, against 44,175 in the previous year, showing an increase of 2168. The ambulance brought in 381 cases, the total number relieved by that means since the inauguration of the service in 1887 being 5875. The average number of beds occupied during the year was 190, the greatest number of in-patients at one time being 203. The number of deaths was 200, of which 60 occurred within 24 hours of admission; 18 persons who were brought in dead were not included in the above.

### *Small-pox in Liverpool: Deputation to the President of the Local Government Board.*

The latest report of the medical officer of health of Liverpool places the number of patients suffering from small-pox at 42. A fortnight ago there were only 18 cases, but the increase need not be considered alarming as the addition to that number was largely caused by the arrival of the s.s. *Kansas* from Boston on Feb. 6th, having on board 14 persons suffering from small-pox. The utmost vigilance was exercised by the port sanitary authorities to prevent the ship from coming in contact with any other vessel, and the *Kansas* proceeded up to the Sloyne, a part of the Mersey at some distance from the landing-stage, whilst the patients were removed to the port sanitary hospital. The latest patient is a man who landed nearly three weeks ago from the steamer *Devonian*, also from Boston. The illness was of a type so mild that he did not suspect the nature of it. He presented himself at one of the general hospitals of the city on Sunday last in regard to some "spots" on his body, when the nature of the disease was determined. This individual, in the opinion of the authorities, had no doubt been the source of infection to two of the cases previously reported in which infection at that time had not been traced.—Mr. Walter Long (the President of the Local Government Board) will receive a deputation from the Port Sanitary Authority of Liverpool on Feb. 20th in reference to the difficulty experienced by that body in dealing with persons who had been exposed to the risk of small-pox on board vessels arriving in Liverpool.

Feb. 18th.

## WALES AND WESTERN COUNTIES.

(From our own Correspondents.)

### *Small-pox.*

In Ystalyfera, near Swansea, small-pox appears to be dying out, but in the borough of Swansea fresh cases are occurring, one having been reported on Feb. 10th and two on Feb. 15th.—The Swansea Corporation discussed on Feb. 12th the desirability of adding chicken-pox to the list of diseases notifiable in the borough. Although formal notice had been given in accordance with the provisions of the Infectious Disease (Notification) Act, 1889, the motion giving effect to the addition of chicken-pox was lost in favour of one instructing the town clerk to communicate with the medical men practising in the town, respectfully requesting them to seek the advice of the medical officer of health in all doubtful cases of measles or chicken-pox coming under their care.—In Cardiff at present there has occurred only one case of small-pox, the patient being a man who was admitted to the tramp ward of the workhouse on Feb. 4th. On the 5th he went into the workhouse infirmary and on the following day was found to be suffering from small-pox and was removed to the isolation hospital. The man had never been vaccinated. At a meeting of the board of guardians the chairman of the board animadverted upon the removal of the patient when he fell ill to the infirmary instead of to the isolation ward. It seems almost impossible for a layman to understand that the diagnosis of small-pox cannot be made on the first day of the disease, and if the suggestion that every ailing tramp should be placed in an described, were fairly characteristic of an attack of plague with bubo in the left groin. The fact that this patient was a Caucasian and that some cases of plague had occurred shortly before at Batoum in the Caucasus led to the suggestion that this was an instance of fresh importation of infection from Batoum. But the fact that the house where the boy sickened was in the same quarter of this city where so many of the earlier cases of plague had occurred lent far greater probability to the view that the case was of indigenous origin. No other case of plague has since come to the knowledge of the authorities in Constantinople.

In Batoum and Odessa a few cases of plague and others of "suspected" plague occurred between the end of October and the beginning of December, but very few accurate details have as yet come to light as to their number, origin, or character. The Ottoman Board of Health imposed 10 days' quarantine against Batoum on Oct. 30th and removed it on Nov. 10th, re-imposed it on Dec. 10th and removed it on the 18th. Against Odessa 48 hours' observation with disinfection was imposed on Nov. 12th and removed on the 22nd.

In Smyrna no known case of plague occurred between the middle of September and the end of the year. On Dec. 21st a waiter in a restaurant on the Smyrna quays fell ill and later examination proved that this was a fresh case of plague. On Jan. 16th a second case was reported, the patient in this instance also was a waiter employed at a café situated on the quays. In both instances there was bacteriological proof that the diagnosis of plague was correct. It is difficult to account for these cases. The history of plague in Smyrna during the past year has been briefly as follows. In December, 1900, a small epidemic of plague pneumonia occurred in a village close to the town causing the death of three whole families; in January a case of bubonic plague occurred in the town itself, another followed in the month of May, and a third in September. It is not easy to account for these long plague-free intervals otherwise than by supposing each case to be due to a fresh importation of infection. Smyrna is in constant relations with Constantinople and with Alexandria, in both of which plague has been present through the greater part of the past summer and autumn.

On Jan. 3rd a plague case was discovered at Beirut on the Syrian coast. The patient was a native of Bagdad and had travelled from Bagdad to Beirut, stopping a certain time (the length of which is at present unknown) at Damascus *en route*. He fell ill the day of his arrival at Beirut. This case presents many points of interest. As he is said to have fallen ill on the day of his arrival it is scarcely possible that he can have contracted the disease in Beirut itself. He came originally from Bagdad, and as will be shown later plague has been present in Bagdad certainly for several weeks and possibly for many months. Later reports will, it is hoped, throw more light on this case, particularly as to the length of the interval between the patient's leaving Bagdad and his arrival in Beirut.

On Jan. 20th the sanitary officer at Bagdad telegraphed to the Board of Health in Constantinople that an outbreak of plague of some severity had occurred in that city. Up to that date eight known cases, of which four had proved fatal, had come to the knowledge of the authorities. A later telegram reports two more cases and three deaths, bringing the totals to 10 cases with seven deaths. Of the origin of this outbreak nothing is at present known with certainty. The sanitary officer's report states that rumours had been current for some time that a suspicious disease existed in the Abou Seiffdin quarter of Bagdad, but that no one ventured to point out to him the houses affected. As long ago as Dec. 9th he wrote to the Vali asking that an order might be given to the medical staff to inquire into the outbreak, but apparently nothing was done. The first certain case seen by him was on Jan. 17th. The suspected quarter of the city was the Jewish quarter and it is noteworthy that all the first eight cases were of the Jewish religion. In connexion with this outbreak the sanitary history of Bagdad during the past year is of the greatest possible interest. In May of last year a limited outbreak of plague occurred in the Sadrieh quarter of that city. So far as was known the disease then died out, but evidence has since come to light that this may not have been the case and that plague may have lingered on in Bagdad from then until the present day. In a report of the sanitary officer there, dated July 29th, it was stated that in June last rumours were already current of several cases of suspicious disease in the Bab el Chah and Sadrieh quarters of the city. On June 13th he and another practitioner "penetrated" into these quarters and saw three patients with bubonic symptoms. The *mouhtars, imams* and other local notables denied the existence of anything unusual, but on the 14th two more cases were seen, and on the 15th one case. No subsequent cases could be observed, because the people had become suspicious of the medical men's visits and refused to report any more. The detailed description of these six cases shows that in each there were slight fever, one or more enlarged glands, and a short illness always ending in recovery.

A later report dated Nov. 28th last stated that similar cases of fever with enlarged glands had continued to appear from time to time in Bagdad in different parts of the town, and it was added that within the 10 or 20 days preceding the date of the report as many as half a score of such cases had been seen in a Jewish quarter of the city. It is in this quarter that the present outbreak of the plague has occurred. It is difficult in reviewing this brief history not to suppose that these cases of mild glandular fever may have been cases of mild or ambulant plague, and that the present outbreak of the severe form of the disease is but a revival of the infection remaining from the outbreak there in May last.

The measures decreed by the Board of Health to control this epidemic are briefly as follows. Two temporary lazarets of tents have been formed, the one to the north, at Beni Said Han, and the other to the south-west, on the Redvanieh Canal. Passengers have to undergo here five days' quarantine with daily exposure of their goods to the sun. Ships leaving Bagdad (by the Tigris) for the south undergo five days' quarantine at Gararah (close to Bagdad). Before loading such ships have to have their rats destroyed by sulphur fumigation. On arriving at Basra (near the mouth of the river) these ships have to go to the lazaret there in order that the clothes and effects of the passengers and crew may be disinfected in the stove. Cavalry patrols have been ordered to patrol the country between Bagdad and the two lazarets named above. The carriage of dead bodies from Bagdad to the Shiite Holy Places of Kerbela and Nedjef is prohibited for the present.

Constantinople, Feb. 1st, 1902.

## BIRMINGHAM

(FROM OUR OWN CORRESPONDENT.)

### *The Welsh Water Scheme.*

WHEN the corporation of Birmingham embarked upon the scheme of a water-supply from the Elan valley they were contented with the prospect placed before them. The estimated expenditure was certainly very large, but it was considered to be amply sufficient for the object in view. The Parliamentary estimate for the first instalment was £3,755,360. Years have gone by, the works have steadily progressed, and as surely the expenditure has grown in a ratio far exceeding the expectations of the Water Committee of the Town Council. Even the most sanguine promoters of the project have to confess that they were unprepared for the enormous increase in the figures which has been laid before the Council. A report has been issued in which it is shown that the present estimate is £5,884,918, an excess of £2,129,558. This is a gigantic sum and the amount is looked upon with surprise mingled with indignation. The heavily burdened and patient ratepayer has to bear this extra load with philosophic resignation. Protest is useless, but the "man in the street" criticises freely and wonders how such a prodigious increase on the original estimate could have occurred—more particularly when he recollects that eminent geologists, leading engineers, and a host of scientific experts were engaged upon the work for a long time before the estimates were made out.

### *Small-pox.*

A single case of small-pox is the total of the outbreak so far in Birmingham. As one swallow does not make a summer, so it may be inferred that one case may not be the beginning of an epidemic. Still it is curious to observe how fear takes hold of many who dread an epidemic. In view of this solitary instance it is asserted that many country people refuse to come into the city, and speak with bated breath of the presence of small-pox in our midst. When reflection is allowed to take the place of panic it will six most dreaded infectious diseases—viz., measles, whooping-cough, diphtheria, enteric fever, erysipelas, scarlet fever, and small-pox Sir Henry Littlejohn, in his report for the year 1899, had shown that out of 574 deaths due to pulmonary consumption three-fifths of the victims inhabited houses of one, two, or three rooms. Presumably most of these had been ratepayers who if they had become ill with one of the fevers would have been entitled to the benefits of the city hospital. The municipality had, however, made no attempt to deal with cases of consumption even though it was a much more deadly infectious disease than any which it took charge of in the city hospital. If the town was to deal with those cases it must do so upon purely public and not on benevolent grounds. It was impossible to isolate the patients in all cases of consumption, but they might provide for cases beyond the range of cure and at the stage of the disease which was most dangerous for the community. The committee had made a suggestion that 100 beds should be fitted up in the present city hospital when the new hospital at Colinton had been completed, but it might prove to be more profitable to sell the old hospital and to provide a site elsewhere. What the committee desired meanwhile was that the council should, without committing itself as to site and other details, approve of the recommendation to include consumption among the notifiable diseases and that the council should further generally approve of the recommendation to provide accommodation for 100 beds for the reception of the most advanced cases of consumption. Treasurer Cranston, in seconding the motion, believed that whatever sum was required would be freely and frankly paid by the citizens in return for the benefit which they would get. The probable annual cost of notification, estimated at 2*s.* 6*d.* a head, would amount to £750, and a similar sum would be required for examining sputum. Mr. Clark proposed an amendment to the effect that arrangements should be made for voluntary but not compulsory notification. He thought that compulsory notification interfered too much with the rights and liberties of the people. On a division, after a four hours' sitting, 10 voted for the motion and 20 for the amendment.

### *Royal Society of Edinburgh.*

A meeting of the Royal Society of Edinburgh was held on Feb. 17th, Professor Geikie, vice-president, being in the chair. Major W B. Bannerman, I.M.S., superintendent of the Plague Research Laboratory at Parel, gave an account of the work carried on there under Professor Haffkine, the director-in-chief. Professor Fraser doubted whether plague epidemics could be stayed by the use of plague prophylactics, and urged that improvements should be brought about in the dwellings of the people. Major Bannerman, in reply, wished that Professor Fraser would use his influence to get a representative of the medical profession attached to the Legislative Council of the Viceroy of India.

### *Small-pox in Glasgow.*

There has been a somewhat rapid extension of the epidemic, which was, however, not altogether unexpected, and is not in any sense alarming. The number of cases under treatment has increased to 133, and even this does not fully represent the recent activity of the outbreak, as many convalescents have been dismissed from the hospital. On Feb 14th the new cases numbered 20; on the 15th, 39; on the 16th, 26; and on the 17th, 18. For the most part the cases have been of a mild type. At a meeting of the town council on Feb. 18th one of the medical members, in discussing the small-pox outbreak, drew attention to the large proportion of cases occurring in the east-end of the city, and argued that the explanation of this was the proximity of the small-pox hospital. This statement aroused some indignation and was generally condemned as neither warranted by the facts nor politic in the circumstances. The Lord Provost made an urgent appeal to the citizens to adopt the practice of revaccination. He stated that some 10 to 20 per cent. of the population even now remained unvaccinated, and he pointed these out as a danger to the whole community.

### *Glasgow University.*

The University Court met on Feb. 13th. The principal made sympathetic reference to the death of Professor Adamson which has caused general distress and deep regret throughout the whole university. It was announced that the senate has appointed Monsieur Emile Bontroux, Professor of the History of Modern Philosophy in the Sorbonne, Paris, to be lecturer on the Gifford foundation for the sessions 1903–4 and 1904–5.—A distinctive robe has been designed for members of the court and this was formally approved.—The court has received a letter from the secretaries of the Muirhead College proposing coöperation with the university regarding the medical education of women; the letter was referred to a special committee.

Feb. 18th.

## IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

### *Small-pox in Dublin.*

No fresh case of small-pox has appeared in Dublin, while the three patients isolated in the convalescent home at Findlas continue to go on well. Sir Charles Cameron has written to the daily papers stating that the Public Health Committee has resolved to recommend the corporation to add chicken-pox to the schedule of infectious diseases which are notifiable. He appeals to medical practitioners kindly to report this disease even before notification has become compulsory.

### *Extraordinary Accident to a Coroner's Jury.*

On Feb. 8th an extraordinary accident occurred at Newlands, three miles from Naas, in county Kildare. A man died on the previous day from the accidental stab of a pitchfork in the leg, and Dr. M. F. Kenna, the coroner for South Kildare, went to the place the next day to hold an inquest. The jury first proceeded to "view the body," which lay in a loft over a byre. The floor was a shaky one, and as soon as the twelfth juryman put his foot on it the entire fabric gave way precipitating the 12 men down on to the cattle below. The portion of the floor on which the corpse lay remained intact, but all the rest fell. The distance the jury fell was only seven feet, and, fortunately, beyond a few contusions, received while struggling among the cattle, no casualty occurred. The noise and confusion within the byre before the door was opened by the police to liberate the men were indescribable. The cattle, frantic with fright, roared, the jurors shouted and swore, and in their struggles with the cattle banged against one another or rolled on the not over-clean floor of the cowshed. When released they presented a remarkable appearance, being covered from head to foot with manure, while the odour exhaled from them was anything but pleasant. After a time, however, the inquest was proceeded with and a verdict in accordance with the medical evidence was returned.

### *The Government and Vaccination.*

One of the most constant supporters of the present Government (the *Belfast Newsletter*) has a strong leading article in its issue of Feb. 18th in which it declares that it has "no sympathy whatever with the Government in this course of procedure"—that is, its opposition in the House of Lords on Feb. 17th to the Bill introduced by Lord Newton which sought to amend the Vaccination Act of 1898 by repealing the conscientious objector's clause of that Act. The *Belfast Newsletter* article blames the Government for its abject surrender to the so-called "conscientious objector" in 1898 as a most glaring blunder, and if, as it is stated, it was due to its desire to rush the Bill through by August 12th, then to resort to such methods of expediency is bad management of the business of the session. To abandon a principle approved of by the vast majority of the Members of the House of Commons in order to placate a small opposition because of the necessity of winding-up the session at a fixed date, is certainly poor statesmanship.

### *Irish University Education.*

A petition has been prepared for presentation to the chairman of the Irish University Commission on behalf of Roman Catholic laymen. It urges that of the various proposals submitted to the Royal Commission the best is to be found in the establishment and endowment of a college in Dublin for Roman Catholic students affiliated to the University of Dublin, which should be, equally with Trinity College, a constituent college of the University with adequate representation on the governing body of the University. Those signing this petition—and it is said that it springs largely from members of the legal profession living in Dublin—argue that no scheme of university education in Ireland will be satisfactory unless it affords Roman Catholics the opportunity of taking the best degree to be obtained in isolation ward is to be carried out many more such wards must be erected speedily, for it is obvious that if there is more than one patient in the ward it ceases to serve the purpose of isolation.—At Gloucester there is one case of small-pox, the patient being a sailor who had come from Bristol. There has recently been erected at Gloucester, at a cost of about £15,000, a very well-equipped permanent isolation hospital with accommodation for 28 patients in three pavilions.—A case of small-pox has occurred in a farmhouse about five miles from Hereford, the patient having contracted the disease in Liverpool.

### *Disinfection after Phthisis.*

In spite of the public meetings which have been held and the literature which has been scattered abroad in South Wales upon the subject of tuberculosis there appear to be still some members of sanitary authorities who are ignorant of the precautions necessary to combat the disease. After a death from consumption in Oystermouth, a district near to Swansea better known as the Mumbles, the medical officer of health, Mr. A. Lloyd Jones, very properly had the house in which the patient died disinfected—a proceeding which members of the district council characterised as quite unnecessary, and the chairman thought that the medical officer of health should be given an opportunity of stating his reasons for ordering the disinfection. When these reasons have been given the district councillors will perhaps realise that if they desire to attract visitors to their town they must encourage their officers to carry out these and similar precautionary measures.

### *Cardiff Infirmary.*

An appeal has been issued by the Board of Management of the Cardiff Infirmary for £5550 to carry out certain projected improvements in the infirmary buildings. The form of the appeal is novel in that the improvements desired are definitely stated and the approximate cost of each is specified. Among the most important are an accident receiving ward which is to cost £1000, a room for delirious patients to cost £50, and a mortuary at a cost of £25.

### *Attack upon a Medical Man.*

Mr. W. A. Reidy, a medical practitioner in Fleur-de-Lis, a Monmouthshire village near Cardiff, was subjected, though happily without serious consequences, to an alarming attack on Feb. 8th. On the evening of that day while sitting in his dining-room a bullet was fired through the window and window shutter and it fell at his feet. In connexion with the outrage a woman who had been a patient under the care of Mr. Reidy and whom a short time before he had refused to see is under remand

### *Isolation Accommodation in Worcestershire.*

A conference was held on Feb. 8th between the sanitary committee of the county council and the district councils of Worcestershire to consider what steps should be taken to prepare for an outbreak of small-pox. The population of the administrative county is 360,000 and there are within the county 13 urban and 17 rural districts. In only three of the urban and one of the rural districts, having a total population of 100,000 persons, is there any provision made for isolating small-pox. It was decided by the conference to recommend the county council to divide the county into six districts and to erect in each district an iron hospital with steam disinfector, &c. It is estimated that the cost of this scheme to the county will be about £3000, an amount equal to ½*d.* in the pound upon the assessable value of the county.

### *Gallant Action by a Medical Man.*

At St. Agnes coastguard station on Feb. 11th the divisional officer (Lieutenant R. Ayscough, R.N.) presented two coastguards with bronze medals and diplomas which were awarded to them by the Dutch Humane Society for rescuing one of the crew of the ship *Voorspoed* off Perran Beach, Cornwall, on March 7th, 1901. Mr. Frank Postlethwaite, M.R.C.S. Eng., L.S.A., of Perranporth, received a silver medal from the society for boarding the vessel to render assistance to the man.

### *Taunton and Somerset Hospital.*

The annual meeting of the subscribers of this institution was held on Feb 13th under the presidency of the Hon. E. W. Portman. The medical report stated that the number of in-patients discharged during 1901 as "cured or relieved" was 736, against 593 in 1900 4500 out-patients were treated, compared with 3968 in the previous year. The report mentioned that the recent appeal for £6500 for hospital improvements was liberally responded to, the sum of £6050 having been received already. During the past year the late Mr. R. B. West of Exeter had bequeathed £1000 to the institution. At the close of the meeting Major W. Barrett promised £400 towards the deficit on the building fund.

Feb 17th.

## SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

### *Edinburgh University: Death of the Lord Rector.*

BY the death of the Marquis of Dufferin the University of Edinburgh has lost its Lord Rector. To those who were present at the rectorial address which he delivered in the M'Ewan Hall some months ago and who noted his profound anæmia and extreme debility the Marquis's death has been no surprise. On Feb 15th the Senatus of Edinburgh University gave expression to its sorrow at the death of the Lord Rector by holding a service in St. Giles's Cathedral at the hour of the funeral The students of the university through their Representative Council decided to give expression to their deep regret by holding a religious service in the M'Ewan Hall on the afternoon of Sunday, Feb. 16th. This service was largely attended and was presided over by the senior president of the Students' Representative Council. The meeting was addressed by the Rev. John Kelman, who dwelt upon the brilliant career and the high character of the deceased Lord Rector.

### *The late Dr R. Peel Ritchie.*

In THE LANCET of Feb. 15th, p. 481, I made reference to the death of Dr. R. Peel Ritchie. Preaching in St. Cuthbert's Church on the morning of Sunday, Feb. 16th, the officiating clergyman paid the following high tribute to his memory He said: "In his relation with us as a member and office-bearer he leaves behind him the memory of a pure, straightforward, and upright Christian gentleman. Amid the differences of opinion which arise in the work of life he was always clear in stating his views, but he cherished no feelings save those of brotherly charity and friendship between man and man. Essentially a public-spirited and deeply religious man he gave much of his time to the public service, especially on behalf of the suffering and the destitute. As an elder of the church he was always marked by his faithful devotion to duty, by his high-mindedness and sincere Christian principle." Reference was also made to Dr. Ritchie's strenuous labours in the cause of Church defence, a cause which lay very near his heart.

### *The late Charles Stuart, M.D., L.R.C.S. Edin*

By the death of Dr. C. Stuart of Chirnside, Berwickshire, the border counties have lost a well-known medical man. He was a graduate in medicine of Edinburgh University of the year 1846 and had practised in Chirnside since 1848. In addition to his medical interests Dr. Stuart was a lover of plants and flowers and devoted considerable attention to the production of new varieties by cross-fertilisation. He also wrote papers on the botany, archæology, ornithology, and meteorology of his district. He had retired from active work during the last few years of his life.

### *Edinburgh Town Council: Notification of Consumption.*

A special meeting of the Town Council of Edinburgh was held on Feb 12th to consider reports by the Public Health Committee recommending the magistrates and council, as the local authority, to consider the passing of a resolution that the notification of pulmonary consumption should be made compulsory within the district, and suggesting the provision of a hospital with 100 beds for consumptive patients. The meeting was well attended at the outset, but at the close only about 30 members were present. The motion was given by Mr. Lang Todd, convener of the Public Health Committee, and ran as follows.—

> (1) That the magistrates and town council, as local authority, resolved to meet on a date to be afterwards fixed in terms of the statute to pass a resolution that the Infectious Diseases Notification Act, 1889, shall apply to pulmonary consumption within their own district; and (2) that the magistrates and council generally approve of the suggestion that provision should be made for consumptive patients, but not exceeding 100 beds.

Mr. Todd discussed the hopefulness of the prospect in attempting the prevention of consumption, now that consumption was recognised to be not a hereditary but an infectious disease. He showed that the mortality from pulmonary consumption greatly exceeded the combined mortality from the

Government or municipal officials and as such are required to make a daily visit to each of their wards. They may engage in private practice, but only as consultants. The number of chief medical officers is as a rule much too small, so that each of them is responsible for the care of a great many patients—sometimes from 300 to 400, and in Berlin a few years ago the number of chief medical officers was doubled with the view of relieving this pressure. As a matter of fact, this system has answered well in every way; the intellectual portion of the public are quite satisfied with it as it stands, and among the physicians and surgeons of the municipal hospitals of Berlin and other German cities there are men of European fame. If, as the Socialist party desires, these gentlemen were debarred from private practice and compelled to devote themselves exclusively to their hospital duties, the majority of them would no doubt resign their hospital appointments, as their emoluments derived from private practice must be twenty times as great as their official salaries. In his reply to Herr Antrick, Count Posadowsky, the Secretary of State, said that all these charges and some others of a like kind which were made by the Socialist party were either unfounded or exaggerated, and without denying the occasional possibility of abuses, he maintained that isolated occurrences must not be treated as representative of the hospital system in general. German hospitals, especially those of Berlin, were celebrated for their medical staffs, and foreign medical men who had visited them on such occasions as the meetings of congresses, spoke of them with admiration. Count Posadowsky added that the debate was in any case a purely academical one, for the municipal hospitals were under the control of either the municipalities or the Governments of the individual States, so that the Imperial Government had nothing to do with the matter. It is not unlikely that this debate in Parliament may tend to deter patients from seeking hospital treatment The charges made against the hospitals do not for the most part rest on any foundation in fact and have caused much indignation in medical circles. The Berlin Municipal Council is the proper authority for dealing with such questions, and some of the members have announced that they will take steps to bring about an investigation.

### *Serum Treatment of Scarlet Fever.*

At a recent meeting of the Gesellschaft der Charité-Aerzte (Society of Medical Officers of the Charité Hospital) Professor von Leyden gave an account of experiments that had been made on the treatment of scarlet fever by injections of serum. Serum obtained from patients convalescent from scarlet fever was injected in 12 cases, the result being evidently favourable in three of them, less marked in eight, and inappreciable in one. The temperature decreased in one case on the third day, in two cases on the fourth day, in four cases on the fifth day, and in two cases on the sixth day. All the patients were adults. The quantity of serum injected was 10 cubic centimetres at first and 20 cubic centimetres afterwards. In the ensuing discussion Professor Heubner said that in order to test the efficacy of Professor von Leyden's serum it ought to be used in serious cases only, for mild cases might recover without any treatment. He also pointed out that injections of human serum were not free from the danger of transmitting syphilis or tuberculosis, and, moreover, that in the absence of any definite knowledge as to the special virus of scarlet fever it was impossible to ascertain by experiment whether the serum of convalescents contained an antitoxin or not. Professor von Leyden, in his reply, said that the last-mentioned objection was equally applicable to the serum treatment of diphtheria, the efficacy of which was nevertheless beyond question.

### *His Excellency Professor von Bergmann.*

Dr. von Bergmann, ordinary professor of surgery in Berlin University and director of the university surgical clinic, has been invested with the rank of Wirklicher Geheimer Rath (Real Privy Councillor). This dignity, which is the highest of its class in Germany, carries with it the title of Excellency and is as a rule conferred only on great officers of State and persons occupying important positions at Court, very few medical men having been thus honoured. The celebrated Professor von Langenbeck, who preceded Professor von Bergmann in the chair of surgery in Berlin University, was invested with this rank, but not until he had reached an advanced stage of his career, although in addition to his scientific eminence he had distinguished himself in two great wars. In THE LANCET of Oct. 13th, 1900, p. 1102, I mentioned that Professor Esmarch of Kiel had been created Wirklicher Geheimer Rath. He and Professor von Bergmann are the only two medical men at present in possession of this dignity.

### *Cancer and Malaria.*

Some months ago Professor Loeffler drew attention to the circumstance that carcinoma had become more prevalent since the decline of malaria in Europe, and, as mentioned in THE LANCET of Nov. 30th, 1901, p. 1541, he suggested that a collective investigation should be made for the purpose of ascertaining whether cancer was less frequent in malarial than in non-malarial countries. In an article published in the *Munchener Medicinische Wochenschrift* Professor Kruse of the Hygienic Institute of Bonn has compared the death-rates from cancer and malaria in different countries. He found that in Italy during the period 1887–1891 the death-rate from malaria was 5·81 per 10,000, but the death-rate from cancer was nearly the same as in Prussia and Austria where no death was caused by malaria during the period in question. It appears that cancer is more prevalent in the north of Italy than in the south, and conversely that malaria is more prevalent in the south than in the north, but on the whole he thinks that these differences are due to racial rather than to climatic or geographical causes.

Feb. 17th.

# Obituary.

## SAMUEL ROBERT LOVETT, L.R.C.P. EDIN., L.R.C.S. IREL., L.S.A. LOND.

BY the death of Samuel Robert Lovett the medical profession loses one of its oldest health officers. Mr. Lovett, who was born in 1833, was educated at King's College Hospital. His father was one of the parish medical officers of the parish of St. Giles-in-the-Fields and Mr. Lovett assisted him before as well as after he became qualified. From a notice in the February number of *Public Health*, a proof of which has been courteously supplied to us by the editor, we learn that in 1875 Mr. Lovett was appointed medical officer of health for the district of St. Giles-in-the-Fields and St. George, Bloomsbury. Some years later the Ville of Lincoln's Inn was also placed under his care and he held both appointments until the coming into force of the London Government Act, 1899, when he retired with the highest pension possible. Unfortunately, just at the time he was seized with an acute illness which left him in a very enfeebled condition. Mr. Lovett was instrumental in bringing about several radical clearances of slum property in St. Giles district, notably the Great Wild-street, Little Coram-street, and Shelton-street areas, which were dealt with under the Artizan and Labourers' Dwellings Act, 1875, in addition to which he reported nearly 200 houses under Part II. of the Housing of the Working Classes Act, and he was at all times ready to assist his colleagues with the benefit of his experience. Mr. Lovett's connexion with the Incorporated Society of Medical Officers of Health dates from 1875, and before long he was elected a member of the council and auditor of accounts. In 1880 he was elected honorary treasurer, which office he continued to hold, greatly to the advantage of the society, till 1894, when he was chosen president. After the International Congress of Hygiene and Demography in London in 1891 the society presented Mr. Lovett with a service of plate in recognition of his services as treasurer. It will be remembered that the society's journal, *Public Health*, was the official organ of the Congress, with a daily issue, under the editorship of the present president, Mr. A. Wynter Blyth, and a good deal of work fell on Mr. Lovett in connexion with the financial arrangements of the undertaking. A few months ago, in consequence of continued ill-health, Mr. Lovett resigned his fellowship of the society, and as a further mark of its appreciation of his services the society unanimously elected him an honorary fellow. At the request of the council Dr. E. C. Seaton attended the funeral at Brompton Cemetery on behalf of the society and placed a wreath on the coffin. Other floral tributes included those from the staff of the late St Giles Board of Works, from the Lodge of Fidelity (of which Mr. Lovett was a past master and for many years secretary), as well as from many private friends and official colleagues

## CECIL LATTER, M.A., M.D., B.C. CANTAB.

HIS many friends will learn with deep regret of the sudden death of Dr. Cecil Latter of Folkestone, which took place

Ireland and of enjoying all the advantages to be obtained from collegiate life This movement follows largely the suggested settlement of the Irish University problem made by Professor Mahaffy in his evidence before the Commission at its last sittings which were held in London

Feb 18th

## PARIS.

(FROM OUR OWN CORRESPONDENT)

### *The Decay of Population in France*

THERE has been founded at Paris a league, with the title of "Ligue contre la Mortalite Infantile," for the study and active propaganda of methods calculated to combat in every way possible the excessive and preventable infantile mortality so prevalent in France The league will further in all ways private effort for amelioration in any district where statistics show that such effort is desirable It will also, with the aid of municipalities and of medical men, inquire into the causes of the excessive mortality which exists in certain districts and according to the results of these local inquiries will publish the best measures to be taken, and it will give hearty aid to municipalities or private benefactors who may wish to start refuges, creches dispensaries, "*gouttes de lait*," or other institutions for the distribution of sterilised milk or any similar institution In one word the league wishes to help forward any method or society having for its object to help poor mothers and children brought up by them, whether such children be brought up by their own mothers or by "minders" or in charitable institutions The league will also do its utmost to spread the light as far as regards infantile hygiene by collecting all information possible both from French and from foreign sources and by publishing pamphlets and leaflets on the subject Among those who have given their warm approbation to the scheme are Dr Budin, Professor at the Faculty, Member of the Academy of Medicine; Dr Fournier, Professor at the Faculty, Member of the Academy of Medicine, Dr Duclaux, Member of the Academy of Medicine, Director of the Pasteur Institute, Dr Josias, Member of the Academy of Medicine, physician to the Bretonneau Hospital, Dr Leon Labbé, Senator, Dr Theophile Roussel, Senator, Dr Grancher, Professor at the Faculty, Member of the Academy of Medicine, and Dr Variot, physician to the Hospital for Sick Children The president is Dr Th Roussel, the vice presidents are M Paul Strauss and M Pierre Budin, the secretaries are Dr Josias and Dr Variot, and the treasurer is Dr Henri de Rothschild In its turn the Government has just appointed an extra Parliamentary Commission to inquire into the best means of combating the decay of population Among the members of this commission are the following medical men Dr J Bertillon, Dr Borne, Dr Budin, Dr Dron, Dr Drouineau, Dr Emile Dubois, Dr Fumouze, Dr Gauthier, Dr Labbé Dr Lannelongue, Dr Letulle, Dr A J Martin, Dr Maurel, Dr Pinard, Dr Roy, Dr Richet, and Dr Variot

### *The Sealed Letter Archive at the Academy of Medicine*

The meeting of the Academy of Medicine on Feb 4th was held *in camerâ* and important alterations in the rules of the society were agreed upon The reasons for this change were as follows The Academy had become aware that certain persons abused their privileges and the weight which the name of the academy carries by bringing before it papers which were devoid of any scientific value and were, in fact, nothing but advertisements These were afterwards reproduced as serious works submitted to the Academy Up to the present, when anyone who is not a member of the Academy wished to read a paper before it he was obliged to get the paper revised by the secretary, but nothing but the title of the paper and the name of the author were reproduced in the Transactions of the Academy The same rule held good with regard to the correspondence addressed to the President and read at the end of the sitting However, this difficulty was surmounted in the following manner Anybody has a right to submit a communication as a sealed letter to be kept stored in the archives of the academy In this way, anyone engaged in research is assured of rights of priority, even though, as is often the case he does not wish to make public his researches until they are quite finished, which may not be for some time As soon as this happens he can demand that his sealed letter shall be opened and read before the Academy and it is finally printed in the Transactions In this way various charlatans have been able to obtain not only a reading but an official recognition of their lucubrations by the Academy. However, the Academy has now decided that no such reading or publication shall take place without the formal approbation of the committee of the Academy. This is a wise decision, but some means will have to be found of reconciling the new regulation with the approval *in posse* which the mere reception of the sealed letter would seem to imply

### *The Death of Doodica*

Doodica, one of the little girls making up the xiphopagous monster whose division by Dr Doyen I described to your readers in the last issue of THE LANCET, died on Sunday, Feb 16th The post mortem examination revealed complete union of the operation wound and there was no trace of hæmorrhage around the divided liver tissue The peritoneum was thickly studded with tubercles, and besides there was in the right iliac fossa an enormous peri cæcal abscess which had been set up by an appendicitis The appendix was gangrenous and there was intestinal perforation No surgical measures would have been of any avail in a condition of such widespread disease even if the condition had been diagnosed Radica, the other twin, continues to improve at the time of writing

Feb 18th

## BERLIN.

(FROM OUR OWN CORRESPONDENT)

### *Accusations against Berlin Hospitals*

IN the German Parliament not long ago serious accusations were made against the Berlin hospitals on the occasion of a debate on the Budget The subject was introduced by Herr Antrick, a member of the Socialist party, who drew attention especially to matters connected with nursing He said that the male attendants of whom a large number were employed in the State and municipal hospitals, were ill-paid, over-worked and insufficiently fed The consequence was that changes were very frequent among them, for the majority of them looked upon nursing work only as a temporary occupation and resigned their situations whenever they could find other employment Male attendants were therefore not so much in request now as they formerly were, and had been replaced to some extent by female nurses belonging either to religious orders or to private associations These nurses it now appears, have their detractors, one of whom has recently published a pamphlet from which Herr Antrick quoted in the course of his speech In this work, the author of which has evidently been a male attendant, it is alleged that the moral standard of the nurses other than those belonging to the religious orders is not very high that they do not object to nursing male patients suffering from venereal complaints and other diseases of the generative organs, and that they have a liking for being present at operations on these organs Another of the charges is directed against the matrons, who, it is said, tyrannise over the nurses and sometimes set themselves in opposition to the medical staff Two cases are even mentioned in which matrons by means of various machinations had succeeded in bringing about the removal of the principal medical officers of hospitals. A hospital in Berlin is also referred to, where about 20 children became infected with gonorrhœa, the explanation of which was that they had been washed with one sponge and this sponge contained gonococci Another of the alleged grounds of complaint is that the chief medical officers have too many patients allotted to them, so many, in fact, that they are unable to do more than give attention to the so called interesting cases the remainder of the patients being left to the care of the assistant and junior medical officers (Volontärärzte) In order that the last sentence may be intelligible to English readers it must be explained that there are many points of difference between the hospital systems of England and Germany In all the great hospitals of Germany belonging either to the State or to municipalities the medical officers both the chief medical officer and the assistants, receive a fixed salary, which in Berlin amounts to 6000 marks (£300) for the chief physicians and surgeons apart from free house accommodation for themselves and their families The position which they hold is therefore not an honorary one, as in an English hospital, but they are

Hospital the same year and was a prizeman in physiology in May, 1851. In 1859 he joined the medical service of H.M. Indian Army and was attached to the 1st European Regiment of Madras Fusiliers (102nd Royal Dublin Fusiliers), his commission bearing date Feb. 10th. In 1861 he left India on sick leave, and from that year he practised at Mentone during the winter and spring, and from 1864 was nominated one of the Officiers de Santé in the Alpes Maritimes.

At Mentone Dr. Marriott was noted for his kindness and unaffected manners and the interest he took in his patients. He was a sincerely religious man and performed innumerable acts of kindness to the poorer classes of English who were obliged to reside at Mentone for their health. He was devoted to botany and years ago raised some funds for the first English church at Mentone by giving lectures on this favourite subject. He also made a valuable herbarium in the Alpes Maritimes and other parts of Europe. He married a daughter of the late Gerald FitzGerald, of the Queen's County. Ireland, and of St. James's-square, Bath, and leaves one son.

# Medical News.

UNIVERSITY OF LONDON.—At the preliminary scientific examination held in January, the following candidates were successful:—

*Entire Examination.*

*First Division.*—Stanley James Annear Beale, London Hospital and University of New Zealand; Sheldon Francis Dudley, Merchant Taylors' School; Henry John Nightingale, St. Thomas's Hospital; and Alexander Morton Pollard, King's College and Alwyne Institution.

*Second Division.*—Josephine Eugenie Louise Griffiths, University College, Aberystwith; Charles Colgate Holman, Eastbourne College; Austin Threlfal Nankivell, Dulwich College and private study; Basil Thomas Parsons-Smith, University Tutorial College; Elsie Muriel Smith, London (Royal Free Hospital) School of Medicine for Women; John Heatly Spencer, Charing Cross Hospital and Alwyne Institution; and Ronald Ernest Todd, St. Thomas's Hospital.

*Chemistry and Experimental Physics.*

*Godfrey Frederick Ely Allison, Guy's Hospital and William Ellis Endowed School; *James Appleyard, University College and private study; *C. James Armstrong-Dash, St. Bartholomew's Hospital; *Charles Anthony Basker and *John Albert Bullbrook, Guy's Hospital; *Angel Camacho, Charing Cross Hospital and Alwyne Institution; Lawrence Croft, Yorkshire College and Bradford Municipal Technical College; *Wilfrid James Parsons Dicks, private tuition; Reginald Lionel Ernest Downer and *Archibald Thomas W. Forrester, St. Bartholomew's Hospital; *Henry Mellor Fort, Owens College; *Eric Henry Rhys Harries, London Hospital; *Charles Thomas Hawkins, University College, Cardiff; *Reginald Beaumont Heygate, Middlesex Hospital and Epsom College; *Reginald de Bracy M. Hopkins, University College, Bristol, and private study; *Charles Reginald Hoskyn, St. Bartholomew's Hospital; *Howell Tylford Howells, University College, Cardiff; *Edward Henry Hugo, Charing Cross Hospital and Epsom College; *Evan John Goronwy Jones, University College, Cardiff; *Ralph de Veil King, St. Mary's Hospital; *Alfred John Lee, University College and University Tutorial College; Harold Howard Leeson, University Tutorial College; *Ethel Mary Lomas, London (Royal Free Hospital) School of Medicine for Women; Clement Lovell, University Tutorial College and private study; *Philip Janvrin Marett, Birkbeck Institution; *E. M. Spencer Mecredy, Yorkshire College and private study; Howard Edward Hall Mitchell, Guy's Hospital; A. Wornum Mongredien, University Tutorial College and Birkbeck Institution; *John Griffiths Morgan, London Hospital; Humphrey Nockolds, Hartley College, Southampton; *Charles Louis Claude Owen, private study; *Joseph Owen, London Hospital; *Owen Brynog Parry, Birkbeck Institution and University Tutorial College; Walter Patey, Dulwich College; Arthur John Scott Pinchin, South Western Polytechnic and private study; *Edward John Price, University College, Aberystwith; *Eliza Macdonald Smith, London (Royal Free Hospital) School of Medicine for Women and Alwyne Institution; *Nora Frances Smith, London (Royal Free Hospital) School of Medicine for Women; Ethelbert William Squire, St. Mary's Hospital; William Francis Sutcliffe, St. Thomas's Hospital; Harold Thwaite, Birmingham University and private tuition; *Thomas Williams Wade, University College, Cardiff; *Norman Hamilton Walker, St. Bartholomew's Hospital; Herbert Inman Welsh, St. Paul's School and private tuition; *Edgar Wharton, Owens College; *Joseph William James Willcox, University College, Bristol; and Hugh Owen Williams, University College, Cardiff.

*Biology.*

*Arnold Alcock, Owens College; Frederick Alfred Barter, London Hospital; Harold Henry Blake, University Tutorial College and private study; *Henry Joseph Cates, University Tutorial College and private study; *Bertram Walter Cherrett, Hartley College, Southampton; Philip Crawford Conran, St. Paul's School and University Tutorial College; *Samuel Wilfrid Daw and A. Ffolliott William Denning, Guy's Hospital; Thomas Evans, Univerity College, Aberystwith, and University Tutorial College; Rupert Farrant, Epsom College and private study; *Margaret Fisher, London (Royal Free Hospital) School of Medicine for Women; *Arthur Leslie Foster, Guy's Hospital; *Sidney Frank Fouracre, Charing Cross Hospital and Alwyne Institution; *Henry Leatham Grabham, St. Thomas's Hospital and Bedford Grammar School; *Hendrik Houwink, Birkbeck Institution; *Harold Emlyn Jones, London Hospital; Roger Percival Jones, University College, Cardiff; *Claude Herbert Marshall, Guy's Hospital and Dulwich College; M. Herschel E. R. Montesole and *Charles Max Page, St. Thomas's Hospital; *Arthur Haig Pollard, London Hospital; *Edgar Nelson Ramsbottom, Owens College; *Russell John Reynolds, Alwyne Institution and private study; *Arthur Herbert Rich, University Tutorial College; Claude Mallinson Rigby, Dulwich College; *Cecil Frederick Robertson, Middlesex Hospital and private tuition; *Arthur Frederick Sanderson, St. Thomas's Hospital; Frank Standish, London Hospital; Kenneth Henry Stokes, University Tutorial College; *Sydney Arthur Tucker, St. Bartholomew's Hospital; *Harold Arthur Whitcombe, Birmingham University and private study; *Cyril Underwood Whitney, Westminster Hospital; and *Arthur Zorab, Guy's Hospital.

* These candidates have already passed a part of the examination.

N.B.—The foregoing list, published for the convenience of candidates, is provisional only, and is not final until the reports of the examiners shall have been confirmed by the Senate.

UNIVERSITY OF CAMBRIDGE.—At the congregation held on Feb. 13th the following medical degrees were conferred:—

*Doctor of Medicine.*—L. T. R. Hutchinson, Trinity; G. C. Taylor Christ's.

*Bachelor of Medicine and Bachelor of Surgery.*—D. J. Morgan, St. John's; J. G. Cooke, Sidney Sussex.

VACCINATION IN WORKHOUSES.—At the meeting of the St. Austell (Cornwall) Board of Guardians held on Feb. 8th it was decided that every tramp coming into the workhouse should be vaccinated.—The Kingsbridge (Devon) Board of Guardians at its meeting on Feb. 8th decided that all the children over seven years of age in the workhouse, and such of the adults as wished it, should be revaccinated.

BRITISH MEDICAL BENEVOLENT FUND.—The annual general meeting of subscribers to the British Medical Benevolent Fund was held on Feb. 18th, Sir William H. Broadbent, Bart., K.C.V.O., the President, being in the chair. The report of the committee and the treasurer's financial statement for the past year were presented and adopted. In the grant department subscriptions amounting to £1110 9*s.* 2*d.* and donations amounting to £369 8*s.* 3*d.* had been received, and £1614 1*s.* had been distributed to 161 applicants in sums varying from £5 to £20. In the annuity department the income from capital had been £2419 8*s.* 5*d.*, of which £2288 6*s.* 8*d.* had been paid to pensioners of the age of 60 years and upwards, the number being now 114. The working expenses of the fund had been, as for so many years past, less than 5 per cent. and the accounts had been subjected to the usual strict investigation by a chartered accountant. The report stated that it was impossible to give adequate help, even to the most distressing cases, on account of the restricted means at the disposal of the committee, and it expressed a hope that every subscriber would endeavour to interest others in the work of the charity. Hearty votes of thanks were passed to the President and other officers, who were unanimously re-elected and the meeting concluded with a warm acknowledgment of the support always given to the charity by the medical press.

THE CHANGES IN CHEESE.—At a recent meeting of the Society of Chemical Industry Dr. W. F. Sutherst, F.C.S., Professor of Agricultural Science at the Cheshire Agricultural College, Chelford, read a paper on the "Ripening" of Cheese. He said that the final explanation of the process was still wanting, but two agencies—namely, microbes and the ferments which broke up the complicated bodies in the curd into simpler ones—were the chief causes. The microbic action was most varied, and to it the peculiar taste of different cheeses was due. But the moulds and fungi were capable, apart from bacteria, of ripening cheese. It might be possible to make any kind of cheese by causing the particular microbe of that variety to be dominant in the curd. The very technical chemical analysis of cheese was explained and the variations in the chemical groups that go to make up a cheese in its different stages were traced. As the chairman, Dr. Grossman, said, it is well known that cheese-making has been a very empirical proceeding. Mr. D. B. Hewitt, a member of the Cheshire County Council, complimented Dr. Sutherst on his paper and said that he remembered being asked by a prominent agriculturist why a cheese lost colour in one part and not in another, and also what it was that gave it its particular flavour, and why in Cheshire the old long-keeping cheese on the evening of Jan 29th under circumstances of singular sadness He was staying with a medical friend in London and while hurrying across Hyde park to be in time for dinner was seized with heart failure and died during his conveyance to St George's Hospital To those who had seen much of him of late this sudden end was not wholly unexpected as signs of heart weakness had shown themselves previously and the general condition had been lowered by insomnia He may be said never fully to have recovered from a very severe attack of complicated scarlet fever contracted at the end of his term of service as assistant medical officer at the Western Fever Hospital in 1893

Cecil Latter, the son of the late Rev Arthur S Latter, was born in 1866 In 1884 he left Charterhouse with a science scholarship and entered at Pembroke College, Cambridge, where he graduated in the natural science tripos in 1887 Mental abilities of a marked order enabled him to grasp and to retain very easily the details of an education in natural science, but science in itself did not really attract him His real interests were always human and as quite a young man he exhibited in a remarkable degree the power of insight into character , he was acutely critical but nearly always in the sense of seeing good qualities where others missed them In 1888 he entered at St Thomas's Hospital, where, becoming at once intensely interested in the human side of medicine, he gave his very able mind for the first time to the serious study of its science and art, and as a consequence scored a brilliant record there taking the Mead medal in 1891 and earning the esteem of the staff and of his fellow students He held the various resident posts at St Thomas's Hospital and then acted as assistant medical officer at the Gore Farm Convalescent Hospital and at the Western Fever Hospital contracting at the latter the illness which was permanently to weaken him Feeling strongly that the most complete and satisfactory function of medicine was that exercised by the family physician, Dr Latter elected to enter at once upon general practice and in 1893, after convalescence from the fever, he settled at Folkestone In the same year he married the daughter of Mr William Beechey, and for this lady and her little son the most profound sympathy is now expressed by many friends both in and outside the profession At Folkestone Dr Latter soon began to acquire the work and to occupy the position to which he was entitled as a medical man unusually well equipped in his profession and possessed besides of a mind both original and highly cultivated He took an active share in the work of the Folkestone Medical Society in its early days proving an invaluable honorary secretary in 1894 and 1895 and a frequent contributor to its debates He was elected to the staff of the Folkestone Hospital as well as to that of the St Andrew's Convalescent Home He always realised very keenly that members of our profession owed special public duties to the community, and a few years since he read a paper before the British Balneological and Climatological Society, urging his views on the subject He put his doctrine into practice by getting himself elected in 1899 to the town council, on which body he proved himself an active citizen particularly where public sanitation was concerned The same sense of public duty made him devote a great deal of time and energy to lecturing upon first aid and ambulance work, especially among the fishermen who repaid him with affectionate gratitude It seems probable that his enthusiasm for municipal work put upon his constitution a strain greater than it could bear, for he never permitted it to interfere with the exactions of a large and increasing practice or with his work at the hospital His untimely death has called forth expressions of deep personal regret from members of every class in Folkestone where so many have lost in him not merely a skilful medical man but a sincere friend

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## D'ARCY BAINBRIDGE CARTER M R C S Eng , L R C P Edin

On Feb 8th there were laid to rest the mortal remains of D'Arcy Bainbridge Carter of Shipley who died from heart failure and pneumonia The deceased was educated at Leeds Grammar School and at the Old Leeds School of Medicine He qualified in 1881 As house surgeon to the General Infirmary at Leeds and afterwards resident medical officer to the Clayton Hospital Wakefield he built up a sound foundation of professional knowledge and in 1884 he entered into partnership with Mr W H Ellis of Shipley The many public appointments which he subsequently held, including as they did the post of surgeon to the Sir Titus Salt Hospital, Saltaire, surgeon to the Great Northern and Midland Railways and to the Eastern Division of the West Riding Constabulary, and medical officer to the Woodhouse Grove School are proofs of the value placed upon his skill and judgment Mr Carter also trained members of the local ambulance association for service in South Africa In short, there was no local movement in which he did not heartily cooperate for the benefit of his fellow townsmen

Although the weather of Feb 8th was of the most inclement description, snow falling heavily throughout the whole day, it did not prevent the people of Shipley from assembling in hundreds to pay a last mark of respect to the man who for the past 18 years had been alike their medical attendant and their friend No one who witnessed the funeral procession could fail to have been impressed with the sincerity of the vast gathering which included men and women of all ranks In conjunction with his partner, Mr Ellis Mr Carter worked hard in the carrying out of an extensive practice but devoted his leisure entirely to public work Mr Carter leaves a widow and two daughters , he died at the early age of 42 years He was a type of man too rarely met with—one who gave his best for others and who thought of himself last

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## WILLIAM CHARLES HILLS, M D Aberd , M R C S Eng , L S A

Dr W C Hills was the second son of Mr Monson Hills the elder, resident apothecary and cupper of Guy's Hospital, and was born within its precincts in February, 1828 He received his early education at the Merchant Taylors' School and his medical training at Guy's Hospital, where he was intimately known to Sir W W Gull Mr Bryant, Sir Samuel Wilks, and many others After qualifying as M R C S , L S A , in 1850 he was appointed house surgeon at the Surrey Dispensary, and subsequently in 1854 was elected assistant medical officer at the Kent Asylum at Barming Heath, near Maidstone under Dr James Huxley, who is still living, the brother of the late Professor Huxley In 1859 he graduated as M D Aberd and in 1861 he was promoted to the medical superintendency of the Norfolk County Asylum at Thorpe which post he filled with great ability and tact until January, 1887, when he retired on a well earned pension of £600 a year The remaining 15 years of his life were usefully employed as an alienist consultant in the county with which he had been so long associated and in gratuitous medical work amongst the poor of his district, by whom he was beloved Death came to him suddenly from cardiac failure shortly after retiring to bed at his house in The Chantry, Norwich, on Jan 18th last, and on the 22nd he was laid to rest in the picturesque churchyard of Postwick, near Thorpe beside his second wife and only son who had predeceased him He leaves one daughter, Mrs Aubrey A Blake to mourn her loss The funeral was largely attended by medical friends including Mr William Cadge, Mr Charles Williams Mr Charles Muriel, Mr Thomas H Morse and his old friend Dr Ernest W White, with whom in recent years he had generally spent a few weeks each summer at the City of London Asylum for to the last he was eager to keep himself abreast of the times in the treatment of mental diseases

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## PETER WILLIAM MARRIOTT, M D St And , M R C P Lond , M R C S Eng F L S

We regret to record the death on Feb 1st of Dr Marriott of Mentone He was born on June 30th 1831, and was the second son of the Rev Harvey Marriott, vicar of Wellington, Somerset and 40 years rector of Claverton Bath His grandfather, William Marriott, H E I C S , Governor of the province of Burdwan (then of some importance) near Calcutta, was brother of Randolph Marriott of Avenbury, and son of the Rev Randolph Marriott, D D , of the Leases, Bedale, Yorks, rector of Darfield, by his wife, Lady Diana, daughter of the fourth Earl of Denbigh, Count of Hapsburg, &c He was educated at Edinburgh Academy, where in July, 1846 in the fifth class he won the prizes for the best sapphics, the best Latin hexameters and pentameters and one for scholarship He worked in the Bath United Hospital in 1849 and in 1850 matriculated at the London University He entered the college of St. Bartholomew's children 413 were successfully vaccinated, 24 conscientious objection certificates were granted, and 62 children died unvaccinated, leaving 98 unaccounted for, the majority of whom had certificates of postponement.—The vaccination returns for Bristol show that during the first six months of 1901 there were 9089 births registered. Of these children 5216 were successfully vaccinated, 222 were granted certificates of exemption on the ground of conscientious objection, and 996 died unvaccinated.

# Parliamentary Intelligence.

## HOUSE OF LORDS.

### MONDAY, FEB. 17TH.

### *Proposal to Abolish the Conscientious Objector.*

Lord NEWTON moved the second reading of a Bill to amend the Vaccination Act of 1898 by repealing the conscientious objector clause. His lordship said that he did not think that there was any sympathy in any part of the House with the person known as the "conscientious objector." The Lord Chancellor had caused all the officials at the law courts under his control to be vaccinated, and he was not aware that his lordship had made any exception in favour of the conscientious objector or anybody else. Nobody liked him and many hated him. Why not, therefore, take this opportunity of getting rid of him? When the Bill of 1893 was introduced there was no mention whatever of the conscientious objector; it was only after the sacrifice of Mr. Chaplin, then President of the Local Government Board, that the clause he now wished to see repealed appeared in the measure. His contention was that the clause had made easier the path of the anti-vaccinationist to the danger of the community at large, that it was mischievous and retrograde, and that as a matter of common-sense Parliament ought to repeal it.

Viscount GALWAY, supporting the Bill, said that in his opinion the clause constituted a danger to the community.

Lord KENYON pointed out that the whole Act was in the nature of an experiment and that in the ordinary course of things it would expire in 1903, when it would be necessary to review the whole situation. In these circumstances he thought that it would be unwise to pass this Bill.

Lord PIRBRIGHT expressed the view that the logical course for their lordships would be to abolish the conscientious objector at once.

Lord BALFOUR of BURLEIGH said that the issue raised in this matter was simply whether the conscientious objector clause should be allowed to expire with the Act itself at the end of 1903, or be brought to an end on Jan. 1st, 1903, by this Bill. Personally he was a believer in vaccination, as he believed that every member of the Government was, and he had testified to that belief by himself submitting to revaccination. He was responsible for vaccination in Scotland, where the conscientious objector was not known and where they got on very well without him. They might say that people ought to be vaccinated, and proceed if they chose to put them in prison for not having their children vaccinated; but in a country governed as this country was it was impossible to enforce a law if a large proportion of the people had made up their minds that the law was wrong. There was a state of rebellion against the law, arising partly from the carelessness with which vaccination had been administered and partly to a well-planned agitation. Two or three things were done. The vaccination officers had been instructed and empowered to administer vaccination on different lines; the obligation to take children to vaccination stations was, if not abolished, largely modified; the public vaccinators were empowered, and paid, to attend at the house, and the practice of arm to-arm vaccination was got rid of and purer lymph supplied. It was hoped that by the operation of these and other causes the prejudice against vaccination would die away. A period of grace was believed to be necessary during which these prejudices could be combated and popular opinion changed He was authorised by the President of the Local Government Board to say that, so far as his information went, the administration of vaccination under the law as it now stood was a great deal more successful than it had been before. He (Lord Balfour) did not go so far as to say that this was owing entirely to the liberty given to the conscientious objector. It was enough to say that the Act of 1898 had been highly successful, that it was tending to be more successful, and that he should look with great concern on any decision of that House which upset the compromise of 1898 a year before its natural time, as likely to encourage prejudice and agitation rather than to allay them. He did not think it possible to make out that the present epidemic was in any way connected with the legislation of 1898, because those who took advantage of the conscientious objector clause could not have been more than 14 years of age in 1893, and of those who had been born since only an average of some 32,000 or 33,000 a year had availed themselves of this provision. To make out that the present epidemic was connected with the legislation of 1898 it would be necessary to prove that only those, or mainly those, who had taken advantage of the clause were now the victims of the epidemic. Vaccination in London was on the whole better enforced than in any other part of England. People who were against vaccination might make an argumentative use of that admission and ask why, if London were better protected, it had this epidemic. That was due to a variety of causes which, if it were expedient, it might be necessary to examine. But there was not the slightest evidence to prove that either this epidemic or any other occurring since the Act of 1898 was passed was due to the legislation of that year.

The LORD CHANCELLOR said that he was unable to vote for this Bill, although if they were discussing the subject for the first time he did not say that he should disagree with the mover of the second reading. He had no power to make an order that all people employed at the Law Courts should be vaccinated. He had, however, intimated, and he proposed to act upon the intimation, that if they were not they would no longer be admitted. He hoped their lordships would not now interfere with the compromise made in 1898 and depart from that kind of understanding without which it would be very difficult to conduct public business in this country.

Earl SPENCER spoke in favour of the experiment being left undisturbed in the hope that the public feeling against vaccination might be allayed.

On a division being taken the Bill was thrown out by 52 to 32 votes.

### TUESDAY, FEB. 18TH.

### *Shops (Early Closing) Bill.*

The result of a second reading debate on this Bill was the rejection of the measure by 57 against 26 votes. The Bill was introduced by Lord AVEBURY, long known in the House of Commons in connexion with this subject as Sir John Lubbock. It proposed to give to local authorities on the application of two-thirds of the shopkeepers in their district the power of enforcing certain regulations as to hours of closing and half-holidays.

## HOUSE OF COMMONS.

### THURSDAY, FEB. 13TH.

### *Royal Commission on Tuberculosis.*

Sir WALTER FOSTER asked the President of the Local Government Board if he could state the localities in which the farms were situated at which the experiments of the Royal Commission on Tuberculosis would be carried out and the condition on which these farms had been obtained and the necessary laboratories and buildings erected.—Mr. LONG replied: The two farms referred to are situated at Stansted, in Essex. They belong to Sir James Blyth who has most generously placed them at the disposal of the Royal Commission for experimental work free of charge. The Government have expressed to Sir James Blyth their warm appreciation of his act, which will greatly facilitate the labours of the Commission. Arrangements have been made for the occupation of the farms for a period of three years, though it is hoped that the inquiry will be completed within a shorter period. The Commissioners have caused to be erected on the farms the laboratories and other buildings necessary for their experiments.

### *The Supply of Lymph.*

A question on this subject was addressed by Mr. BULL to Mr. Long who referred the hon. Member to previous answers which he had given and said that as at present advised he did not propose to ask for power to control the lymph supplied from outside sources.—Mr. THOMAS BAYLEY asked the President of the Local Government Board whether his attention had been drawn to the use of small-pox virus passed through pustules on monkeys as a source of vaccine by Dr. S. Monckton Copeman, medical inspector, Local Government Board, who stated that a considerable number of children had been vaccinated with vaccine thus obtained; and whether the Local Government Board had given its medical inspector leave to vaccinate children with vaccine of such a nature.—Mr. LONG replied that Dr. Copeman had informed him that he had made experiments of the kind referred to, but the Local Government Board had not given him permission to vaccinate children with lymph yielded by the monkey, and he (Mr. Long) understood that he had not done so. In all cases vaccinations had been performed with lymph derived direct from the calf.

### FRIDAY, FEB. 14TH.

### *The Superannuation Question in Ireland.*

Mr. CAREW asked the Attorney-General for Ireland whether all the officers, including the doctors, the apothecaries (who in most cases were also the treasurers), matrons, nurses, and porters to the different county infirmaries in Ireland, who on the passing of the Local Government Act of 1898 were transferred to the county councils, were entitled to pensions under the existing regulations.—The ATTORNEY-GENERAL (Mr. ATKINSON) replied that officers of county infirmaries were not officers of the Grand Juries and were not transferred to the county councils by the Local Government Act, 1898. The rights of existing officers of these institutions were preserved by section 15, sub-section 8, of the Act, but apparently no right to pension on retirement existed prior to the Act, and no such right was conferred by it.

### *The Use of Preservatives and Colouring Matters in Food.*

In reply to a question addressed to him by Mr. JOYCE asking him whether he had taken any steps to carry out the recommendations of the Departmental Committee on this subject Mr. LONG said that legislation would be necessary to give effect to these recommendations, and he had not yet arrived at a decision as to the course to be taken.

### *Typhoid Fever Among the Troops in South Africa.*

Sir WALTER FOSTER asked the Secretary of State for War if he could state the number of cases of typhoid fever and the number of deaths from that disease which had occurred among the troops serving in South Africa since May, 1901, giving, if possible, the numbers of cases and deaths for each month.—Lord STANLEY replied: The figures are as follows:—

| | Admissions. | Deaths. |
|---|---|---|
| June | 885 | 170 |
| July | 324 | 68 |
| August | 328 | 73 |
| September | 257 | 47 |
| October | 451 | 43 |
| November | 1091 | 160 |
| | 3336 | 561 |

### *The Royal Army Medical Corps.*

Sir WALTER FOSTER asked the Secretary of State for War whether he could state how many non-commissioned officers and men of the Royal Army Medical Corps had been sent from England to South Africa during the last seven months and how many of these had had actual training in hospitals in nursing the sick.—Lord STANLEY replied: Since July 1st, 1901, 1160 non-commissioned officers and men of the Royal Army Medical Corps have embarked for South Africa. Of these, 626 were enlisted in the usual way and had had actual training in military hospitals in nursing the sick. The remainder were enlisted under a special Army Order of March 11th, 1901, engaging men who had been trained in civil life. These all had good certificates of proficiency in was now very little made It seems likely that such researches as Dr. Sutherst's may introduce something like certainty into cheese-making, greatly to the advantage of the makers and the community at large.

WALTON CONVALESCENT HOME, CLEVEDON.—The annual report states that during 1901 there were 479 patients admitted, an increase of six on the previous year. The financial statement shows a balance in hand of £29.

SOCIETY OF APOTHECARIES OF LONDON.—The Gillson Scholarship in Pathology, 1902, has been awarded to Dr. Herbert Stanley French, medical registrar at Guy's Hospital.

VICTORIA HOSPITAL, SWINDON —The fourteenth annual meeting of the subscribers of this institution was held on Feb. 8th. The medical report stated that 262 in-patients had been admitted during 1901, against 230 in 1900. The financial statement showed that the total income amounted to £765 and that there was a favourable balance of £178

MANUFACTURE OF CHLORATE OF POTASH.—It may be remembered that in connexion with the explosion at the Kurtz Chemical Works at St. Helens in May, 1899, it was asked if chlorate of potash was "explosive by itself." The recent experiments of Dr Dupré prove that under some circumstances, as when a bead of chlorate is suddenly brought to a high temperature by passing an electric current through a loop of platinum wire in which the bead is held, an explosion results Manufacturers seem unwilling to believe this.

A DISPUTED DIAGNOSIS.—The medical attendant of a man who died at Penydarren, South Wales, on Feb 3rd was prepared to certify that the cause of death was bronchitis and fatty heart, but the son of the deceased disputed the diagnosis and refused to allow a post-mortem examination to be made. The medical man therefore refused to give a certificate and on Feb 7th an inquest was held at which he again stated that the death was due to bronchitis and fatty heart, and the jury at once returned a verdict in accordance with that evidence. The coroner characterised the conduct of the son as utterly absurd.

BEQUESTS AND DONATIONS TO HOSPITALS.—Mr. and Mrs. John Stell of Keighley have given £500 to the new hospital at Keighley. The committee requires about £9000 to complete and equip the new premises.—Under the will of Mrs. Constance Trousdell of Byblox, Doneraile, county Cork, £50 are bequeathed to the City of Dublin Hospital —In connexion with the provision of a nurses' home at the North Staffordshire Infirmary, the King, who laid the foundation-stone of the infirmary in 1866, has forwarded £105 —Under the will of Mr. A. J. Dettmar the committee of the Hospital for Epilepsy and Paralysis and other Diseases of the Nervous System, Regent's-park, London, has received the sum of £9367 13*s.* 4*d.* for the new hospital now being built at Maida-vale

MEMORIAL TO THE LATE JAMES PRESCOTT JOULE.—The services of the late Dr. Joule to science attracted but scant public recognition during his life and his name has not received any worthy memorial. Now, however, it is proposed that Sale, a suburb of Manchester, where Dr. Joule lived a retired life, shall do itself honour by removing that reproach. Sir William H. Bailey has offered to present to the Sale District Council an automatic recording meteorological public clock at a cost of about £250, and Mr Frank Armstrong has offered a set of meteorological instruments, provided that they shall be suitably housed in the interests of the public. The district council is quite willing that a building shall be placed in the public park, and designs have been prepared for a tower to be called the "Joule Memorial Tower." It is to be a square building 40 or 50 feet high, with three clock dials and a dial to indicate the direction of the wind. The meteorological instruments will be in a room in the base of the building, while a tablet will be fixed outside, on which there will be a medallion portrait and a short record of Dr. Joule's work. The cost of the tower will be about £1000, which the district council would have provided had its funds been applicable for such a purpose. A committee has been formed to raise subscriptions, and it is believed that the object will appeal not only to those locally interested but to scientific men over a wider area. It is hoped that, apart from its being a memorial of Dr. Joule, it will receive official approval as a meteorological station. Mr. Charles E Lees is chairman of the executive committee of the fund and Mr. J. Walter Robson is the honorary secretary.

NOTIFICATION OF CHICKEN-POX.—At the meeting of the Exeter City Council held on Feb. 12th it was decided that chicken-pox should be included among the diseases to be notifiable under the Infectious Diseases Notification Act.

AT the meeting of the Plymouth Borough Council held on Feb 13th Dr. J. Rolston and Mr. G. A. Rae, L.R.C.P., L.R.C.S Edin., were elected members of the Plymouth Port Sanitary Authority.

SOUTHERN DISPENSARY, BATH.—The annual meeting of the subscribers to this institution was held on Feb. 4th under the presidency of General Jervois The medical report stated that 976 patients had been treated during 1901, being an increase on the previous year. The financial statement showed a favourable balance of £91.

GRANT FOR SUCCESSFUL VACCINATION.—Mr. Alfred G. Hebblethwaite, M.R.C.S. Eng., L.R.C.P. Lond., has received from the Local Government Board a gratuity for successful vaccination in the Keighley district, of which he is public vaccinator. This is very gratifying, seeing that the district is an anti-vaccinationist hotbed.

HEALTH OF BARNSTAPLE.—The medical officer of health of Barnstaple (Mr. J Harper), in his annual report for 1901, states that the population of that town is estimated at 17,962 389 births were registered during the year, equal to a rate of 22 04 per 1000 220 deaths occurred, corresponding to a rate of 12 43 per 1000.

A JUDGE ON VACCINATION.—At the opening of the Gloucestershire Winter Assizes, held at Gloucester on Feb 11th, Mr Justice Phillimore alluded to the late epidemic of small-pox in that city when the assizes were transferred to Cheltenham. He said that he was glad to hear that the lesson of the epidemic had not been lost on the city and that the protection afforded by vaccination was now recognised by the inhabitants

PRESENTATION TO A MEDICAL PRACTITIONER.—At an entertainment given at the Oddfellows' Hall, Plymouth, on Feb 12th, in connexion with the Great Western Railway Millbay Division of St. John Ambulance Brigade, Superintendent A. Ilott, on behalf of the members of the division, presented Mr. Henry Woolmington Webber, M.D., M.S., L.R.C.P. Lond., M.R.C.S. Eng., with a silver fruit-dish in recognition of his services as honorary lecturer.

THE ROYAL INSTITUTION.—Magic Squares formed the subject of the Friday evening discourse delivered at the Royal Institution on Feb. 14th by Major Percy A. Macmahon, Royal Artillery. A magic square is one divided like a chessboard into any number of equal squares, in each of which is placed one of a series of consecutive numbers from 1 up to the square of the number of cells in a side, in such a manner that the sum of those in each horizontal row, each vertical column, and each of the two diagonals is constant Major Macmahon said that these squares had been known from a remote period; they were at one time supposed to possess occult qualities and had been worn as amulets. Euler and several other eminent mathematicians of later date had investigated their properties, as it was found that they served to illustrate some points in the theory of numbers and the theory of groups A brief reference was also made to Nasik squares and Nasik cubes Several Nasik cubes are shown on the upper floor of the western gallery of the Museum in South Kensington

VACCINATION RETURNS.—At the meeting of the Exeter Board of Guardians held on Feb 11th the vaccination returns for 1900 were presented, which showed that during that year 831 births were registered; of these children 640 were successfully vaccinated, 30 were exempted on the ground of conscientious objection, 93 died unvaccinated, seven were medically postponed, 23 changed their address, and 38 were otherwise unaccounted for. During the first six months of 1901 there were 422 births registered. Of these children 288 were successfully vaccinated, 12 were exempted on the ground of conscientious objection, and 63 died unvaccinated.—The vaccination returns for Penzance Union for the first six months of 1901, which have just been issued, show that 597 births were registered. Of these

# Appointments.

*Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to* The Lancet *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

**Allport, R. H.**, M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory Acts for the Loughton District of Essex.

**Berry, H. Poole**, M.B. Lond., has been re-appointed Medical Officer of Health to the Grantham Corporation.

**Brown, Henry Reynolds**, M.B., M.S.Edin., has been appointed Medical Officer of Health to the Malden Urban District Council and Port Sanitary Authority, Essex.

**Butler, Gamaliel H.**, M.R.C.S., L.R.C.P. Lond., has been appointed a Member of the Central Board of Health, Hobart, Tasmania.

**Cooper, Arthur**, M.R.C.S., L.R.C.P. Lond., has been appointed Honorary Consulting Surgeon to the Westminster General Dispensary.

**Cornwall, J. W.**, M.D. Cantab., I.M.S., has been re-appointed to act Deputy Sanitary Commissioner, Madras Government.

**Crowe, Daniel**, M.B., B.Ch. Dubl., has been appointed Certifying Surgeon under the Factory Acts for the Ulceby District of the county of Lincoln.

**Crowther, Edward Lodewyk**, M.D. Aberd., has been appointed President of the Court of Medical Examiners, Hobart, Tasmania.

**Draffin, David Kinnear**, L.R.C.S., L.R.C.P. Irel., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Public Vaccinator for the Merthyr Vale District of the Merthyr Tydvil Union.

**Flynn, John**, L.R.C.P. & S. Edin., has been appointed temporarily Acting Official Visitor to the Hospital for Insane, Sandy Gallop, Queensland.

**Frost, E.**, L.R.C.P. I., L.R.C.S. I., has been appointed a Medical Referee under the Workmen's Compensation Acts, and to act for the county of Clare, Ireland.

**Fry, Cradock A.**, M.A., M.B., B.C. Cantab., has been appointed Honorary Assistant Surgeon to the Essex and Colchester Hospital.

**Lines, David H. E.**, M.B., Ch.B. Melb., has been appointed House Surgeon to the Hobart General Hospital, Tasmania.

**Macrae, F. Alness**, M.B., M.S. Aberd., has been appointed Medical Officer of Health for Dingwall.

**Powell, W. Wyndham**, F.R.C.S. Eng., has been appointed Honorary Surgeon to the Westminster General Dispensary.

**Riddell, James Edward**, L.R.C.S. Irel., has been appointed Public Vaccinator for the districts of Wainui and Porangahau, New Zealand.

**Roberts, D. J.**, M.B., Ch.B., has been appointed Medical Superintendent to the Westmorland Sanatorium for Consumption.

**Sinclair, G T.**, M.B., M.S. Edin., has been appointed Certifying Surgeon under the Factory Acts for the Clackmannan District.

**Sinclair, Norman J.**, M.B., B.S. Aberd., has been appointed Medical Officer to the Post Office for the Brechin District, and also Medical Examiner for the Education Department under the Teachers' Superannuation Act.

**Stenhouse, Andrew**, M.B., B.Ch. N.Z., has been appointed Public Vaccinator for the Blackstone District, St. Bathan's, New Zealand.

**Thomas, William John**, L.R.C P. Lond., M.R.C.S., has been appointed Public Vaccinator for the Bargoed District of the Merthyr Tydvil Union.

**Thomson, John**, M.B., Ch.M. Edin., has been appointed Acting Official Visitor to the Hospital for Insane, Goodna, Queensland.

**Thorp, Winifred**, L.S.A., has been appointed House Surgeon to the Mater Infirmorum Hospital, Belfast.

**Turnbull, C. C. I.**, has been appointed House Surgeon to the North Devon Infirmary, vice M. B. Hay, L.R.C.P. Lond., M.R.C.S., *resigned*.

**Wyncoll, J. W.**, *M.B., C.M. Edin.*, has been appointed Resident Medical Officer to the Westminster General Dispensary.

# Vacancies.

*For further information regarding each vacancy reference should be made to the advertisement (see Index).*

**Belgrave Hospital for Children.**—Ophthalmic Surgeon; Assistant Physician; Assistant Surgeon; Sanitary Officer.

**Birkenhead Borough Hospital.**—Junior Male House Surgeon. Salary £80 per annum, with board and washing.

**Birmingham General Dispensary.**—Resident Surgeons, unmarried. Salary £150 per annum (with allowance of £30 for cab hire), furnished rooms, fire, lights, and attendance.

**Blackburn County Borough.**—Medical Officer of Health. Salary £550 per annum.

**Borough Hospital**, Bootle, Liverpool.—Senior and Junior Residents. Salary £100 and £80 respectively.

**Bradford Poor-law Union.**—First Resident Assistant Medical Officer, unmarried. Salary £125, with rations, apartments, and washing.

**Brentford Union Infirmary, Workhouse, and Schools.**—Assistant Medical Superintendent, unmarried. Salary £100 per annum, with apartments, rations, washing, &c.

**Brighton, Hove, and Sussex Throat and Ear Hospital**, Church-street, Brighton.—House Surgeon for six months, renewable. Salary at rate of £75 per annum.

**Bristol General Hospital.**—Assistant House Physician. Salary £70 per annum, with board and residence.

**Central London Throat and Ear Hospital**, Gray's Inn-road.—House Surgeon (non-resident). Honorarium at rate of 40 guineas a year.

**City of Liverpool Infectious Diseases Hospital**, Parkhill.—Assistant *Resident Medical Officer, unmarried. Salary £120 per annum, with board, washing, and lodging.*

**County Lunatic Asylum**, Lancaster.—Pathologist. Salary £200 per annum. Also Assistant Medical Officer, unmarried. Salary £150. In both cases with board, &c.

**Cumberland Infirmary**, Carlisle.—Resident Medical Officer as House Physician for first six months and as House Surgeon for next six months. Salary at rate of £80 and £100 per annum respectively, with board, lodging, and washing.

**David Lewis Northern Hospital**, Liverpool.—Assistant House Surgeon. Salary £70 per annum, with residence and maintenance.

**Devonshire Hospital**, Buxton, Derbyshire.—Assistant House Surgeon. Salary £70 per annum, with apartments, board, lodging, and laundry.

**Doncaster Rural District.**—Medical Officer of Health. Salary £300 per annum.

**Durham County Asylum.**—Junior Assistant Medical Officer. Salary £150, rising to £180, with board, apartments, laundry, and attendance.

**Durham County Hospital.**—House Surgeon; also Junior House Surgeon. Salary of Senior, £100, with board and lodging; of Junior, £50, with board and lodging.

**East London Hospital for Children and Dispensary for Women**, Shadwell, E.—House Surgeon for six months. Honorarium of £25, with board, residence, &c.

**Farringdon General Dispensary and Lying-in Charity**, 17, Bartlett's Buildings, Holborn-circus, E.C.—Honorary Physician.

**Hospital for Sick Children**, Great Ormond-street, London, W.C.—House Physician, unmarried, for six months. Salary £20, washing allowance £2 10s., with board and residence.

**King's College**, London.—Sambrook Medical Registrarship (open to King's College Students).

**Manchester Children's Hospital.**—Junior Resident Medical Officer, unmarried, for six months, eligible for election as Senior. Salary *at rate of £80 a year when Junior and* £100 a year as Senior, with board and lodging.

**Manchester Royal Infirmary.**—Junior Anæsthetist. Salary £50 per annum.

**Manchester School Board.**—Medical Officer. Salary £250 per annum.

**New Hospital for Women.**—Anæsthetist (female).

**Peterborough Infirmary and Dispensary.**—House Surgeon. Salary £80, rising to £100 per annum, with board, residence, and washing.

**Royal Boscombe and West Hants Hospital**, Bournemouth.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

**Royal Hospital for Sick Children**, Glasgow.—House Physician. Salary £50, with board and washing.

**Sheffield Royal Hospital.**—Junior Assistant House Surgeon, unmarried. Salary £50 per annum, with board and lodging.

**Thingoe Union.** Medical Officer. Salary £60 and fees.

**Tottenham Urban District Council.**—Medical Officer of Health. Salary £500 per annum.

**Warneford Hospital**, Leamington.—House Surgeon. Salary £100 per annum, with board, washing, and apartments.

**West London Hospital**, Hammersmith-road, W.—House Physician and House Surgeon for six months. Board and lodging provided.

**Weston-super-Mare Hospital.**—House Surgeon. Salary £100 per annum, with board and residence.

The Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies as Certifying Surgeon, under the Factory Acts, at Heckington, *in the county of Lincoln, and* at Luton in the county of Bedford.

# Births, Marriages, and Deaths.

## BIRTHS.

**Burrell.**—On Feb. 17th, at Arlarie, Kew, the wife of Lionel Cottingham Burrell, M.A., M.B., B.C. Cantab., of a daughter.

**Crone.**—On Feb 4th, at Kensal Lodge, Kensal-rise, N.W., the wife of J. S. Crone, L.K.Q.C.P. Irel., L.S.A., J.P., Chairman Willesden District Council, of a son.

**Fisher.**—On Feb. 10th, at Sittingbourne, the wife of H. Holdrich Fisher, M.D. Lond., of a son.

**Hinds.**—On Feb. 13th, at Bexley House, Crayford, Kent, the wife of Thomas W. Hinds, M.D. Lond., of a son.

**Powell.**—On Feb. 15th, at Calverton Lodge, Stony Stratford, the wife of Cecil Powell, M.A., M.B. Cantab., of a daughter.

**Robinson.**—On Feb. 14th, at Gladwins, Limpsfield, the wife of Charles Allen Robinson, B.A., M.B., B.C. Cantab., of a son.

**Stewart.**—On Feb. 16th, at Walton House, Lordship-lane, S.E., the wife of H. M. Stewart, M.A., M.D. Cantab., of a son.

**Waring.**—On Feb. 14th, at Wimpole-street, W., the wife of H. J. Waring, M.S., M.B. Lond., F.R.C.S., of a son.

**Wharry.**—On Feb. 12th, at Park-street, Park-lane, the wife of Henry Gordon Wharry, M.R.C.S., of a son.

## DEATHS.

**Carter.**—February 5th, at Victoria Park, Shipley, *from acute pneumonia*, aged 42 years, D'Arcy Bainbridge Carter, M.R.C.S. Eng.

**Toller.**—On the 19th inst., to the great distress of his parents, and deeply lamented by his *friends*, at his residence, Cairo, Egypt, Seymour Graves Toller, M.D., M.R.C.P. Lond., aged 35, late Physician to Kasr-el-Aini Hospital, Caire, and late Assistant Physician to St. Thomas's Hospital, London. Friends will kindly accept this, the only intimation.

*N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

first aid, ambulance drill, &c., but it is not possible to say exactly what actual nursing experience they had On arrival in South Africa the drafts are detailed by the principal medical officers according to their qualifications

### *The Enforcement of Vaccination*

Colonel **STOPFORD SACKVILLE** asked the President of the Local Government Board whether he was aware that a recent vacancy in the office of the vaccination officer in the Wellingborough district lasted from Oct 18th 1901, to Jan 30th, 1902, what was the reason for the delay in approving of the appointment made by the guardians, was any person appointed to act temporarily during the vacancy, and had he any information to show whether the vaccination laws were now effectually enforced within the limits of the Wellingborough Kettering and Thrapston unions —Mr **LONG** replied: In the case of Thrapston I understand that the vaccination officer is performing his duties satisfactorily and that prosecutions in cases of default are taking place I regret however to say that the information in my possession shows that the vaccination laws are not being effectually enforced in the other two unions to which my hon and gallant friend refers, and I am considering what steps should be taken in these and similar cases With regard to Wellingborough, in consequence of a report which I received from one of my medical inspectors I caused letters to be addressed to the vaccination officers of that union calling attention to the unsatisfactory way in which they were performing their duties and stating that they would not be allowed to retain office unless they were prepared to carry out their duties in accordance with the Vaccination Acts As a result one of the vaccination officers resigned The guardians appointed another person in his place in October last, but in view of the unsatisfactory replies received from the other two vaccination officers I felt much difficulty as to sanctioning the new appointment Sanction was eventually given last month in the case of this officer I have felt it necessary to call on the other vaccination officers to resign

### MONDAY, FEB 17TH

### *Vaccination and the Conscientious Objector*

Mr **LONG**, in reply to a question addressed to him by Mr **CHAPLIN** said that the Parliamentary return already issued gave the number of successful primary vaccinations for 1898 as 600 314 and for 1899 as 669 349 According to returns which he had since received the number for 1900 was 677 655 He had not at present received returns from all the unions for 1901 The number of certificates of conscientious objection received by vaccination officers were as follows: in 1898 203 413, in 1899, 32 341, in 1900, 39 839, and in the first six months of 1901, 19 252

### *The London Water Question*

Sir **SAMUEL SCOTT** asked the President of the Local Government Board whether he was prepared to insert in the London Water Bill a clause protecting the consumers of water in the area of the metropolis supplied by the Middlesex Water Company from the loss of the discount on their water rates to which by law they were now entitled —Mr **LONG** replied Under Clause 35 of the Bill the scale of water charges enforceable by the West Middlesex Company will continue in force until repealed altered or superseded The powers of the Water Board in this matter will be precisely similar to those of the company at the present time and I do not propose to insert any special provision in the Bill on the subject I do not express any opinion as to the legal right of consumers, but no such right which *now exists would be taken* away by the Bill

### *The Adulteration of Milk and Butter*

General **LAURIE** asked the President of the Local Government Board whether his attention had been called to the report of the public analyst for the borough of Paddington for the quarter ending June 24th, 1901 in which it was stated that, on a conviction for adulteration of milk by adding 22 per cent of water the magistrate inflicted a fine of 5*s*, and, in view of other similar prosecutions by local authorities for adulteration of milk and butter which had either failed in consequence of the terms of the contract or other such reasons or had resulted in either only the imposition of costs or modified fines whether he could, by legislation or by other means enable the local authorities to enforce the law against adulteration especially of those articles in constant demand among the humbler classes —Mr **LONG** replied: I have not yet received the report referred to in the question I have no authority to intervene in the manner suggested nor does it appear to me that I can undertake to provide legislation on the subject I may especially point out that it must remain in the discretion of the magistrate whether a fine should be inflicted in any particular case and if so what the amount should be

### TUESDAY FEB 18TH

### *The Army Medical Service*

Dr **THOMPSON** asked the Secretary of State for War if his attention had been called to a recent statement of Dr C Ball of Dublin a member of the Advisory Army Medical Board, respecting the retirement of army medical officers and would he explain whether it was the intention of the Government to recommend that an army medical officer who had served 18 or 20 years in the army and who *had failed* to pass the examination to a lieutenant-colonelcy, should be compulsorily retired on a gratuity or whether such an officer would be allowed to serve for 20 years as at present and then be retired on a pension of £1 per diem —Mr **BRODRICK** replied An officer who fails to pass the examination for the rank of lieutenant-colonel will be permitted to complete 20 years service and retire on £1 per diem —Dr **THOMPSON** asked the Secretary of State for War if, before the issue of the promised Royal warrant for reform of the Royal Army Medical Corps he would carefully consider the objections raised, both by the officers of the Royal Army Medical Corps and the Medical Schools, to the recommendations of the late Departmental Commission as regards examinations for promotion, and if he would make such alterations as would limit these examinations to the real requirements of the service —viz *for promotion to the ranks of major and lieutenant colonel*, as suggested by the sub committee appointed by the Council of the British Medical Association to consider the reform of the Army Medical Service —Mr **BRODRICK** replied The only examinations in purely professional subjects will be those for major and lieutenant colonel The examination of lieutenants for the rank of captain will be in corps and service duties only

### *The Water-supply of Knutsford*

Mr **GROVES** asked the President of the Local Government Board whether he was aware of the danger to the inhabitants of Knutsford, Cheshire, arising from the pollution of their water supply, that the medical officer of health of the urban district council had warned such council that Knutsford was liable to an epidemic similar to that which visited Maidstone, and that such opinion had been confirmed by an independent expert, and, seeing that the council had taken no steps to stop such pollution or to secure a pure supply of water, whether he would take proceedings to compel the council to fulfil its duties, and whether in view of the application to Parliament for borrowing powers by the Knutsford Light and Water Company, he would see that conditions were imposed to compel the company to fulfil its obligations and to obtain its supply of water from an unpolluted source —Mr **LONG** replied I am aware of the complaints which have been made as to the water supply of Knutsford The Local Government Board has been in frequent communication with the urban district council with regard to it The council states that it feels the responsibility of its position but that it considers that it has taken every practicable step in its power for the safety of the inhabitants of its district I am still in correspondence with it on the subject I have no control over the company by whom the water is supplied, but at my suggestion the district council has placed before the Board of Trade the facts as to the alleged pollution of the supply so that the same may be considered in connexion with the application of the company to that *department for a provisional order to enable it to raise additional* capital

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## BOOKS, ETC , RECEIVED

**ALLEN, GEORGE** 156 Charing cross road W C

Women in Love Eight Studies in Sentiment By Alfred Sutro, author of The Cave of Illusion Price 6*s*

**BAILLIERE J B ET FILS**, 19 rue Hautefeuille, Paris

Radiotherapie et Phototherapie Par le Dr L R Regnier, Chef du Laboratoire d Electrothérapie et de Radiographie à l Hôpital de la Charité Price 1 fr 50 c

**CHURCHILL, J & A**, 7, Great Marlborough street, W

A Manual of Practical Anatomy By the late Professor Alfred W Hughes M B M C Edin &c Edited and completed by Arthur Keith, M D Aberd F R C S Eng In Three Parts Part II The Abdomen and Thorax Price 8*s* 6*d*

**DORNAN, WILLIAM J** Philadelphia

Transactions of the American Surgical Association Volume the Nineteenth Edited by Richard H Harte, M D, Recorder of the Association Price not stated

**HEATH D C, AND Co**, 15, York street Covent garden W C

Introduction to the Study of the Dependent, Defective and Delinquent Classes and of their Social Treatment By Charles Richmond Henderson D D, Professor of Sociology in the University of Chicago First English edition enlarged and rewritten from first American edition Price 7*s* 6*d*

**KIMPTON HENRY**, 13 Furnival-street Holborn, E C

An International System of Electro-therapeutics For Students General Practitioners and Specialists, By numerous associated Authors Edited by Horatio R Bigelow, M D Second edition thoroughly revised and brought up to the present date Edited by G Betton Massey, M D Price not stated

Baldness and Greyness their Etiology, Pathology, and Treatment. By Tom Robinson M D Fourth edition Price 2*s* 6*d* net

**MACMILLAN AND Co, LIMITED**, London and New York

Some Thoughts on the Principles of Local Treatment in Diseases of the Upper Air Passages Being Two Lectures delivered at the Medical Graduates College and Polyclinic on Oct 2nd and 9th 1901 By Sir Felix Semon, M D, F R C P Price 2*s* 6*d* net

**ROONEY AND OTTEN PRINTING Co**, New York, U S A

Transactions of the Twenty third Annual Meeting of the American Laryngological Association Held at New Haven, Conn, May 27th, 28th and 29th 1901 Price not stated

**SAUNDERS, W B, AND Co**, Philadelphia and London

Nothnagel s Encyclopædia of Practical Medicine: Variola, Vaccination, Varicella Cholera, Erysipelas, Whooping-cough, Hay Fever Edited, with additions, by John W. Moore, M D, F R C P Authorised translation from the German under the editorial supervision of Alfred Stengel, M D Price 21*s* net

The Four Epochs of Woman s Life A Study in Hygiene By Anna M Galbraith M D, Fellow of the New York Academy of Medicine With an Introductory Note by John H Musser, M D, Professor of Clinical Medicine, University of Pennsylvania Price 5*s* net

**SMITH, ELDER AND Co**, 15 Waterloo place, S W

St Bartholomew s Hospital Reports Edited by Norman Moore M D and D Arcy Power F R C S Vol xxxvii Price to Subscribers 6*s*, to Non subscribers 8*s* 6*d*

**UNIVERSITY CORRESPONDENCE COLLEGE** Burlington House, Cambridge London Office 32 Red Lion square Holborn W C

Matriculation Directory No XXXI, January, 1902 With list of text books, including the special subjects for June 1902 and January and June 1903 Price 1*s* 6*d* net

**UNIVERSITY PRESS**, Cambridge

Reports of the Cambridge Anthropological Expedition to Torres Straits Volume II Physiology and Psychology Part I Introduction and Vision Price 9*s* net

**UNWIN T FISHER** Paternoster square E C

The Discovery of the Future A Discourse delivered to the Royal Institution on Jan 24th 1902 By H G Wells B Sc, author of "Anticipations" Price 2*s*

**WHITTAKER AND Co** 2 White Hart street, Paternoster square E C; and **GEORGE BELL AND SONS** York street Covent garden, W C

The School Calendar 1902 A Guide to Scholarships and Examinations, 1902. Fifteenth year of issue Price 1*s* net

## A NEW SHAVING PASTE.

MR. EDMUND WHITE recently published in the *St. Thomas's Hospital Gazette* an outline of a proposed scheme for applying aseptic principles to the barber's duties in the hospital. The scheme has proved very satisfactory in practice, but a shaving brush capable of sterilisation was wanted to make the scheme complete. In the February number of the *St. Thomas's Hospital Gazette* Mr. White returns to the subject. He says: "A little consideration will show that in shaving it is necessary to support the hairs, so that the razor may cut through them transversely, and at the same time to moisten or lubricate the surface of the skin so that the outer layers of the epidermis may not be too freely removed. ...... Numerous trials were necessary in order to arrive at satisfactory results ...... and, finally, an emulsion of paraffin wax, melting at 55° C., was adopted. This was prepared with 25 per cent. of wax and 2 per cent. of tragacanth, the wax being melted and mixed with the tragacanth previously made into a mucilage with some of the water. The addition of a little stearin or lard renders the emulsification of the wax easier, for some reason which cannot readily be explained, while about 10 per cent. of alcohol makes the preparation more agreeable to use. The fatty odour of the preparation may be covered by the addition of a half to 1 per cent. of lavender oil, and the finished product then appears as a thick white cream. In use a small quantity is rubbed over the area to be shaved and the razor immediately applied. As the water in the emulsion evaporates, the particles of wax previously distributed in the emulsion become coherent and fill up the depressions in the surface of the skin from which the hairs arise, thus forming a mechanical support during the passage of the razor. The quantity required is very small, one ounce being sufficient for shaving the face about six times."

## STERCORACEOUS THERAPEUTICS.

THERE is an inexplicable tendency in the minds of many people who are reputed sane to repose more confidence in the prescriptions of medicasters, no matter how illiterate—in fact, the more illiterate the better—than they do in those of men who have made a sufficiently deep study of medicine and the cognate sciences to be able to answer the requirements of strict, and withal practical, examiners. *Omne ignotum pro magnifico* ought certainly to be the motto of these illogical champions of uninstructed ignorance who, strange to say, are not themselves as a rule illiterate, but, on the contrary, often include in their ranks men of exceptional culture and education. Strange, likewise, but equally true, it is that the nostrums most in vogue amongst quack-salvers nearly always contain substances which, to say the least of them, are nasty. The more incongruous from an æsthetic, or, indeed, from a cleanly, point of view the vaunted remedy is, the greater are its curative virtues. It would really seem that if a budding charlatan can only hit upon something sufficiently filthy he may look upon the success of his panacea as assured. In a book entitled "Medicinal Experiments: or a Collection of Choice and Safe Remedies," of which the seventh edition was published in London by "W. Innys, at the West End of St. Paul's," in 1731, the author, according to the title-page, being none other than "The Honourable R. Boyle, Esq., late Fellow of the Royal Society," there are among its "Five Hundred Choice Receipts" a great many containing such inconceivably loathsome ingredients that the wonder is how they could ever have been thought of. Here are some textual specimens: Pigs-Dung; Earth-Worms; Paracelsus's Zebethum Occidentale (viz., human Dung); Millepides (in English by some called Wood-lice, by others Sows); the Patient's own Urine, newly made; fresh Stone-horse Dung; Pizzle of a Stagg; Highly Rectify'd Spirit of Man's Urine; Snail-shells; the Warts that grow upon the hinder Legs of a (Stone) Horse; Balls of fresh Horse-dung; House Snails; Grated Pizzle of a Hart or Deer; Oil of Earth-Worms; Sole of an old shoe; Album Græcum or Dogs-turd; Hens-dung, dry'd and mix'd with Sugar; fresh Sheeps-dung; fresh Cow-dung; Pizzle of a Green Turtle (or Tortoise); The Thigh-bone of a hang'd Person; The Powder (whether made by filing, rasping, or otherwise) of the Sound Skull of a dead Man; fresh Dung of a Hog, Vipers reduc'd to fine Powder; Frogs-spawn; &c. It would serve no useful or edifying purpose to disturb this ancient manure-heap if it were not that a tendency towards what we may perhaps call stercoraceous therapeutics still exists. In the *Morning Post* of Jan 8th, 1902, the following passage will be found under the heading, "Discovery and Invention'.—

> "The methods of native 'medicine men' are always matter for ridicule, sometimes too freely bestowed, among ourselves. A medical paper gives an account of the remarkable healing of wounds among the Kaffirs, and quotes the case of one of these having been shot, in mistake for a belligerent, by a sentry. The Lee-Metford ball passed between the ribs on his right side, went through the liver, and came out on the left under the last false rib His native doctor, having first blown well into the wound through the hollow horn of a cow, put on two plasters of cowdung. Unfortunately, in the interests of science, though the man's condition was good and his temperature low on the fourth day, a regimental doctor saw the patient and substituted antiseptic bandages in place of the plasters, with the result that, after a brief relapse of suppuration, the patient mended. It is impossible, however, to assign the respective shares in the cure to the plaster and bandage."

The Honourable Robert Boyle, who has been styled the "father of modern chemistry," was a firm believer in the virtues of stercoraceous therapeutics, and it is evident from the views implied as well as expressed by him that the writer in the *Morning Post* shares the belief of his eminent predecessor. He thinks the interests of science have suffered because the wounded Kaffir's cow-dung plasters were ruthlessly torn from him. He is mistaken, but he errs in good mediæval company.

## A CURE FOR WARTS.

*To the Editors of* THE LANCET.

SIRS,—If "At My Wit's End," whose inquiry as to the above appeared in THE LANCET of Feb. 8th, p. 420, will apply the following to his patient's warts twice daily they will soon disappear:—℞. Papain, ʒss.; acid. hydroch. fort., ʒi. Care must be taken that the mixture is only applied to the warts.

I am, Sirs, yours faithfully,
THOMAS DUTTON.

Manchester square, W, Feb. 8th, 1902.

*To the Editors of* THE LANCET.

SIRS,—I have found the liq. hydr. nitratis acidus a useful escharotic.

I am, Sirs, yours faithfully,
J. G. CARRUTHERS.

Feb. 11th, 1902.

ERRATUM.—In Dr. Castellani's article "On Hæmolysins produced by Certain Bacteria," published in THE LANCET of Feb. 15th, p. 440, the words within parentheses "(bacillus typhi, bacillus coli, and bacillus dysenteriæ of Kruse)" in the first few lines of the text should have appeared in the title and not in the text.

COMMUNICATIONS not noticed in our present issue will receive attentio in our next.

# Medical Diary for the ensuing Week.

## OPERATIONS.

### METROPOLITAN HOSPITALS.

**MONDAY** (24th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.) St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.) West London (2.30 P.M.), London Throat (2 P.M.).

**TUESDAY** (25th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

**WEDNESDAY** (26th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.).

**THURSDAY** (27th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

**FRIDAY** (28th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.). West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square, (9.30 A.M.), City Orthopædic (2.30 P.M.).

**SATURDAY** (1st).—Royal Free (9 A.M. and 2 P.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.), Throat, Golden-square (9.30 A.M.)

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

## SOCIETIES.

**MONDAY** (24th).—MEDICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish square, W.).—8 30 P.M. Council Meeting Night. Papers:—Dr. M. Skerritt: Cardiac Pain.—Dr. H. D. Rolleston: Note on Hypostatic Albuminuria of Splenic Origin.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (20, Hanover-square, W.).—7 P.M. Council. 8 P.M. Communications:—Mr. W. G. Nash. Sarcoma of the Submaxillary Gland proving rapidly Fatal.—Mr. J. Bland Sutton: Anomalous Tumour of the Antrum. Paper:—Dr. H. Campbell · The Influence of Mastication on the Jaws and Appendages.

**TUESDAY** (25th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8 30 P.M. Mr. C. Ballance and Dr. P Stewart: Clinical and Experimental Observations. introducing Discussion on the Regeneration of Peripheral Nerves (with lanter epidiascope, and microscopical demonstrations).

# Notes, Short Comments, and Answers to Correspondents.

## HOW DISEASE IS SPREAD

A CASE of small pox diagnosed in one of a number of tramps sleeping at the East Grinstead workhouse on the night of Feb 13th indicates the great need which there is for the Local Government Board to issue an order giving masters of workhouses power to detain and to vaccinate tramps when in the opinion of the medical officer such a course is desirable in the interests of public health 16 casuals presented themselves for admission to the workhouse but before their request was granted they were examined by a medical man—a course very wisely adopted by the board of guardians since the prevalence of small pox in other parts of the county 15 passed the medical officer Mr T J P Hartigan who however discovered the sixteenth to be suffering from small pox and furthermore he was of opinion that the disease must have been apparent for at least four days In the course of these four days the itinerant had slept in the casual wards of two workhouses and no doubt had associated with many more of his own class and another night he passed in a stable or an outhouse The necessary processes of disinfection were immediately carried out and the patient was isolated in a temporary small pox hospital But what of the other 15 casuals? The medical officer would have liked to have isolated and revaccinated them For the want of the necessary authority he could not so act against their will and having performed the prescribed task of work the casuals were allowed to go to wander where they liked and probably to spread infection

At a meeting of the Chichester Board of Guardians held on Feb 14th the Rev W A Firth moved that all casual paupers should until further notice be examined by a medical man before admission to the workhouse The clerk replied that this would be impracticable If such an examination can be held at East Grinstead we see no reason why a similar one should not be held at Chichester

## EGYPTIAN CIGARETTES

MESSRS W J BAMBRIDGE AND Co of 37 St Mary Axe London E C have submitted for our inspection and analysis a sample box of Loulpoulo and Co s Egyptian cigarettes which are stated to be made from the finest Turkish tobacco and to be quite free from any artificial flavouring We found the tobacco to be of an excellent Dubec type yielding on burning a pleasing aromatic odour free from pungency We could detect no flavour other than that of well matured Dubec leaf The pleasing characteristics of this tobacco would in our opinion be better appreciated if the cigarette were made not so small It would be an advantage if the cigarette could be made twice or even three times as thick so as to reduce to a minimum the amount of paper wrapper in relation to the tobacco

## AN OPPORTUNITY

*To the Editors of* THE LANCET

SIRS —Having too many hobbies I am disposing (at Stevens s auction rooms King street Covent garden) of a superb 10-inch "Apps Newton" induction coil which certainly has not had in all half an hours use and is perfect in every particular It will give a spark up to 11½ or 12 inches The cost net was (with cabinet) £40 2s 6d The instrument can be purchased on the understanding that Messrs Newton the makers will work the coil if desired and certify to its excellence This they will do There may be some medical correspondent or hospital on the look out for such an instrument which at anything below its net cost would be a bargain The coil might well be sold as absolutely new

I am Sirs yours faithfully

30 Linden gardens Bayswater W E DOUGLAS FAWCETT

## INCENSE AS AN AID TO THE TREATMENT OF INFLUENZA

*To the Editors of* THE LANCET

SIRS —I have had remarkable success by the burning of incense (pulv thus co) freely in the rooms of my influenza patients It is very useful in both recent and old-standing catarrhal cases—an antiseptic used in the days of Solomon

I am Sirs yours faithfully

Hampstead N W G PORTER WORNUM

## WEIGHT CHARTS

MR H D KELF of St Saviours Union Infirmary East Dulwich grove has devised an ingenious pattern of weight chart on which a patient s weight may be recorded and preserved in a form convenient for reference Three charts make a set the first being arranged for weights not exceeding three stones increasing by successive additions of half a pound the second is intended for weights from three to nine stones and the third for weights from eight to 14 stones The charts have horizontal rulings with the weights printed on the left hand margin and vertical rulings with spaces for entering the date at the top They are supplied by Messrs Maw Son and Sons Aldersgate-street London E C and are sold at 18s per 1000 or in smaller quantities at a slightly proportionate increase

## INDECENT ADVERTISEMENTS

A CORRESPONDENT sends us the cover of *Illustrated Bits* for the week ending Feb 22nd and invites our attention to certain of the advertisements We regret to see that advertisements are published in this paper of Martin s apiol and steel pills and of Dr Davis s Boon to Womankind Ineffective as these kind of abortifacients almost invariably are they are sold to women as safeguards against pregnancy and no newspaper should assist in the traffic Other advertisements of any special article in rubber goods of medical and surgical requisites and of tablets providing new life for weak men would not we feel sure be accepted by an editor jealous for the good reputation of his journal

## THE R D ANDERSON FUND

MR WALTER MONNINGTON writes —The following is a further list of subscriptions to date exclusive of those kindly collected and already announced by Dr Alfred Cox of Gateshead —

| | £ | s | d | | £ | s | d |
|---|---|---|---|---|---|---|---|
| Surgeon Major H de Tatham I M S (retired) | 3 | 3 | 0 | Kirkham | 0 | 4 | 0 |
| Dr W R Haggard | 2 | 2 | 0 | L R C P | 0 | 2 | 6 |
| Mr T M Watt | 1 | 1 | 0 | Dr Clement Dukes | 1 | 1 | 0 |
| Dr A Smythe | 2 | 2 | 0 | Dr I H Alderson | 0 | 10 | 6 |
| Lord Hawke | 1 | 1 | 0 | Dr Alfred Cox | 1 | 4 | 0 |
| Dr W H Brand | 1 | 1 | 0 | Surgeon General Stewart | 0 | 5 | 0 |
| O S M | 0 | 10 | 0 | The Almoners of THE LANCET Relief Fund | 20 | 0 | 0 |
| Dr W D Stone | 1 | 1 | 0 | Dr T R Lomle | 1 | 1 | 0 |
| Mr Walter Edmunds | 1 | 1 | 0 | Eleanor A Forge | 3 | 3 | 0 |
| Dr F B Ifemell | 1 | 1 | 0 | Dr G H McCoull | 0 | 5 | 0 |
| Mr S P Snook | 1 | 0 | 0 | A S | 0 | 10 | 0 |
| Dr R Petch | 1 | 0 | 0 | Dr Coda | 1 | 1 | 0 |
| Dr A L Porter | 1 | 1 | 0 | Dr J Johnson | 0 | 5 | 0 |
| Major G Gallon R A M C | 2 | 2 | 0 | Major F P Maynard I M S | 2 | 2 | 0 |
| Dr W Douglas | 1 | 1 | 0 | Dr J A Jamieson | 0 | 10 | 0 |
| Mr I W Lintage | 0 | 5 | 0 | Ramsgate Medical Society | 2 | 2 | 0 |
| Dr C J Wharry | 1 | 1 | 0 | Mr R H Wolstenholme (for the Manchester Medical Guild)* | 12 | 4 | 6 |
| Surgeon Major G K Poole I M S (retired) | 0 | 10 | 0 | | | | |
| Dr Robert Barnes | 10 | 0 | 0 | | | | |

** Details of this last amount will be announced in next list

## THE GRADUAL DEVELOPMENT OF FAHRENHEIT S THERMOMETRIC SCALE

IN the February number of *Knowledge* Sir Samuel Wilks relates some interesting particulars in the history of Fahrenheit s thermometric scale on which the freezing and boiling points are marked 32° and 212° respectively This scale in its original form was invented by Sir Isaac Newton whose paper on the subject is to be found in the Philosophical Transactions for 1701 Sir Samuel Wilks continues his narrative as follows —

> His [i e Newton s] lowest point was that of freezing as his highest was that of boiling water He chose for the starting point on his scale the heat of the human body and this he called by the round number 12 that is he divided the space between the freezing point and the temperature of the body into 12 parts A few years afterwards when Fahrenheit was working at the subject of heat he took Newton s instruments for his experiments but finding the scale not minute enough he divided each degree into two parts and so made it measure 24 instead of 12 He also did more for finding he could obtain lower temperatures than freezing and notably that of ice and salt mixed together he took this for his starting point It was from this point he began to count 24 degrees up to body heat This made by his measurements 8 the point of freezing Boiling point he made 53 It then became zero freezing 8 body heat 24 and boiling water 53 Later on finding that he could measure increments of heat more minutely Fahrenheit divided each degree into four parts It will now be seen that if the numbers just mentioned are multiplied by four we have the thermometer which is now in use Beginning with zero freezing becomes 32 the body heat 96 and boiling point 212 This is the scale which Fahrenheit made and the reasons for his doing so

## A PLEA FOR THE SEALED MILK CAN

*To the Editors of* THE LANCET

SIRS —In your annotation on the above subject in THE LANCET of Feb 8th p 391 you mention that it has been stated pretty freely in court that the railway companies will not allow milk consignors to seal or lock their cans This statement shows to my mind that the persons responsible for it either were hopelessly behind the times or had some ulterior object in making it

For upwards of 20 years this company has insisted upon all milk churns consigned to them being sealed and not the slightest opposition or objection has been raised to the practice by any of the railway companies Of such importance have we deemed this simple precaution that no contract has been entered into for at least 20 years which has not contained a clause imposing a penalty for the omission As a result we have never among the millions of cans we have received in the period had a single case of tampering with the milk in transit

I am Sirs yours faithfully,

M HATTERSLEY

Managing Director of the Aylesbury Dairy

Bayswater W Feb 8th 1902 Company Limited

## Communications, Letters, &c., have been received from—

**A.**—A. H. B., A. H. M.

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HUNTERIAN SOCIETY —8.30 P M Mr R Harrison Some Points in Practical Surgery suggested by the Study of the Life and Work of John Hunter (Hunterian Lecture )

**THURSDAY** (27th) —SOCIETY OF ARTS —4 30 P M Mr N B Wagle The Industrial Development of India

**FRIDAY** (28th) —CLINICAL SOCIETY OF LONDON (20 Hanover-square W ) —8 P M Exhibition of Clinical Cases followed by Discussion Patients will be in attendance from 8 P M to 9 P M.

## LECTURES, ADDRESSES DEMONSTRATIONS, &c

**MONDAY** (24th) —ROYAL COLLEGE OF SURGEONS OF ENGLAND —5 P M Prof W McAdam Eccles The Imperfectly Descended Testis its Anatomy Physiology and Pathology
MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22, Chenies street, W C ) —4 P M Dr J Galloway Clinique (Skin )
POST GRADUATE COLLEGE (West London Hospital Hammersmith road W ) —5 P M Dr Saunders Therapeutics

**TUESDAY** (25th) —ROYAL COLLEGE OF PHYSICIANS OF LONDON — 5 P M Dr Corfield The Etiology of Typhoid Fever and its Prevention (Milroy Lecture )
MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22 Chenies street, W C ) —4 P M Sir W H Broadbent Clinique (Medical.)
POST GRADUATE COLLEGE (West London Hospital Hammersmith road W ) —5 P M Dr Moullin Backward Displacements of the Uterus
NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen square Bloomsbury) —3 30 P M Mr Horsley : Surgery of the Nervous System

**WEDNESDAY** (26th) —ROYAL COLLEGE OF SURGEONS OF ENGLAND — 5 P M Prof W McAdam Eccles The Imperfectly Descended Testis its Anatomy Physiology and Pathology
MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22 Chenies street W C ) —4 P M Mr J Smith : Clinique (Surgical )
POST GRADUATE COLLEGE (West London Hospital Hammersmith road W ) —5 P M Mr Ll Williams : Hygiene of Mouth

**THURSDAY** (27th) —ROYAL COLLEGE OF PHYSICIANS OF LONDON — 5 P M Dr Corfield The Etiology of Typhoid Fever and its Prevention (Milroy Lecture )
MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22, Chenies street W C ) —4 P M Clinique (Surgical )
POST GRADUATE COLLEGE (West London Hospital Hammersmith road W ) —5 P M Dr Davis Medical Anatomy and Physical Diagnosis
THE HOSPITAL FOR SICK CHILDREN (Gt Ormond street W C ) — 4 P M Dr Voelcker Demonstration of Selected Cases
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**FRIDAY** (28th) —ROYAL COLLEGE OF SURGEONS OF ENGLAND — 5 P M Prof W McAdam Eccles The Imperfectly Descended Testis its Anatomy Physiology and Pathology
MEDICAL GRADUATES COLLEGE AND POLYCLINIC (22 Chenies street, W C ) —4 P M Mr W Dodd : Clinique (Eye )
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*Lectures, original articles and reports should be written on one side of the paper only* AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR AND IF POSSIBLE OF THE ARTICLE SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION

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# MANAGER'S NOTICES.

### THE INDEX TO THE LANCET

THE Index to Vol II of 1901 which was completed with the issue of Dec 28th and the Title page to the Volume, were given in THE LANCET of Jan 4th

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VOLUMES for the second half of the year 1901 are now ready Bound in cloth, gilt lettered, price 18*s*, carriage extra

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# METEOROLOGICAL READINGS.

*(Taken daily at 8.30 a m by Steward's Instruments )*

THE LANCET Office Feb 20th,

| Date | Barometer reduced to Sea Level and 32° F | Direction of Wind | Rain fall | Solar Radia in Vacuo | Maximum Temp Shade | Min Temp | Wet Bulb | Dry Bulb | Remarks at 8.30 A.M |
|---|---|---|---|---|---|---|---|---|---|
| Feb 14 | 30 05 | N E | .. | 40 | 36 | 29 | Fzn | 30 | Overcast |
| " 15 | 30 21 | N | | 44 | 39 | 30 | 35 | 30 | Overcast |
| " 16 | 30 35 | W | | 63 | 36 | 25 | Fzn | 25 | Cloudy |
| " 17 | 29 92 | E | | 58 | 42 | 24 | Fzn | 28 | Foggy |
| " 18 | 30 03 | E | | 43 | 40 | 28 | 34 | 35 | Overcast |
| " 19 | 30 05 | S E | | 43 | 39 | 35 | 36 | 37 | Overcast |
| " 20 | 30 07 | N E | | 37 | 37 | 35 | 36 | 37 | Overcast |

**During the week marked copies of the following newspapers have been received** —*Cape Daily Telegraph Aberdeen Journal Aberdeen Free Press (Weekly) Surrey Advertiser Times of India Morley Observer City Press South Wales Post South Wales Daily News Plymouth News Westminster Gazette Irish Times Banbury Guardian Freeman's Journal (Dublin) Essex County Chronicle St James's Gazette Lancaster Post Suffolk Chronicle Star Manchester Courier Newcastle Chronicle Echo Manchester Despatch Yorkshire Post Belfast Newsletter Nottingham Express Cardiff Echo Newcastle Leader, Darlington Echo Hartlepool Mail Star Ipswich Times Yorks Observer &c*

rule about two months before birth. In spite of this it is a fact that the testis would seem to pass into the area of the femoral triangle even as late as commencing adult life. It is not clear, therefore, that the gubernaculum can always be said to have the credit of having caused the abnormal position.

It is extremely doubtful whether the testis has ever reached the upper part of the thigh by a spontaneous passage through the femoral ring. The classical instances which are quoted in support of this view are not altogether convincing as to the exact path along which the testis moved, some of the cases being very inadequately reported. Nearly always with the testis in Scarpa's triangle the spermatic cord can by careful manipulation be traced, not through the femoral ring, but up to and through the superficial abdominal ring, thus proving that the organ left the abdomen by the inguinal canal, and it was only after its exit from the superficial abdominal ring that it passed into the upper part of the thigh. That a hernia in its advance may force a testis from its normal course into a position which is altogether unusual for it, is fairly certain, and most, if not all, of those instances in which a testis is found lying on the aponeurosis of the external oblique muscle superficial to the inguinal canal are in reality examples of this pushing and not of the drawing action exerted by fibres of the gubernaculum.

Into whatever position the testis unnaturally passes it takes with it a process of peritoneum termed the processus vaginalis testis, provided that the pouch remains connected with the general peritoneal cavity, or the tunica vaginalis if it is shut off from it.

While thus reviewing the imperfect and the abnormal descent of the human testis it is well to remember in connexion with the pathological conditions that may be associated with the same that what may be imperfect or abnormal descent in the human subject may be the natural or perfect condition in other animals. Taking only the vertebrata in which the testis has an inclination to descend it will be found that the testis remains permanently within the abdomen near to the region of the kidney in certain animals, of which the snake, the pigeon, and the frog are typical examples. In these, therefore, there is practically no descent whatever. In the hedgehog, on the other hand, while the testis does certainly continue to reside within the abdomen, yet it has descended so far as to lie close to the deep ring, the entrance to the inguinal canal. Here there is an attempt to reach the region of the scrotum, but it is an abortive one. In the hare the testis has left the confines of the abdominal cavity and is placed in the inguinal canal, which indicates a still further attempt to descend.

In those animals other than man in which the testis has reached the scrotum it may still retain some indication of imperfection when compared with the human subject. In apes, for instance, it is the rule that the processus vaginalis should permanently remain patent. In the pig the testes normally pass into the perineum, the scrotum never being distended, while in the marsupials they occupy a position which is pre-penial.

It is also worthy of note that the position of the testis in some animals is not permanently scrotal, but that the organ descends only during the period of annual sexual activity into this pouch, being withdrawn again into the abdomen or the inguinal canal when this season is over. Further, in some other animals the testis, which is of comparatively small size ordinarily, becomes considerably enlarged during the breeding season, returning to its more usual size when the period is past. The actual size of the testis compared to the weight of the animal to which it belongs varies greatly in different classes. In many carnivorous animals, as, for instance, in the cat or the dog, the testes are relatively small. Herbivorous animals, such as the goat and the ram, on the contrary, have proportionately large testes. In the human subject the testis that has normally descended into the lowest part of the scrotum is fully developed, but if it should be arrested then there is a great probability of imperfect development. But, on the other hand, in those animals in which the testis naturally lingers in its descent or does not even start to descend the development of the organ will be perfect. There is, therefore, some subtle influence at work in the testis of the higher vertebrates which renders full descent in the vast majority of cases necessary to, or concomitant with, full development. It is also a fact that the various pathological conditions associated with imperfect descent in the human subject are unknown, or almost unknown, in those animals in which the testes never transgress the limits of the abdominal wall.

The effect of imperfect descent upon the testicle itself, so far as its anatomical characters are concerned, lies chie in the fact that, as a rule, the organ is smaller than normally-placed fellow, or, at any rate, smaller than a tes should be of an individual of the same age whose testes in their proper position. While, however, it is a truth tl the testis is so frequently not of its usual magnitude wher is imperfectly descended, yet it must be remembered tl this want of growth is not invariable and that about 5 cent. are of normal size in spite of their occupying situati other than the lowest limit of the scrotum. This proporti is undoubtedly a comparatively small one, and even in the without confirmatory microscopical examination of glandular structure, it is impossible to be quite certain tl the testis, although apparently of its proper size, has not ultimate tissue imperfect in its development.

There are at least three ways in which the abnormal cc dition of the imperfectly descended testis can be view The first is that there has been an initial want of pro formation of the organ altogether apart from the want complete descent. The second is that the organ proceeds its usual growth up to the period of the commencement sexual life, but never enlarges and undergoes that f development which should accompany the onset of pubert The third is that the testis does acquire its normal size a with it its complete physiological function at puberty, b that owing to its abnormal position it is soon involved retrogressive changes, producing in the end entire atrop of the seminal tubules and a consequent loss of activit It must be confessed that there is still a want of cle evidence in favour of any one of these three suggestions, a it may be possible that each should have its quota of cas placed under its respective heading.

The testis as it lies in the abdomen close by the kidney, the iliac fossa, or just within the deep abdominal ring, when it has passed into, but not out of, the canal, or, furth when it has only reached just below the superficial ring, the upper part of the scrotum, is undoubtedly in the majori of instances smaller and softer than a normally plac organ. In shape the arrested testis may closely resem that of the perfect organ, or it may widely differ therefro If the epididymis has passed beyond the site of the body the testis this condition will materially alter its sha Moreover, its internal structure on section contrasts marke with that which is fully developed.

Of recent years a considerable amount of attention been paid to the want of development of the imperfec descended testis, chiefly from the fact that there has b much difference of opinion as to what is the correct met of dealing with the organ when it is met with in the cou of a radical operation upon an associated hernia. From review of a large number of records, both published unpublished, as well as from the examination of a consid able series of sections of imperfectly descended testes, a the exact condition of the seminal tubules, of the presenc not of spermatozoa or of their partial formation, it wo seem that it may be accepted as a working hypothesis t the testis so arrested is one that has very definite divergen from the structure of a normally placed and fully-develo organ. A fully-developed normal adult testis may described as having well-marked seminal tubules show spermatozoa in all stages of their formation. The walls the tubules are composed of several layers of flattened ce well formed and regularly arranged. The tubules occupied by epithelial elements, grouped as irregular str They may be said to form three fairly distinct layers. outermost, or lining, layer is made up of cubical or slig flattened cells which lie immediately within the ba ment membrane of the wall. Some of these may h and there show some evidence of proliferation. next layer consists of large rounded cells with cl protoplasm which are also somewhat irregularly plac These are the cells which are chiefly concerned, it probable, with the formation of spermatozoa. They n be termed the intermediate or proliferating cells. innermost layer is one of granular ill-defined cells wh appear so closely associated as to produce an almost unif mass, staining badly and showing no tendency whatever division. Their nuclei are small, and towards the lumen the tubule they become very faintly outlined. This mass cells may be looked upon as the nutritive layer. Embed in the inner part of this stratum are the heads of spermatozoa, and it is probable that these become freed the liquefaction of the protoplasmic layer in which th heads are concealed. When, on the other hand, the struct

ABSTRACT OF

# The Hunterian Lectures

ON

# HE ANATOMY, PHYSIOLOGY, AND PATHOLOGY OF THE IMPERFECTLY DESCENDED TESTIS.

*elivered before the Royal College of Surgeons of England on Feb 24th 26th and 28th 1902,*

By W McADAM ECCLES, M S Lond,
F R C S Eng,
UNTERIAN PROFESSOR OF SURGERY SENIOR ASSISTANT SURGEON WEST
LONDON HOSPITAL ASSISTANT SURGEON CITY OF
LONDON TRUSS SOCIETY

## LECTURE I

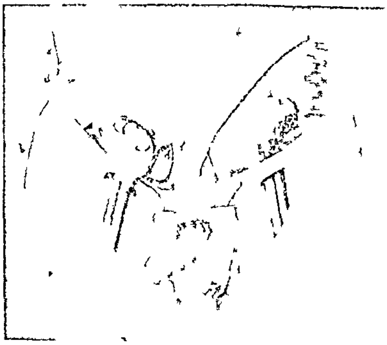
*Delivered on Feb 24th*

Mr President and Gentlemen, — The imperfectly escended testis has during recent years claimed an ncreasing amount of attention and while there has not een advanced much that is novel, yet the importance of he lesion from a surgical point of view has been more learly demonstrated It is my intention in these lectures o bring together the chief facts so far as they are known at he present time concerning the anatomy, physiology, and athology of the testis which has not reached its normal osition in the scrotum

### Anatomy

The human testis may be arrested at some spot in the ormal route along which it migrates—namely, within the bdomen in the inguinal canal just below the superficial bdominal ring and in the higher part of the scrotum Fig 1) These constitute non descent partial descent, or retention Or the testis having proceeded as far as the exit of the inguinal canal may pass into an unnatural position such as the perineum Scarpa triangle the root of the penis or upon the superficial surface of the aponeurosis of the external oblique muscle of the abdomen These constitute abnormal descent or ectopia (Fig 2)

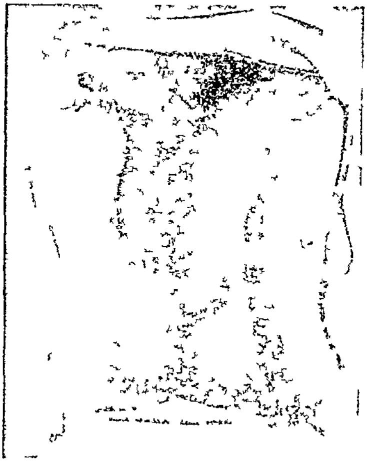
Fig 1



Inguinal retention of both testes a Unopened processus vaginalis of left side b Opened processus vaginalis of right side d Fibres of internal oblique (Bredall 1824)

It would occupy too great an amount of time to do more than indicate the several conditions which have been considered to be the causes of the arrest of the human testis in its passage along the normal route of its transition For the sake of brevity they may be classified as follows 1 Conditions associated with the mesorchium (*a*) the mesorchium may be too long, the testis would therefore probably hang too freely in the abdominal cavity and would thus be prevented from engaging the ostium of the processus vaginalis (*b*) adhesions between the peritoneum forming the mesorchium and the adjacent portion of the serous membrane, generally the outcome of intra uterine fœtal peritonitis, and (*c*) abnormal persistence of the plica vasculari 2 Conditions associated with the testis and its component parts (*a*) the spermatic vessels may be too short, (*b*) the vas deferens may be of insufficient length, (*c*) the epididymis may be abnormal in size (*d*) there may be a fusion of the two testes—synorchism, and (*e*) certain forms of hermaphroditism 3 Conditions associated with the gubernaculum testis (*a*) absence of the upper normal attachments of the gubernaculum (*b*) deficiency of its muscular fibres, and (*c*) deficiency or absence of its scrotal attachments 4 Conditions associated with the cremaster (*a*) retraction of the testis after it has descended to its usual habitat in the scrotum, and (*b*) want of action of the internal fibres of the cremaster before the testis has reached the inguinal canal 5 Conditions associated with the route along which the testis has to pass (*a*) ill development of the inguinal canal, (*b*) ill development of the superficial abdominal ring and (*c*) ill development of one half of the scrotum 6 Other conditions such as the wearing of a truss preventing the onward passage of the organ into the scrotum In some cases the body of the testis may be retained in the canal, while the epididymis and vas pass into the scrotum

Fig 2



A left testis lying in the perineum The testis was of the size of an almond and its component parts could be readily made out through the skin The left half of the scrotum was entirely undeveloped The right testis was of normal size in the right half of the scrotum (Godard)

There are probably only two causes of the abnormal descent of the human testis, or ectopia of the organ one is that the testis is drawn into its unusual position by the traction of certain sets of fibres of the gubernaculum testis, the other is that the testis is pushed into its abnormal site by an advancing hernia. In connexion with the first it is necessary to remember that the lower attachments of the gubernaculum are not only into the tissue at the bottom of the scrotum but that there are also at least three other additional sites in which they may terminate These accessory fibres may be of a permanent nature or only transitory in their existence The actual regions in which they have been observed are the perineum, Scarpa's triangle about the root of the penis and towards the anterior superior spine of the ilium in front of the aponeurosis of the external oblique muscle of the abdomen Those fibres which pass into the perineum may terminate by the side of the anus, may blend with the external sphincter ani or may be attached to the ramus of the ischium With regard to the fibres which pass into the neighbourhood of Scarpa's triangle they are fairly constant but are only found at a comparatively early stage of intra uterine life, disappearing as a needful for growth of the body, ought to show signs of hypertrophy. Yet a size of the normally placed organ greater than it should be in a person of corresponding age and development is but rarely seen in the human subject In animals, on the other hand, there seems to be more evidence of such a compensatory hypertrophy. This is particularly the case in the stallion. Sometimes in this animal the descended organ may reach twice the bulk of a normal testis in a horse of the same age and size. Because, therefore, in the human subject true hypertrophy of the fully-descended testis when its fellow is arrested is a comparatively rare condition it still remains to determine whether the completely descended and fully-developed organ, although not larger than normal, is capable by itself of supplying the needed stimulus for adequate bodily growth, or whether the arrested testis that is also present has to subscribe its share towards the same result.

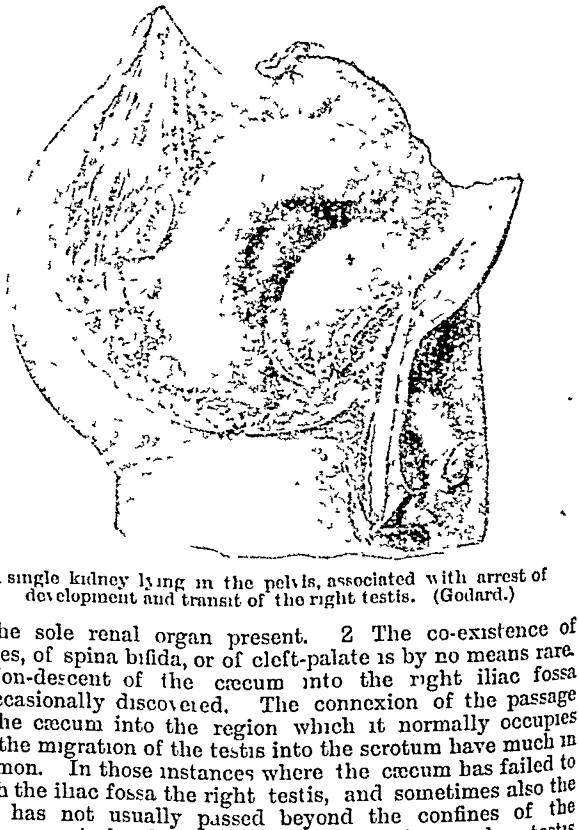
The matter becomes one of serious import when the question of the removal in early life of the imperfectly descended organ is under consideration Experience has shown, and that fairly conclusively, that a single well-developed testis is sufficient in itself to provide all that is needed for the proper growth of the individual, and that no serious inconvenience to the patient, so far as complete bodily growth is concerned, is likely to occur should it become necessary to remove its fellow, and this in spite of the fact that the organ which is left does not exhibit any tendency to increase in size. In furtherance of the argument that an ill-developed and imperfectly descended testis does not subscribe much, if any, of the stimulus for full bodily development of the man is the fact that in instances of double arrest and non-development of the testes there is as a rule some failure in the growth of the individual in all directions. It is to be understood, however, that this want of growth may be due to some prior cause which is acting as a factor in also producing the imperfect descent Such a condition is commonly seen in cases of cretinism and in those rare instances of the condition which it is proposed to term "ateleiosis." When both testes are arrested, but are not imperfectly developed, there should be no want of bodily or other development

In endeavouring to determine the causal relationship between imperfect development of the arrested testes and the failure of general bodily growth, or of efficiency in certain physiological functions, some light may possibly be thrown by a careful study of the microscopical appearances of sections of the arrested glands As was stated in the former lecture, it is an interesting fact that the testis of the boy before puberty is entirely devoid, or nearly so, of a type of cell lying in the spaces between the seminiferous tubules These interstitial cells are, however, beginning to be noticeable about the period of increased sexual development and may become very abundant. It has further been shown that although in instances of double arrest of the testes both organs may be wholly incapable of producing spermatozoa, yet the owner of them may acquire full virile power, but will remain for ever without the ability to procreate The arrested glands not infrequently have large numbers of these well-defined interstitial cells, and it is possible that they have an important function at the onset of puberty. They may have the duty of producing what is now so generally termed the "internal secretion" of the organ. This substance, whatever it may be, probably plays an important rôle in the development of the body, for without its presence much of the normal growth may be lost or the usual changes that occur at puberty may be profoundly modified. That there is some relationship between internal secretion of glands and the growth and division of cell elements gains some support from the fact that in a considerable proportion of instances where double oophorectomy has been performed for recurrent or inoperable carcinoma of the mamma, and particularly in women before the climacteric, there has been a very noticeable change in the constitution of the malignant deposits In some of these cases the neoplasm has become markedly altered within a few days of the removal of the ovaries, and in others, well-authenticated, there has been a complete temporary, if not a permanent, disappearance of the carcinomatous masses. Then, again, there is the well-known circumstance that an early removal of the ovaries leads to a diminution in the size of the uterus—uterine atrophy; and that the ablation of both the testes causes shrinking of both lobes of the prostate—prostatic atrophy. Further, it is an interesting fact that each of these mutilations is liable to be followed soon after they are performed by severe "nerve-storms," in which the patient may for the time being become irresponsible for his or her actions. On the other hand, supposing in the male that the vasa deferentia alone have been severed, such nervous phenomena but rarely succeed; and in such a condition, although eventually the testis does atrophy on the side of the vasectomy, yet it remains present and probably still capable of producing its internal secretion. Further, a removal of both the testes or of both the ovaries tends to a considerable alteration in the amount of adipose tissue in the body, the subjects as a rule becoming much disposed to the accumulation of fat in the subcutaneous tissues There is much that is highly suggestive in the fact of these internal secretions, but there is need of a large amount of clinical, physiological, and pathological study to elucidate their full significance.

Returning again to the theory that in some instances the association of imperfect descent of the testes with a failure in perfect growth may be due in reality to some common cause, cretinism is perhaps the best example of such. In male cretins it is extremely rare to find either of the testes within the scrotum, and it is equally rare to find them at all developed, and although I have not as yet had the opportunity of examining the testis of a cretin by the microscope I should expect that the interstitial cells are altogether wanting in their development. Thus it may be stated shortly that whereas there are found in the testis two distinct types of cells, the first needed for the formation of spermatozoa, and the other probably, though it cannot at present be affirmed positively, required for the production of an internal secretion, and failure in the development of both these types of cells will as a rule lead to failure in the proper bodily growth of the individual, but development of the interstitial cells, even though there are no sperm elements, will allow the possessor to become virile while remaining sterile.

Many cases are on record in which imperfect descent of the testis has been accompanied by actual bodily deformities Among the more interesting and important of these are:—1 The occurrence of incomplete transition with the absence of one kidney (Fig. 5). In one such case a sarcoma of the arrested testis actually produced a fatal result by extension to the sole renal organ present. 2 The co-existence of talipes, of spina bifida, or of cleft-palate is by no means rare. 3. Non-descent of the cæcum into the right iliac fossa is occasionally discovered. The connexion of the passage of the cæcum into the region which it normally occupies and the migration of the testis into the scrotum have much in common. In those instances where the cæcum has failed to reach the iliac fossa the right testis, and sometimes also the left, has not usually passed beyond the confines of the abdomen As has been pointed out, the gubernaculum testis has anterior attachments to the cæcum, &c, and these share probably in bringing about some of the movement of the

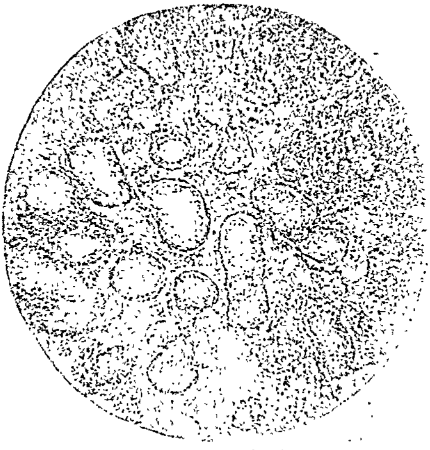
FIG. 5.



A single kidney lying in the pelvis, associated with arrest of development and transit of the right testis. (Godard.)

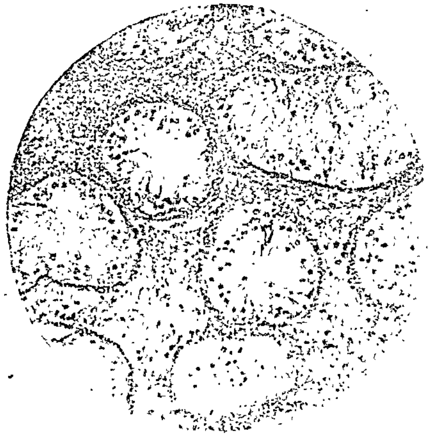
of the tubules of a testis that has not reached its proper level is examined there will be found a very different histological picture in the majority of the instances. The tubules are fewer in number, smaller, and more widely separated from one another by interstitial tissue, consisting of loose connective tissue which is rich in blood-vessels in spite of the otherwise ill-development of the gland. Scattered throughout this will be seen nuclei belonging almost certainly to interstitial stroma cells. (Figs. 3 and 4.) In some sections these appear to have undergone considerable *increase* both in number and size. *Such* interstitial cells are present in the connective tissues of the normal adult organ, but in comparatively few numbers. What their significance and function may be is still problematical. Possibly they are associated with an internal secretion of the gland, a secretion that may be needful for the full bodily development or sexual perfection of the man. The fact that they are found in apparently larger numbers in particular instances of imperfectly descended testes is a matter of great interest both from a physiological and a pathological point of view. The connective tissue, moreover, here and there contains some large lymph spaces. The basement membrane of the tubules derived from the connective tissue as well as the membrana propria are well-developed. The lumen of the tubules is most commonly found occupied by a mass of granular débris containing a large number of nuclei of various shapes and sizes, these being probably separated from the cells lining the tubule. As a rule, neither spermatoblasts nor spermatozoa can be demonstrated in the tubules of imperfectly descended testes. In some instances, however, it is possible to show that there has been actual spermatogenesis, and this most usually in those testes which have passed into the perineum.

FIG. 3.



Section of testis removed from the inguinal canal, showing few poorly developed tubules and many interstitial cells in the intertubular connective tissue. (× 50.)

FIG. 4.



Section of a testis removed from the inguinal canal of an adult, showing fairly well-developed but inactive tubules and numerous interstitial cells. (× 150.)

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## LECTURE II.

*Delivered on Feb. 26th.*

### PHYSIOLOGY.

MR. PRESIDENT AND GENTLEMEN,—Nearly all authorities are agreed that the testis which has not reached its normal position in the scrotum is generally functionless—at least, in so far as the formation of spermatozoa is concerned. While, therefore, there is no doubt that this belief is true in the vast majority of instances, yet there are persons whose testes, although arrested or ectopic, are nevertheless capable of producing well-formed and active spermatozoa. This fact has been indubitably proved by the microscopical examination of the semen which has been ejaculated and of the lining epithelium of the tubules of the glands themselves, in addition to the evidence of the procreation of children.

Double arrest or ectopia associated with want of development of the testes as a rule implies sterility on the part of the man, although he may be perfectly virile. There is also some real doubt as to whether a testis arrested at birth, but brought down in early life into the scrotum, ever so develops as to become the seat of spermatogenesis. A few cases are on record *in which this has been stated to have occurred*, but the facts given do not support the assertion strongly. Moreover, testes which at birth are lying in the inguinal canal or even within the abdomen have been known to descend gradually or perhaps somewhat hastily either before or after the period of puberty. It may therefore be that some of the glands that have been brought down, placed, and grown in the scrotum were those which, although well-developed for their age, had merely had their passage delayed and would eventually have reached their proper habitat by natural means and have become fully capable of function. But while the chief fault of the imperfectly descended testis may be its inability to produce active spermatozoa there are other conditions so closely associated with arrest or displacement of the organ that they require some description. There would appear to be some relationship between the general growth and development of the body in the male and a proper descent of the testis, or, to put the same statement in slightly different language, many instances of want of general growth of the body are accompanied in the male by an arrest of the testes. The subject may perhaps be amplified by the following propositions. 1. Arrest of one testis, with complete descent and development of the opposite gland, is only very rarely associated with any deficiency in bodily growth. 2. Arrest of both testes, when they are ill-developed, is usually accompanied by some more or less pronounced want of development of the body as a whole 3. Arrest of both testes, but good development of both glands, is but rarely followed by, or connected with, imperfect growth of the body. 4. Arrest of both testes with want of development of only one gland is not necessarily accompanied by a diminution of bodily growth. With one testis arrested and ill-developed there is therefore, except in a few instances, no lack of development of the individual, whether bodily, mentally, or sexually. It would seem from *this fact that either* the fully-descended and developed testis is sufficient to promote bodily growth, that it has in reality at present some obscure qualities or functions that render it capable of playing an important rôle in the organism in spite of its fellow being functionless, or that, on the other hand, the arrested gland does of itself supply its quota towards the full development of the individual. If the former view is the correct one it might be urged that the normal testis, in order to supply the full amount of what is and the abnormal features of the external genitals may both be the result of some prior cause. A lack of some form of stimulus to proper development may have affected the whole of the generative apparatus, bringing about the arrest in the descent of the testes and the want of full differentiation of the external organs as male.)

## PATHOLOGY.

*Inflammation of the imperfectly descended testis.*—The testicle which has not reached the lowest limit of the scrotum, or which has passed into abnormal positions, is liable to inflammation arising from the same causes as the inflammatory conditions of the normally descended organ. But in addition the site of the testis when arrested or ectopic in itself renders it prone to become inflamed from reasons other than those operating upon the normally placed gland. Inflammation of the imperfectly descended testis may be due, therefore, to (1) traumatism; to (2) extension of inflammation from the urethra; to (3) secondary inflammation in certain cases of parotitis (in all of these the inflammation is of an acute nature); to (4) deposit of the tubercle bacillus; or to (5) syphilitic infection (in both of these it is usually of a chronic nature).

*Traumatic inflammation.*—Inflammation due to traumatism is peculiarly the misfortune of the testis which is abnormally situated. A testis hanging from a normal cord in the lowest part of the scrotum, although apparently exposed to many and grave dangers, is in reality comparatively seldom actually damaged, for it is well able to get out of harm's way. It is so mobile that it slips aside almost at the approach of violence. Not so the testis which hangs high in the scrotum or just below the superficial ring, often from a short, altogether unyielding, cord, or the gland which is retained in the inguinal canal. When it has only passed out of the canal but a short way the testis is so placed as to be constantly open to receive blows and various forms of harmful pressure, which it is unable to avoid in the manner that its normally placed fellow can do. Many a time the delicate and sensitive testicular tissue is pressed backwards against the totally unyielding body of the os pubis, only to result in a sharp attack of acute orchitis. It is here also, outside the inguinal canal, but not in the scrotum that the imperfectly descended testis is certain to be injured by the pressure of the pad of a truss that has been improperly applied. When an inguinal hernia accompanies a testis found just below the superficial abdominal ring, the pad of the truss which is to control it should be placed over the site of the inguinal canal and altogether above the level of the body of the os pubis. Here it will rest only upon soft tissues and the testis will be in no way exposed to injurious pressure. In like manner the adjustment of a truss to a bubonocele with the testis in the inguinal canal will cause no harm, as a rule, if the testis is allowed to slip away to one or other side of the pad But it may be markedly irritated in this position if a truss with a so-called horse-shoe or forked pad is applied. Fortunately, the testis has the good sense not to remain within the trap that is so placed to retain it and thus escapes injury; but should it happen to be squeezed in the restricted area prepared for it an attack of inflammation is almost certain to result. Again, with the testis in the canal damage may accrue if a truss with too strong a spring is applied, or from the pressure of an instrument the spring of which has a too-marked antero-posterior curve, as so often seen in badly constructed trusses. Inguinal inclusion is also a cause of inflammation owing to the fact that strong muscular efforts on the part of the patient will produce sufficient pressure upon the organ to set up actual injury. In many other cases the application of a trust is in reality a prophylactic measure, for it will occasion the retention of the gland within the abdomen and thus keep it to a great extent out of danger.

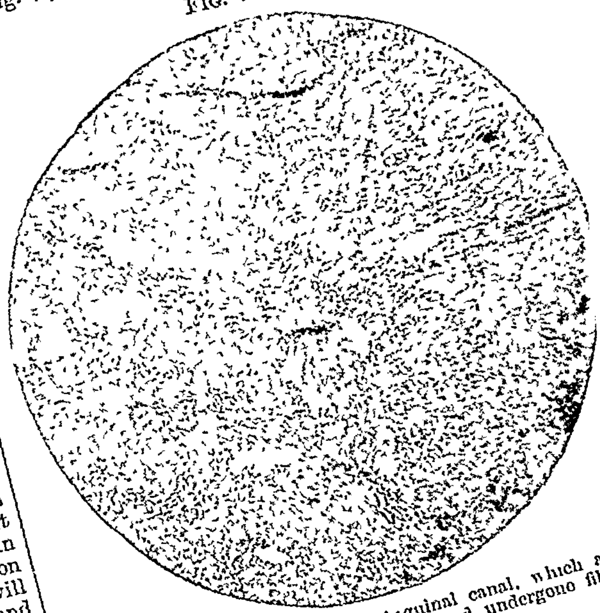
There is another manner in which a testis in the inguinal canal may be damaged. Supposing that the gland is at the lower part of the canal, and hanging from a fairly lax cord, one that allows of a certain amount of play in an up-and-down direction, a sudden muscular effort, such as the lifting of a heavy weight, may lead to the extrusion of the organ through the superficial abdominal ring, the pillars of which during the passage become separated from one another and approximate after the descent. It will thus come about that undue pressure may be exerted upon the spermatic cord, as well as possibly some actual injury to the testis in its transition. Very severe pain, sometimes enough to cause fainting, is occasioned and acute inflammation rapidly supervenes. This accident, although in some points resembling that of torsion of the spermatic cord, is distinct from that lesion and may be several times repeated, provided that the testis is withdrawn again within the limits of the canal.

Torsion of the cord, which is itself not infrequently the outcome of traumatism, is another cause of inflammation, often passing on to gangrene. When the testis has passed into the perineum it is peculiarly liable to become squeezed and bruised from pressure in sitting, horse exercise, or in bicycle-riding. The testis in Scarpa's triangle, again, is exposed to injury, but not to the same extent as the organ which lies in the perineum. The testis which has not left the protection afforded by the abdominal wall and still lies within that cavity is not more threatened with damage than is the normally-placed ovary.

Inflammation of the imperfectly descended testis consequent upon traumatism may occur at all ages but is most common in young adults. As in the normally situated gland, so inflammation of the abnormally placed organ is frequently accompanied by an acute hydrocele of the enveloping serous membrane, though on account of the usual communication of the peritoneal pouch with the general cavity of the abdomen there may be but little accumulation of fluid in the sac, for much of it will find its way upwards. In those instances where the processus vaginalis has proceeded beyond the position of the testis the fluid may fill the lower part of the sac as well, thus masking to a certain degree the absence of the testis from the scrotum and leading to some confusion in the diagnosis of the actual condition that is present. The fluid, if evacuated, is often found to be turbid or even flaky from the admixture of inflammatory products with the serous liquid.

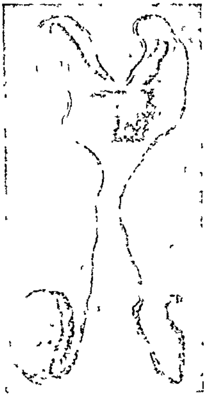
The prognosis of traumatic inflammation of the imperfectly descended testis is a grave one so far as the organ itself is concerned. Such an inflammation is nearly always the forerunner of complete atrophy of the gland, so that should it have possessed any vestige of function previously to the attack this will be lost entirely subsequently. If the disorganisation of the testicular tiss is not absolute after the primary inflammation a seco attack is almost sure to occur and lead to to destruction or the conversion of the gland into a fibr mass. (Fig. 7.) These repeated attacks of inflammation render the organ a source of great annoyance to the sufferer and may be even of danger to him. It is rare for suppuration to take place in the ordinary traumatic inflammation, just as it is also uncommon when the normally placed testis is similarly affected. The hydrocele that is often produced during the attack of orchitis may persist after all the signs and symptoms of the inflammation have passed away. A testis which has once been the site of inflammation may

FIG. 7.



Section of a testis from the inguinal canal, which after repeated attacks of inflammation had undergone fibroid degeneration bowel. In those instances in which the cæcum has remained higher than it is naturally there has been an arrest in its so-called descent, while in those cases in which there exists a congenital cæcocele there has probably been an excess of the normal traction 4. Ectopia vesicæ is almost always, when it occurs in the male, associated with imperfect descent of the testes, which, as a rule, lie in pouches on either side of the extroverted bladder. Not infrequently there is a hernial protrusion at the same time into the processus vaginalis of the arrested glands. 5. In one instance at least there has been a double penis associated with imperfect descent of the testes. There does not appear to be any evidence that arrest of the testes is accompanied by a failure in the development of the tonsils, just as there is none to justify the belief that has been held by some that excision of the tonsils is liable to be followed by atrophy of the testes. There would also, and naturally, appear to be a relationship between the descent of the testes and the sexual development of the individual. The influence of the descent and development of the testis upon the formation and growth of the accessory genital structures in the male is marked. The chief organs to be affected are the prostate, the vesiculæ seminales, Cowper's glands, and the penis. With regard to the prostate, when both testes have failed to arrive in the scrotum, provided that they also show a want of proper development, this associated structure is usually found to be small—that is to say, it does not increase in size at the onset of puberty, remaining always in its puerile condition, its fibrous tissue appears to be added to, while its glandular tissue in the form of the tubules is never fully formed, being represented merely by branching fissures doing duty for ducts and lined by a single layer of flattened cells. The intervening or inter-tubular connective tissue is hypertrophied and there are but few non-striated muscular fibres present. Further, as life advances there seems to be but little tendency for that enlargement which is so common in the organ when there has been an active sexual life. It is also true that only one-half of the prostate will be properly developed when only one testis has reached the scrotum, the other having been arrested and remained in a condition of ill-development. The vesiculæ seminales and the vasa deferentia, either unilaterally or bilaterally, according to whether one or both of the testes have failed to gain their position in the scrotum, show evidence of want of development and appear almost as if they were absent in some instances (Fig. 6) The vesicle on the side in which the testis has not descended is small, very saccular, and unfilled by semen Cowper's glands habitually fail to become of normal size where the testes have been arrested; in fact, in some instances neither they nor their ducts can be found. The penis with double arrest is as a rule small, though there are exceptions. It is also flaccid and appears frequently as if shrunken Erection may be faulty and ejaculation nearly, if not quite, absent. Not uncommonly associated with these conditions there is a want of the proper attainment of manly characteristics. The hair about the symphysis pubis shows a feminine arrangement, the pelvis tends to assume the shape seen most often in the female, and the larynx and voice remain as in the boy. Occasionally the mammary glands show distinct hypertrophy. In a few instances sexual perversion has been present.

FIG. 6.



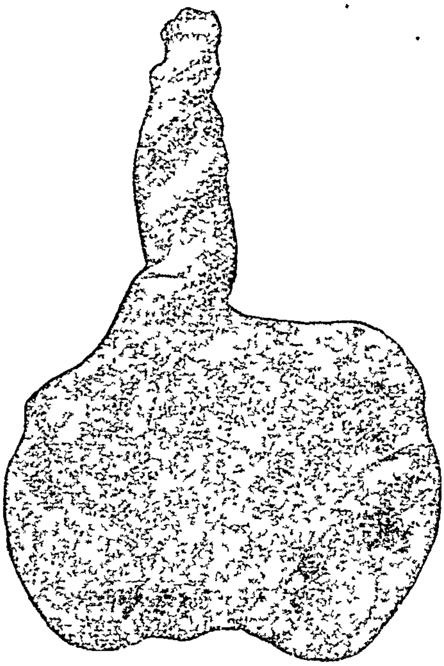
Absence of left testis with imperfect development of vesicle. (Godard.)

There is yet another relationship which is one of considerable interest. It is the association of non-descent of the testes with a condition of hermaphroditism. Hermaphroditism may be classified as true and false. In both the varieties, but particularly in the more common form of spurious, it is very usual to meet with either complete or incomplete arrest of the testicular gland. In true hermaphroditism there are present one or more testes and ovaries or glands which are a combination of both organs. Thus it is possible to have at least three forms of this variety: (1) that in which there is one ovary or testis on one side with an ovary and testis on the other—that is, unilateral; (2) that in which there is an ovary and a testis on both sides—that is, bilateral; and (3) that in which there is an ovary on one side and a testis on the other—that is, lateral. In all such cases it is a matter of some interest as to where the testicular gland is to be found. In nearly half the organ will be found either completely within the abdominal cavity or lying in the inguinal canal. There would seem, therefore, to be some relationship between the causation of the hermaphroditism and the non-passage of the male gland into the scrotum. In spurious hermaphroditism the imperfect descent of the testis is present in even a greater proportion of the cases. In this form there is an external appearance of the organs of generation of one sex, together with internal generative apparatus appertaining to the opposite sex. The relationship between the imperfect descent of the sexual gland and the abnormal condition is perhaps more readily seen and understood in this type than in the former one. Most of the instances are those in which the external parts of generation take the form more or less of the female, while the internal are in reality those of the male.

In addition to this variety there are those forms of complex hermaphroditism in which there is a mixture of the organs of both sexes externally and internally, as, for instance, that class of case where, although there are testes within the abdomen, there is also a uterus and associated parts but no ovaries. The question as to the position of the sexual glands in instances of spurious hermaphroditism should be studied, for it may throw some light on the occurrence of such conditions. In many of the recorded cases there have been found swellings in the inguinal canals. In some these have been the sexual glands, testes, arrested at this spot. In others the organs have been discovered in the bifid scrotum or in the parts which correspond to the labia majora Particular attention is directed to the swellings in the inguinal region. Where the external organs are those having the appearance of the female, more or less developed, a tender, oval, and firm body occurring in one or both of the inguinal canals is very suggestive of a hernia of the ovary There are, in fact, several instances on record in which the structure has been removed under the impression that it was such a gland, and it was only after microscopic examination that its true testicular nature has been discovered. It is doubtful, indeed, whether the opposite condition—namely, that in which the external organs are such as would lead to the belief that the individual was a male together with ovaries in the inguinal canals—is at all common, though not unknown Therefore, it may be stated that supposing there are bodies lying in the canals, associated with some doubt as to the sex so far as the external organs are concerned, it is the wisest plan to look upon the person as a male rather than as a female.

The question, then, that naturally arises is, Has this imperfect descent of the testicular gland any bearing upon the abnormal conditions of the external generative organs? It is a fact that in certain other cases where the testes have failed to reach the scrotum the penis has remained so small as to simulate an enlarged clitoris, and the scrotum has been very imperfectly developed, almost rudimentary, and with but little raphe present, and a degree more or less pronounced of hypospadias co-existent. A little further development of the same tendency to an abnormal condition of the parts and there is produced all the female characteristics of transverse hermaphroditism. Such a state may, therefore, be the outcome of some influence dependent upon the imperfect descent of the testes, or the failure to migrate on their part has allowed intestine to lie in juxtaposition These micro-organisms may lead to suppuration in the sloughing organ or to the formation of pus in the wound after the removal of the gland.

FIG 8



Strangulation of a testis due to torsion of its cord. The dark patches show extravasation of blood into its substance. (Guy's Hospital Museum, No 2078)

For the integrity of the gland torsion necessitates a very grave prognosis Even one attack of rotation, and that one only permitted to last quite a short while, say but a few hours, has been demonstrated to lead to atrophy of the testis Repeated attacks unquestionably tend to eventual disorganisation. Torsion produces atrophy. Torsion with infection by bacteria leads to true moist gangrene

# The Lettsomian Lectures

ON

# CERTAIN DISEASES OF THE BLOOD-VESSELS.

*Delivered before the Medical Society of London*

BY A. PEARCE GOULD, M.S. LOND.,
F.R.C.S. ENG.,
SURGEON TO MIDDLESEX HOSPITAL

## LECTURE I.[1]

*Delivered on Feb 17th*

### VARICOSE VEINS. THEIR NATURE AND IMPORTANCE, AND THE VALUE OF TRENDELENBURG'S OPERATION.

MR. PRESIDENT AND GENTLEMEN,—My first and most agreeable duty is to thank the council of this society for the honour which they have conferred upon me in appointing me to deliver the Lettsomian lectures. Would that I could make a worthier response. I can only ask that the kindness which prompted the invitation may be extended to me now as I offer a contribution which I know is not worthy either of this society or of my predecessors in this office

I believe that it is generally desired that the subjects of the Lettsomian lectures shall be as practical as possible—that they shall deal with affections which perhaps often come under the notice of the Fellows of the society, and in that belief I propose to devote this lecture to a consideration of certain points in connexion with varicose veins. I will not attempt to give you an exhaustive account of this affection or an analysis of the views that have been held in regard to the causes, the consequences, or the best treatment of varix. I will limit myself to a brief discussion of those features of the disease which have chiefly impressed themselves upon me, and will then submit to you the results of a somewhat extended trial of the particular method of treatment which was first employed by Trendelenburg in 1891 and which bears his name

### THE NATURE OF VARICOSE VEINS.

Two views of the nature of varicose veins are commonly held to-day. One regards them as the result of the yielding of the veins to an increased intravenous pressure due to an obstruction to the flow of blood up to and through the heart In support of this much can be said. It may be pointed out that varix is met with most often in the veins of the lower limbs and left spermatic cord and in those veins which are least well supported externally, the subcutaneous veins—that many of the subjects of them are following occupations which necessitate long standing or walking, or are suffering, or have suffered, from some obvious cause of venous pressure, such as the enlarged uterus of pregnancy. The relief that is sometimes afforded by external support to the veins is another fact that may be adduced in support of this theory. According to the other view varicose veins are to be regarded rather as venous overgrowths, a superabundant development of venous tissue—venous angeioma. In trying to decide between these two views the following facts and considerations have led me to reject the obstruction theory.

*The age at which varices are first noticed.*—In the great majority of cases varicose veins make their appearance before the growth of the individual is complete. They are one of the diseases of immature development Out of 50 consecutive cases of varicose veins of the lower limbs collected for another purpose, but in which this point was noted, I found that 41 patients observed their varices before the age of 25 years and only nine after that age. When we remember how unobservant patients, especially hospital patients, are of the date of onset of painless affections and how constantly we have to discount their statements on this point, we may be sure that these figures represent less than the truth Among the 41 cases, the age at which the varices were first noticed were given as follows:—

| | |
|---|---|
| 1 at 8 years. | 2 at 18 years. |
| 1 ,, 11 ,, | 3 ,, 19 ,, |
| 1 ,, 13 ,, | 4 ,, 20 ,, |
| 1 ,, 14 ,, | 1 ,, 21 ,, |
| 2 ,, 15 ,, | 5 ,, 22 ,, |
| 7 ,, 16 ,, | 2 ,, 23 ,, |
| 3 ,, 17 ,, | 6 ,, 24 ,, |

One patient said that she had had the enlarged veins "since she was a girl," and another said that "the veins had been enlarged as long as she could remember."

It is quite certain that puberty and adolescence are not the period of life in which venous obstruction predominates, nor are they the time of life at which strain is liable to tell upon the integrity of the vessel walls.

*The general condition of the tissues of the subjects of varix.* I am sure that we must all have been struck with the general condition of good, even robust, health of the large majority of patients when varix is first discovered. How often it happens that the disease is only discovered when a typically healthy youth presents himself for acceptance in some branch of His Majesty's service.

*The conspicuous absence in cases of varix of the usual symptoms and consequences of venous obstruction*—This is another noteworthy point. We have many opportunities of seeing the effects of venous obstruction—œdema, lividity, and impairment of function In the great majority of cases of varix these symptoms are all absent. I have seen the most extreme degree of varicose veins which had persisted for many years without any, even the slightest, alteration of the skin or subcutaneous tissue—neither œdema, induration, nor any loss of function—and such must be the experience of you all But when we come to study other cases in which there is undoubted venous obstruction, how grave and striking these symptoms always are Even in such a simple case as a slightly ill-applied bandage—just a very little impeding the venous return—how immediate is the discomfort, how quickly the whole member below becomes obviously congested and how rapidly œdema supervenes And in the graver cases of valvular derangement of the remain much more sensitive than it was before the affection of the gland came on, and in certain instances a form of neuralgia may distress the patient for a long period of time unless the organ is removed Sometimes the retained testis affected with fibrosis may be considerably enlarged so as to simulate a new growth In these cases there have, as a rule, been many attacks of inflammation and the fibrous stroma and covering of the gland are all much increased in thickness Adhesions of the testis to the inner surface of the tunica vaginalis may result which will usually lead to a greater fixation of the organ than heretofore

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[1] Lectures II. and III. will be delivered on March 3rd and 17th respectively.

Although it is undoubted that atrophy may, and often does, follow upon inflammation of the arrested testis, yet it is open to considerable uncertainty as to whether malignant disease is ever attributable to the same lesion Irritation and inflammation of the imperfectly descended gland may possibly in some rare cases initiate such changes in the testicular tissues, so far as its embryonic constituents are concerned, as to bring about the incidence of a new growth In a few instances where the testis has been found in the inguinal canal and has been the seat of inflammation peritonitis has been set up within the abdomen, owing to the fact of the communication between the processus vaginalis and the general cavity of the peritoneum

*Inflammation due to the extension of disease from the urethra* —Occasionally the passage of a catheter along the urethra has caused a septic urethritis which has later extended along the vas deferens of an arrested testis and produced an epididymo orchitis There are also some records of cases where a prostatitis other than one dependent upon gonorrhœa has been followed by inflammation in the retained gland But an affection of the epididymis and afterwards of the testicle itself from the passage of the gonococcus along the urethra to the prostate, through the common ejaculatory duct, past the vesicle, up the vas and down to the globus minor of the epididymis, is the most usual form of disease of the arrested testis caused by an extension of inflammation from the urethra Here, again, suppuration is rare, for if the urethral lesion is a double infection of the gonococcus, accompanied by the staphylococcus pyogenes, the latter is but rarely so resistant as to be able to travel alive as far as the commencement of the vas deferens

Gonorrhœal inflammation of the arrested organ is apt to be more severe than that occurring in a testis which is in the scrotum Where the testis remains within the abdomen peritonitis may supervene owing to the extension of the gonorrhœal inflammation to the adjacent serous membrane In a few cases in which the body of the testis has been fixed in the inguinal canal and the epididymis has passed into the scrotum together with the vas, a gonorrhœal infection has occasioned a swelling and tenderness in the latter region, and perhaps no discomfort above Poupart's ligament A fact which is worthy of attention is that it is by no means infrequent to find a specific epididymitis of the fully descended organ while its arrested fellow escapes sharing in the inflammation As in the traumatic inflammation of the imperfectly descended testis atrophy may occur, so it may follow a gonorrhœal infection of the same, and is probably more generally the termination of the lesion than it is when the organ is normally placed

An orchitis of an arrested testis may occur during an attack of acute parotitis In such instances, as is the case in the similar affection of the fully descended organ, the inflammation is prone to be very severe and for the time being alarming Atrophy subsequently is, moreover, very common as a sequela

A tuberculous infection of the tissues of a testis which has not reached the scrotum is a very rare condition, and this may possibly be accounted for by the fact that the undescended organ is often so poorly developed that its blood-vessels are neither so abundant nor so large as are those of the normal gland and therefore tubercle bacilli are not so readily brought to the part Further, should there be primary tuberculous deposits in other portions of the genito urinary tract, it is not so likely that they should pass to the testis along the vas if this structure has a very narrow lumen A secondary infection of the peritoneum, particularly if the testis is retained within the abdominal cavity, is likely to be set up

Syphilitic infection of the arrested testis, whether secondary or tertiary, is also extremely rare, very much rarer than it is in the normally placed organ, and its rarity is all the more remarkable seeing how commonly traumatism, often the precursor of a syphilitic inflammation, affects the retained gland.

*Torsion of the cord of an imperfectly descended testis* —Torsion of the spermatic cord may occur in connexion with the fully descended or imperfectly descended testis Nearly 50 per cent , however, of the recorded cases are those in which the testis has been arrested, and in the other half there is usually some abnormality of the testis or its annexa Almost all viscera within the abdomen which possess pedicles are at times the seat of axial rotation, and many tumours which form within the abdomen are also liable to have their pedicles twisted There are a number of predisposing causes which possibly act in bringing about torsion Imperfect descent of the testis, an abnormally long mesorchium, a practical absence of a mesorchium, action of the gubernaculum testis, a congenital twist of the cord, a roomy tunica vaginalis, and a flattened condition of the imperfectly descended organ, are all factors predisposing to torsion There are two important peculiarities that may be present in the testis which has not reached its proper habitat These are an abnormally long mesorchium, and the existence of two cords supporting the testis, the one consisting of the vessels, the other of the vas deferens Frequently the two conditions are found at one and the same time The reason of this anatomical arrangement is not far to seek The body of the testis has its own blood-supply, and these vessels lie in the plica vascularis, which will then form one cord or part of the mesorchium, while the epididymis and the vas have an altogether separate origin, and therefore a different blood supply, and they consequently tend in some cases to form a distinct cord, which may become itself the site of torsion It thus comes about that the imperfectly descended testis is less firmly attached than is the normally situated one, and there is a liability, if any exciting cause occur, for axial rotation to take place Probably an absence of a mesorchium is a condition which is seldom, if ever, present It is extremely doubtful whether the gubernaculum can ever exercise any influence in bringing about torsion It has been suggested that as the outcome of intra uterine peritonitis a congenital twist may be given to the testis in its descent, and that later this may be aggravated by an exciting cause of torsion being added to it A roomy tunica vaginalis would certainly give more space for the occurrence of a twist To sum up, it is probable that partial descent with a freely moveable testis is the chief predisposing cause of torsion of the spermatic cord

As exciting causes may be mentioned a muscular effort, a mechanical twist, the action of the cremaster, the application of a truss, attempts at the reduction of a hernia by taxis, and possibly the enlargement of the organ at the approach of puberty Others have thought that a primary thrombosis of the vessels of the pampiniform plexus exists, and that torsion is merely secondary to this A sudden muscular effort with the testis lying in the inguinal canal is the history of many cases of torsion As soon as the vessels of the cord undergo a rotation around their longitudinal axis the circulation of blood within them is seriously interfered with The onset of torsion more markedly affects the thinner walled veins than the artery, with the result that while the blood is pumped in through the latter it cannot properly return through the former The consequence of this is a rapid and extreme turgescence of the veins of the pampiniform plexus and great congestion of the whole of the parts from which they derive their blood It is this over full state of the vessels that leads to the agonising pain from which the patient suffers Soon the testis becomes greatly increased in size, often to twice, or even thrice, its original magnitude Occasionally it is only the epididymis that is enlarged, the body of the testis remaining almost its usual size This will be the result of a twist only of that cord which carries the vessels of the epididymis and vas

If the congested testis is exposed by an incision it will be found to be bluish black in colour, not unlike a ripe purple plum, and somewhat like very deeply congested gut (Fig 8 ) This discolourisation may in some instances be visible even through the skin A certain amount of fluid, usually blood-stained, may transude the distended vessels into the cavity of the tunica vaginalis Sometimes the vessels actually give way under the pressure to which they are subjected, and pure blood is thereby extravasated It is interesting to note that there may be a comparatively early invasion of the congested tissues by bacteria, both cocci and bacilli, but possibly only in the cases in which an accompanying hernia the scar, and seems to enter the stump of the saphena vein where it opens into the femoral vein.

Another case (No. 8 in the table of cases) occurred in the person of a member of our profession.

CASE 3.—The patient himself thus describes the case: "At the age of 19—in 1894—I had tortuous veins on the inner side and back of both calves and a prominent internal saphena vein in each thigh in which could be felt a thrill on coughing. At the left saphenous opening was a slight bulging of the vein. Operation in 1894 by Mr. X—excision of a portion of the internal saphena vein in the upper part f the thigh, but I think about an inch or more was left between the ligature and the saphenous opening. This relieved me and the aching pains I used to get went away. Then the veins began to get big again in the calf and in the site of the operation in the left thigh a large mass of veins began to grow which were bigger than I had had before anywhere. These Mr. X excised for me in 1896, at the same time excising most of the tortuous or prominent veins in the calf of each leg. For about three years I kept very free from any discomfort from my veins, but in the summer of 1899 I began to feel them and I had sudden twinges of pain in them when standing in the wards and theatre. They (the varices) had then recurred in the left calf, the right remaining well." This gentleman then consulted me and I found the scar in the upper part of the left thigh occupied by quite a close congeries of large veins which communicated freely with the two ends of the saphena vein. I operated in October, 1899, and removed these veins and tied off the upper end of the saphena vein as close as possible to the common femoral trunk. He adds in the letter which I have quoted from above, "I have been very comfortable since and have no pain in them now." In this case, then, new veins of considerable size were seen to develop twice over in a scar in the thigh, and each time these veins acted as a free channel of communication between the divided ends of the internal saphena trunk.

I think that such cases may be fairly quoted as demonstrating the occasional development in the adult of what may be classed as "venous angeioma." Admitting the possibility of the development of a venous angeioma in the adult, what evidence is there to support the view that varix is a form of venous angeioma?

1. In the first place I would point to the fact that we occasionally meet with cases in which we have a *combination of undoubted venous nævus and varix*, and other cases in which the condition might almost equally well be designated by either of these terms. Several years ago I showed to this society a young woman who presented a most remarkable appearance. The left half of her body from head to foot was the seat of a very extensive diffused angeioma—in great part it was a capillary nævus, part of it was rather of the character of a venous nævus, and yet other parts were indistinguishable from ordinary varix. This was a congenital malformation or error of development, but it suggested to me very powerfully the similarity of varix and venous angeioma. This month I had in the Middlesex Hospital a man with a large venous nævus of the scrotum which occupied the whole of the scrotal raphe and extended along the under surface of the sheath of the penis, and also back into the perineum. I excised this growth and in doing so exposed and removed in the subcutaneous scrotal tissues veins which I could not distinguish from ordinary varices. Further, this man had on the inner edge of his left buttock an area of subcutaneous fascia about two inches in diameter occupied by dilated veins or venous spaces, and on the lower part of the thigh and the leg of the same side were some quite unmistakeable varicose veins. Two or three weeks ago I saw a young woman on whom I had performed Trendelenburg's operation some time before. Her thigh presents a truly remarkable appearance. She is well nourished, with abundance of subcutaneous fat, and in this fat the varicose veins are so numerous that they give a blue tint to the whole limb, and I think that it is as reasonable to regard the condition as a very diffused nævus as it is to speak of it as a very extensive varix. Only this week I saw a patient, 50 years of age, who has what she calls a "wine-and-water mark" covering the upper two-thirds of the right leg and nearly the whole of the thigh, on the outer side extending up to the groin. The subcutaneous tissue is occupied by a close network of dilated veins which project on the surface when very large and give to the whole part a blue colour. The veins are indistinguishable from ordinary varices, but the condition is peculiar in having been present since birth. Many years ago I saw among my out-patients at the Westminster Hospital an old man of 80 years of age whose right leg from knee to ankle was closely covered by a congeries of large veins, many of them of the size of a woman's little finger, which were so numerous that nowhere could a shilling have been placed on the leg without resting on one of these veins. The old man told us that his leg had been like that for 60 years and had never given him any trouble; he came to the hospital for quite another affection. More common and, I think, more striking than these cases, are those others of varix involving the minute veins of the skin. We often see a kind of splash of this condition just above the knee, sometimes superficial to a dilated saphena vein. How exactly it resembles the mildest form of nævus of the skin, or the edge of a nævus undergoing spontaneous cure! Indeed, I think that I have seen every grade between the undoubted congenital venous angeioma and the most uncompromising acquired varicose vein, and this fact has certainly borne in upon me the essential oneness of the two conditions.

2. Notice again the *capricious irregular distribution of varices.* In one case it is the whole saphena vein from groin to instep that is enlarged, no one of its tributaries being involved. In another case it is merely a short section of this vein that is varicose. In a third case the saphena trunk and several of its main tributaries are dilated. In a fourth case the disease involves only some second- or third-rate tributary and leaves the main vein unaffected, or a large varix may be found lying over the normal vein. Large varices are not uncommonly seen in situations where no vein of any size is normally present—e.g., across the front of the patella. Lastly, in a few cases the enlargement appears to involve an enormous number of veins in the whole subcutaneous tissue of the leg or thigh almost uniformly, although the trunks may not be specially enlarged—and yet there is no sign of any impairment in the venous drainage of the tissues. This extreme irregularity and variation in the seat and extent of the affection seem to me to mark it out as an over-development of the venous tissue—errors of development often showing such caprice.

3. *The early age at which varix usually develops* is another interesting fact bearing upon its nature and eminently consistent with the developmental theory.

4. Further evidence pointing to the same conclusion lies in the fact that *varicose veins seem to be distinctly hereditary.* It is very difficult to express this with anything like mathematical accuracy, as a large proportion of patients are unable to give any information about varices in other members of their family. It is not an obvious deformity or defect that cannot be hid—a sister is not likely to know of a brother's varicocele or a brother of a sister's varix unless it causes serious inconvenience. But in spite of this difficulty in getting anything like full family histories on the point it is surprising how often patients tell us of other members of their family who have varicose veins too. The young medical man whose letter I have just quoted mentions in that letter that his father and one of his two brothers have varicose veins. Two days ago I operated upon the daughter of a medical man for varix in each lower limb whose father also suffers from varicose veins. A gentleman whom I have seen on two or three occasions for very large varicose veins which he has had all his adult life and which have in no way interfered with a most active life, including such sport as deer-stalking, mentioned on his last visit that his eldest son—a youth in his teens—was just developing varices in his thighs and legs. I might, indeed, quote from my note-book case after case illustrating the same fact. The very last case of varicose veins I saw was that of a young man who told me that his maternal grandmother, his father, and his two brothers had varicose veins in the legs—he did not know about his sisters. Out of 102 cases of varix of the limbs collected for another purpose I find that the disease was known by 52 patients to be present in some member or members of their families—more than 50 per cent. In the table of cases of Trendelenburg's operation I have put this detail in where I could, and if you will run your eye over the table, I think you cannot fail to be struck by the frequency with which the entry occurs. We know nothing of the real nature of hereditary influence, but we notice that it seems to show itself more often in errors of development, whether by way of excess, or defect, or variation, than in any other way.

5. *The striking innocuousness of varicose veins* in the great

heart, or the growth of tumours or plugging of a main vein where the obstruction, even if it is slow and gradual in onset, is yet persistent, we are never at a loss to notice the grave effects upon the tissues when they are imperfectly drained of their venous blood

The varicose veins that we know and are now thinking of are enlarged cutaneous and subcutaneous veins—parts of a very abundant even superabundant, system of veins—and we are all aware of the fact that many of these veins can be removed or plugged with clot without any injurious effect upon the circulation of the limb, so many and free are the alternative channels which nature has provided for the return of the blood to the heart But this fact has no bearing upon the point which which we are now discussing, for the theory of obstruction always supposes that the obstacle to the free return of blood is one that acts upon the deep main veins and through them upon all the radicles communicating with them And I submit to you that in uncomplicated cases of varicose veins there is, in the very great majority of cases, no evidence of general venous obstruction in the affected part at the onset of the disease—evidence which is not obscure or difficult to recognise and appreciate but which stares us in the face in all cases of undoubted obstruction in deep veins It is an error to accept the enlargement of superficial veins as evidence of obstruction in the main channels into which they open The evidence of this obstruction is to be sought in general venous engorgement of the part, followed by œdema and its consequences

*The result of excision of varicose veins and also of ligature of the main superficial vein into which they empty their contents* —If the cause of a given varix is some deep obstruction it is clear that to excise the varix is the most irrational procedure and could in no case be fraught with good Or to cause a further obstruction to the venous return by a ligature of the main superficial vein through which the varix is emptying its blood must of course, exaggerate the evil and cannot possibly mend matters And yet there is no clinical fact better attested than the success of both of these measures I think that we have here a decisive refutation of the obstruction theory of varicose veins, and if anything could add to its force it would be the disastrous results that are obtained when an incautious surgeon operates upon veins which are enlarged as the result of obvious undoubted central obstruction—a femoral thrombosis for instance

*The influence of pregnancy* —Women often tell us that they had not been troubled by enlarged veins until during or after pregnancy It is, indeed, commonly held that pregnancy plays an important role in the etiology of varix Before we can rightly judge of its importance, however, there are several other facts to be borne in mind At the outset we must carefully distinguish between conditions causing varix and conditions leading to pain in varix Over and over again observant women have told me that they had noticed their enlarged veins in early life before marriage, but that they had *never been troubled by them until they were pregnant* If one is careful to press this distinction it soon becomes obvious that while pregnancy is often a cause of pain in varix it is not very often the cause of varix It is also noteworthy that it is not uncommon for a woman to say that her veins were only noticed to be enlarged when she "got up after her confinement" or even later when she "weaned the baby" While admitting of course that the pregnant uterus may be and often is a cause of pressure upon the common iliac veins or vena cava and so acts as an impediment to the venous circulation in the lower limbs, it is to be remembered that, quite apart from any pressure-effects, pregnancy produces in some women quite remarkable vaso motor disturbances, and it is an error to conclude that all venous engorgements must of necessity result from the mechanical pressure of the enlarged uterus In this connexion it is important to notice that many women complain of pain in their varicose veins at the very commencement of pregnancy before the uterus has risen high enough to press upon either common iliac vein and these women not infrequently tell us that those pains abate in the later months of pregnancy when the pressure upon the veins must be at its maximum I believe too, that it is a fact that large ovarian and uterine tumours are less often attended with troublesome varices of the lower limbs than in pregnancy—a fact (if it be a fact) which surely points to some other factor as well as pressure upon the main veins coming into play in the enlarged and painful varices of pregnancy

*The sex incidence of varix* —But if we look at the influence of pregnancy from another point of view altogether we shall, I think, see still further reason to believe that its influence in causing varicose veins has been over estimated When we consider the frequency of pregnancy in the female sex and the great abdominal distension and pressure that it causes in the later months I think that we shall be bound to admit that there is no condition or even group of conditions in the male sex that can possibly equal the effects of pregnancy in embarrassing the venous circulation of the lower limbs And therefore on the obstruction theory we should expect to find varices of the lower extremities much more common in women than in men But what are the facts? Sir William Bennett's statistics show the incidence to be about equal in the two sexes I have gone over my notes of all the cases that I have seen in private practice and to them I have added all the cases in my hospital practice for the last six years, excluding cases of varicocele—they number 245 Of these patients 153 were men and 92 were women, a proportion of rather more than three males to two females At the hospital I have more female than male beds, and I am unaware of any reason why my experience of the frequency of this affection in the two sexes should not represent the fact If so I think that we must conclude from this survey of the sex incidence of the disease that pregnancy cannot play an important part in causing varix If I had included all my cases of varicocele during the same period the sex-incidence would, of course, have shown a much greater preponderance in men

But if we reject this first theory what grounds are there for adopting the other—the view that varicose veins are venous overgrowths—venous angeioma? Before answering that question it may be well to ask another Is there any evidence that a growth of veins—a highly specialised structure—ever occurs in adolescent or adult life? We have all seen cases of the development of arterial angeioma or aneurysm by anastomosis, and that forms a fair analogy, and we are very familiar with venous angeioma as a congenital growth which if neglected may continue to grow after birth and assume even large proportions We cannot fail too, to be impressed with the apparent superabundance of veins in the normal condition Nature appears to be very prodigal in the supply of veins, and nowhere more so than in the primary veins of the lower limbs and their tributaries Large numbers of veins may be obliterated without any interference with the capillary outflow These facts would prepare us to observe a growth of veins in adults, and I think cases like the following are conclusive evidence that such a growth does occur

CASE 1 —In October 1895 an agricultural labourer, 46 years of age was admitted to hospital under my care suffering from extensive varices in the lower third of the left thigh and in the left leg These caused him so much pain that he was unable to continue at his work even although he wore an elastic stocking or a rubber bandage I excised about one and a half inches of the internal saphena vein above the highest varix and a little below the middle of the thigh In a fortnight the man returned to his work and for two years he was able to work in perfect comfort the varices having in the meantime shrunk and being always lax At the end of two years he began to complain of the old pain and I found that the varices were fuller and tenser On looking at the thigh I found that the saphena vein was varicose above the scar of my operation and close alongside the scar a large vein could be plainly seen and felt passing from the saphena vein above the ligature to the vein below and this accounted for the return of the man's pain, &c

I have seen other similar cases where after I have cut out a piece of the saphena vein in the middle of the thigh, either a single large vein or a number of veins have developed in the scar and have formed a new and free communication between the divided and separated ends of the saphena vein The other day, when examining some of my old hospital patients on whom I had performed Trendelenburg's operation—excision of the upper end of the internal saphena vein—I came upon such a case (No 16 in the table of cases)

CASE 2 —The patient was a man, 41 years of age, upon whom I operated in July, 1900 He had then rather large varices in the left leg and an ulcer over the inner malleolus. He left the hospital with the operation wound and the ulcer soundly healed There is now a large varix in his groin which communicates with the upper end of the lower part of the divided saphena vein, passes round the outer edge of

TABLE OF CASES OF VARICOSE VEINS SHOWING THE RESULT OF TRENDELENBURG'S OPERATION—(*Continued*).

| o. | Age. | Sex. | Date of operation. | Condition before operation. | Result. |
|---|---|---|---|---|---|
| 7 | 35 | M. | July, 1900. | Veins enlarged for 16 years; they had been painful for the last few months. There was some eczema on the left leg. The internal saphena was large and prominent on both sides. There was great dilatation of the vein at the saphena opening on the left side. His father had varicose veins. | Seen January, 1902. He experienced marked relief for a year afterwards. There was no pain now in the right leg; the left leg pained him below the knee. *The vein in the thigh was very small; below the* knee were two varicosities much smaller than before. |
| 18 | 25 | F. | August, 1900. | Veins swollen and painful for the last three years. The veins were enlarged on the front of the right leg and the inner side of the left thigh. Other members of the family had varicose veins. | Letter, January, 1902: "My legs are very much better. The vein in the right leg is still a little swollen and rather painful periodically, but generally speaking I do not find anything of it, and it is nothing like it was before the operation." The veins in the left thigh cause no trouble. |
| 19 | 37 | M. | August, 1900. | Varicose veins in the left leg "since a child"; nine years before operation a vein burst. In 1889 at the Italian Hospital three varices and a thrombus were excised. Lately the veins had been very painful. There were large blue swellings beneath the scars of former operations. | Seen January, 1902. A very good result. The veins were shrunk and lax. He said that he "occasionally has a pricking pain if he stands very much." |
| 20 | 27 | F. | August, 1900. | Was a nurse in hospital. Had varicose veins on both sides. | Letter, January, 1902: "Since the operation I have had no trouble with my legs; they do not swell, are not painful, and I can follow my occupation as a nurse with no discomfort, though the veins are still slightly enlarged." |
| 21 | 65 | F. | October, 1900. | Varicose veins "noticed when a girl." Had an ulcer occupying the lower third of the front of the left leg. There were numerous varices above it. | Letter, January, 1902: "My leg is quite well," no pain or swelling. The veins are their natural size. "I can do all my house work and take walks without discomfort." |
| 22 | 19 | M. | November, 1900. | Varicose veins noticed at eight years of age. Pain and the varicose condition had been getting worse during the last two years. The enlarged veins were situated on the back and outer side of the left calf. His mother had varicose veins. | Seen January, 1902. A very good result. The large varix just below the knee had disappeared; those over the inner side of the calf were much smaller and soft. "Never feels anything of it." |
| 23 | 35 | F. | November, 1900. | Had great irritation in the legs for the last five years. For the last two years had to rest repeatedly at work on account of pain. Large tortuous varices in both thighs and legs. Her mother had varicose veins. | Seen January, 1902. No pain in the limbs; was able to do her work better. Up to the time of operation the veins were enlarging; since then there had been no enlargement. There were numerous varices in both thighs and legs, but much less tense than before. |
| 24 | 39 | M. | January, 1901. | The patient was rejected for the navy at 16 years of age on account of varicose veins. In October, 1896, a vein burst and an ulcer followed. Since then two others had appeared. He had dull aching in both legs after any exertion. He had varices in both legs and thighs. His mother had varicose veins. | Seen January, 1902. No varices in the thighs; those in the legs were smaller and quite lax; he experienced no trouble from them. |
| 25 | 28 | F. | January, 1901. | Had varices both sides for eight years. There was increasing pain in the right knee and thigh for the last six weeks. The internal saphena in the right leg and thigh and in the left leg was enlarged. Her mother had varicose veins. | Seen January, 1902. The veins were much smaller. |
| 26 | 26 | F. | January, 1901. | Veins noticed to enlarge eight years previously during her first pregnancy. On the left leg were two small ulcers. Above the left knee there was a sacculus on the internal saphena vein of the size of a nut. The vein was enlarged down to two inches below the knee. Her mother had varicose veins. | Seen January, 1902. Scars of ulcers were quite sound. "No pain at all in the leg now." She felt "much better for the operation." |
| 27 | 38 | F. | February, 1901. | In March, 1896, the right internal saphena vein was tied above the knee; there was great relief for two years, then a return of the varices in both legs "*controlled*" by pressure on the internal saphena vein. | Seen January, 1902. "Left leg is always in pain. Right leg aches terribly at times; just the same as before." On the right leg numerous varices had developed in the scar and the varices below were as bad as ever. In the left leg the veins had shrunk and the pain complained of was not due to the veins; it was bad when she rested. |
| 28 | 40 | F. | February, 1901. | The veins were noticed 18 years previously during her first pregnancy; they were relieved after labour, but enlarged during each pregnancy. 12 months ago an ulcer appeared on the left leg. For the last 12 months pain day and night had been very severe. The internal saphena veins of the thighs and legs were varicose, also the veins of the feet. Her mother and two brothers had varicose veins. | Seen January, 1902. "No trouble since the operation." Ulcer soundly healed; the veins are smaller. |
| 29 | 18 | M. | February, 1901. | Enlarged veins were noticed for four months. He came for treatment on occount of the pain. The left internal saphena was enlarged in the thigh and leg. | Seen January, 1902. *Now no pain in the left leg,* the one operated on. Complained of pain in the right internal saphena vein which had not been operated on. |
| 30 | 35 | M. | April, 1901. | Had great pain for several weeks before the operation, so that he could not stand upright. An ulcer had existed for six weeks. The left internal saphena was enlarged in whole length above the ulcer. His mother and sister had varicose veins. | Seen January, 1902. Veins were a little smaller; there was no pain. |
| 31 | 25 | F. | April, 1901. | The whole leg below the knee was thickly studded with varices giving it a bluish look. Her mother had had varicose veins. | Seen January, 1902. She did not think there was much difference since the operation. |
| 32 | 27 | F. | April, 1901. | Noticed veins for 10 years. Got rapidly worse during the last three months. There were groups of varices on the inner side of the knee, joining others on the outer side of the leg. There was another group on the inner and posterior aspect of the calf and inner side of the ankle. | Letter, January, 1902: "No benefit from operation." "The veins swell as much as they did before directly I stand on my legs and also are very painful at times." |
| 33 | 17 | F. | May, 1901. | Varicose veins for two years. The leg was painful both on standing and sitting. The internal saphena was enlarged in the right thigh and both legs. | Seen January, 1902. The veins were quite small; there was no œdema or other complication. She complained of "pain and shaking in the legs"—a neurosis. |

TABLE OF CASES OF VARICOSE VEINS SHOWING THE RESULT OF TRENDELENBURG'S OPERATION

| No | Age | Sex | Date of operation | Condition before operation | Result |
|---|---|---|---|---|---|
| 1 | 31 | F | March 1899 | Internal saphena vein was tied in the middle of the thigh on each side in 1896, after a period of relief the pains had recurred and the veins had enlarged again Now the veins were tied in the groin | Letter, January 1902: "Since the last operation the veins have given me little pain My legs have not swollen much or prevented my doing a fair share of domestic duties" |
| 2 | 18 | M | March 1899 | Exceedingly large varices below the right knee continuous dull heavy pain in them One brother had varicose veins | Seen January, 1902. The veins were much smaller, there was no discomfort except a slight pain if he over-exerted himself There was no new varix |
| 3 | 37 | F | May, 1899 | The veins were large but not painful one burst and a great deal of blood was lost, and this led the patient to seek advice Her mother had varicose veins | Seen January, 1902 The veins were much smaller, they caused no trouble at all |
| 4 | 29 | F | May, 1899 | The patient had varicose veins in both legs for 10 years, they ached on walking about Three sisters had varicose veins | Letter, January, 1902 "The varicose veins are decidedly better, one leg is quite cured, but the other swells a little at times, but is seldom painful" |
| 5 | 28 | F | June 1899 | Varices in both legs and above the left knee The patient could remember the varicose veins since the age of 11 years, they had not altered much up to the time of the operation One brother had been operated on for varicose veins | Seen, January, 1902 "The operation had done her decided good she could walk much better, the legs were painful if she stood for two or three hours, but not so much as before |
| 6 | 26 | F | October, 1899 | Bunch of veins just below the knee, there were several smaller ones lower down, there was pain on standing | Letter, January, 1902 "Has had no pain or discomfort since the operation |
| 7 | 20 | M | October 1899 and March, 1901 | The patient had had varicose veins for four or five years, they were very painful and ached very much after a hard day's work The right internal saphena vein was tied in 1899, the left internal saphena vein and the right external saphena vein were tried in 1901 His mother had varicose veins | Seen January, 1902 The operation had done great good, the veins were cured He was employed at a large city warehouse and had no pain or discomfort |
| 8 | 24 | M | October, 1899 | Saphena vein in the thigh prominent from the groin to the knee, bulging at the saphenous opening, tortuous varices over each calf Two previous operations Recurrence of varix in the left calf with pain on standing His father and one brother had varicose veins | Letter January, 1902 "Quite free from any discomfort, veins hardly visible when cool, after long standing or getting hot they show up |
| 9 | 21 | F | November, 1899 | Noticed veins seven years previously Had a good deal of pain which was getting worse Both internal saphena veins were dilated and slightly tortuous One sister had varicose veins | Seen Nov 20th, 1900 Left internal saphena vein above the knee was large and varicose veins below knee quite small; no aching On the right side the veins had diminished in size considerably since operation, a little aching pain after prolonged standing |
| 10 | 28 | F | November, 1899 | Very numerous varices scattered generally over both thighs and legs, giving the limbs quite a bluish colour Subject to frequent attacks of thrombosis—as often as every other month Her father had varicose veins | Seen January, 1902 Since the operation she had had a slight thrombosis each autumn, "very slight to what it used to be |
| 11 | 27 | M | November 1899 | Extreme condition of varix in the right thigh and leg slight on the left side His father had varicose veins | Seen January, 1902 The right leg was quite well, the old varices could be felt, shrunken, soft and lax The left leg was worse, there was a varix at the back of the calf opening into the external saphena vein which ought to have been tied |
| 12 | 33 | M | May, 1900 | Veins on the inner side of the thigh and leg were very swollen and tender Excision of varices was performed at St Thomas's Hospital at 19 years of age, others formed in the leg and thigh, thrombosis occurred in the thigh His mother and one brother had varicose veins | Seen January, 1902 Had no trouble in the legs after the operation, was passed for military service in South Africa and was quite well there till September, 1901 when he suffered from a saddle-gall |
| 13 | 25 | F | June 1900 | Noticed vein three years A year previously the leg became much inflamed and very painful Large vein ran from the knee to the ankle One sister had varicose veins | Letter January, 1902 "Veins are quite the natural size and do not swell I have not had any pain or discomfort since the operation |
| 14 | 32 | F | June, 1900 | Pain from enlarged veins in both legs for three years, lately much worse There was some eczema of both legs The veins of both legs were varicose The left saphena was enlarged above the knee | Letter, January, 1902 "Veins are now their natural size not swollen and are free from pain and I now follow my occupation without any discomfort whatever from them" |
| 15 | 27 | M | June 1900 | Both internal saphena veins were enlarged and very tortuous from the saphenous opening to the foot The patient had not had pain in them The enlargement started in the calf and had spread upwards | Letter January, 1902 "Veins of left leg are normal Those of my right leg have swollen slightly since the operation The veins are not painful and do not hinder me in my work" |
| 16 | 41 | M | July 1900 | Had pain from the veins for four years Had an ulcer above the internal malleolus for the last two years Was compelled to rest in bed occasionally for from two to three weeks at a time Internal saphena in its whole length was varicose Had large ulcer over the internal malleolus at the time of operation The skin round it was eczematous One brother had varicose veins | Seen January, 1902 Leg did not trouble him now in the least" There was no varix in the thigh; those in the leg were smaller The scar of healed ulcer was quite sound A considerable varix had developed below the operation scar and opened into the highest part of the internal saphena vein |

majority of cases, also, I submit, supports the same view of their nature. An extreme degree of varix persisting for many years is by no means incompatible with unimpaired function and structure of the parts draining into the enlarged veins, and the varicose veins themselves will often persist throughout life without undergoing any secondary or further changes. This *stability* of varicose veins is, I think, an important point We often find them persisting quite unaltered for many years, and they are certainly less troublesome in the later than in the earlier years of adult life. It seems to me that this fact is more compatible with the view that they are an exaggeration of a normal physiological structure than the result of a pathological process.

6. The last point I would mention is the *minute structure of a varicose vein.* I believe that all the normal constituents of a vein are found in a varix and are usually increased in amount. It is often stated that the thick walls of a varix—and they may be very thick—are composed almost entirely of fibrous tissue. I have examined a good many and that has not been my experience: an increase of the muscular tissue is as notable as the increase of fibrous tissue and endothelial hyperplasia is sometimes a marked feature.

These, then, are the reasons which seem to me to show that varices are essentially the result of an over-development of venous tissue closely allied to, if not identical with, angeioma.

But associated with this growth of venous tissue there is very usually a failure in the valve apparatus which allows of regurgitation of blood from the main deep veins into the superficial veins. Since reading Trendelenburg's paper I have investigated this point in every case of varix of the lower limbs that has come under my observation, and I have found that regurgitation into the superficial veins is an almost constant phenomenon. The observation is made thus. Having examined the patient in the standing position he is asked to lie down on his back and the limb to be tested is raised to the vertical and the varices are completely emptied by gentle centripetal pressure. The thumb or forefinger is now placed in the groin so as to compress the upper end of the internal saphena vein and the patient is told to rise. It will be found that almost without exception the varices will remain lax and almost empty so long as the compression is maintained upon the main vein above, but that they fill out at once from above when the compression is removed. The regurgitation of blood into the superficial veins is sometimes most striking and obvious—in other cases it is less free, but I have rarely failed to demonstrate it in any well-developed case of varix. In some instances I have found that it has occurred from the popliteal into the external saphena vein instead of, or as well as, from the common femoral vein into the internal saphena vein. In one case I found that the back flow occurred through a small vein passing up the thigh just internally to the line of the anterior iliac spine as well as into the internal saphena vein. This regurgitation is not a normal condition. At my request Dr. H. Campbell Thomson has made observations on this point in the post-mortem room at the Middlesex Hospital, and he has entirely failed to inject fluid from the external iliac vein into the internal saphena vein, owing to the efficiency of the valves at the mouth of the superficial vein. He has made for me some preparations showing these valves. There is a double valve at the mouth of the saphena, the cusps being very unequal in size; two inches lower down another pair of cusps is found, and so on down the vein In the normal state these valves are quite efficient. I am convinced that the connexion between insufficiency of these valves and varix is close and important, and I must confess that even after reading Trendelenburg's paper I was not prepared to find the regurgitation so nearly constant or so marked as it is.

Before passing on to speak of the treatment of varix, I should like to say just a word about the importance of the affection. I am certain that the public have a very exaggerated notion of the gravity of varicose veins and one comes across certain neurotic individuals whose life is made miserable by the constant anticipation of evils which never arise.

The effect of varices upon the nutrition of the part, whether the leg or the testicle, is, I believe, very small, if indeed it be at all perceptible. Certain I am that many persons carry about in their legs and thighs for many years very large and numerous varicose veins, unalleviated by any external pressure or support, without suffering in any way at all—the skin remains elastic and supple, the subcutaneous tissue is free from œdema or induration, and the surface is proof against eczema or ulcer. The troublesome ulcer of the lower third of the leg with thickened edges and unhealthy base—so slow in healing, often so painful—the ulcer that I think has been nicknamed "varicose"—certainly occurs in splendid perfection in limbs devoid of a single varix, and its cause must be sought for elsewhere than in the veins.

The most frequent ill-effect of varices is a sense of fulness or weight in the part which may amount to severe aching in the distended veins. It is brought on by prolonged standing or walking and comes on much sooner in hot climates. It occurs only in the upright position and is at once relieved and quickly removed by recumbency. Some patients complain of a pricking or starting pain in the part. Neither the extent, nor the seat, nor the degree of the varix affords a measure or explanation of the suffering attributed to it. Many patients with well-marked and even extensive varices are able to undergo considerable fatigue without discomfort, while others with apparently far less cause make grievous complaint. The most striking instance of this that I have seen was a nervous, ill-nourished man with a quite moderate development of varices in both legs. He described his sufferings from the veins as most severe and sufficient to make his life miserable, and he gravely assured me that often when attending meetings of boards of directors in the City he had to retire into an adjoining room and to stand on his head "to let the blood out of his legs." This is the only *frequent* ill-effect. Much less often we meet with thrombosis in a varix or started in one—and more rarely still a vein bursts or is ulcerated into and free venous hæmorrhage occurs. Where varicose veins do not trouble the patient he need rarely trouble about them. But a young woman with large varices is wise to have them treated before marriage and pregnancy, and young people of either sex should have them treated before going to live in a hot climate. Thrombosis I propose to speak of in a subsequent lecture.

### TRENDELENBURG'S OPERATION.

Believing that insufficiency of the valve at the opening of the internal saphena vein plays a great part in causing varix below, Trendelenburg in 1891 proposed to treat the disease by division of the upper end of this vein between two ligatures. The operation has been extensively practised, but I believe that there is a wide divergence of opinion as to its value. For the last six years I have treated almost every case of varix in the lower limbs that has required operation by Trendelenburg's method, and as my cases up to the end of 1901 numbered 120 I hope that my results, so far as I can describe them, may be of service in leading to a correct estimate of the value of this treatment. The operation has the great advantage of being a simple one, rarely requiring more than five minutes for its performance. Gas and oxygen are often the only anæsthetic needed. The saphena vein can readily be found by remembering that it lies a finger's-breadth to the inner side of the common femoral artery, the pulsation of which can easily be felt in the groin. I prefer to expose the vein by an oblique incision from one and a half to two inches long parallel with the fold of the groin and having its centre over the vein. The vein is found lying between the two layers of the superficial fascia, it is cleared and a double ligature is placed on it, one thread being tied as high up on the vein as possible, the other about two inches lower down, and the intervening portion of the vein is cut out. The wound is closed by a few points of suture and is sealed by a collodion dressing. The patient is able to get up, as a rule, on the eighth day and to leave the hospital two days later.

I published the results of my first 50 cases—so far as I was able to learn them—in THE LANCET in 1899.[2] I have prepared a table of the cases operated upon since that date, but I have included in it only those cases whose present condition I have myself seen or received a written report of. These are 50 in number. As far as possible I have recorded the patient's own words so that I may not even unconsciously colour the report

Two young patients—Nos. 31 and 32—are no better for the operation; all the others have experienced benefit. The results of the operation may be submitted to three tests: (1) its influence upon the patient's comfort; (2) its influence upon the veins themselves; and (3) its influence upon the liability to thrombosis.

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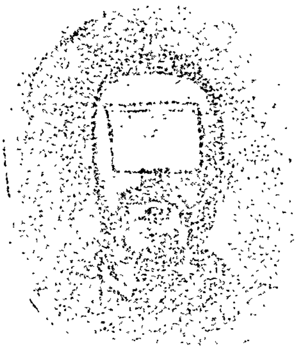
[2] THE LANCET, April 8th, 1899, p 941.

TABLE OF CASES OF VARICOSE VEINS SHOWING THE RESULT OF TRENDELENBURG'S OPERATION—(*Continued*)

| No | Age | Sex | Date of operation | Condition before operation | Result |
|---|---|---|---|---|---|
| 34 | 29 | M | May, 1901 | Started about five years previously The veins on the inner side of the right thigh and leg were much swollen and tortuous, also on the inner side of the left thigh His father, mother, and two brothers had varicose veins | Letter January, 1902 "The operation has been attended with perfect success Since about six weeks after the operation there has been no pain or swelling, the veins are reduced to their natural size, and I am able to attend to my usual occupation without the slightest inconvenience or discomfort" |
| 35 | 22 | M | May, 1901 | Painful on standing | Letter January, 1902 "The veins still swell The veins are not painful and I am able to follow my occupation without discomfort from them |
| 36 | 38 | F | June 1901 | The patient came to hospital on account of pain The veins had been enlarged for 22 years There were varices on the inner side of the left leg also on the inner side of the right leg and thigh and the outer side of the right foot Her father had varicose veins | Seen January 1902 Quite free from pain |
| 37 | 31 | F | June, 1901 | The veins were painful There was a large varix on the inner side of the left leg | Letter January, 1902 "I am able to get up and down stairs better than I have done for the last 10 years There is no pain The veins still swell |
| 38 | 26 | M | July, 1901 | The leg ached after standing, the patient was afraid of rupturing a vein when at work | Letter, January, 1902: "Legs quite well I still follow my usual occupation which is that of a coppersmith and necessitates a great strain on the legs The veins are their natural size and are perfectly smooth, and I feel no discomfort whatever from them |
| 39 | 17 | M | October, 1901 | Veins enlarging for one year Ached slightly after work Trendelenburg's operation was done on both sides and at the upper end of the short saphena of the right side | Seen January, 1902 The veins were smaller He had not felt any inconvenience in them since operation |
| 40 | 32 | F | October, 1901 | Varix at the upper end of the internal saphena vein ulcer on the right leg | Seen January, 1902 She had lost all pain The scar of ulcer was quite sound, there was no œdema |
| 41 | 22 | M | October, 1901 | The veins caused slight irritation at night | Seen January, 1902 The veins were much smaller He had no inconvenience from them |
| 42 | 39 | M | November, 1899 | A very neurotic man Varix was first noticed at 18 years of age and had been steadily increasing ever since The right internal saphena vein was varicose in the lower quarter of the thigh and below the knee In the left leg was a bunch of varices communicating with both the internal and external saphena veins and other varices lower down Both the internal and the left external saphena veins were tied | Seen May, 1900 All the varices were decidedly better He complained now of pain on standing which was relieved by raising the legs This pain started in the right buttock passed down the back of the thigh to the knee to the heel and on to the base of the fifth metatarsal bone There was tenderness on pressing over the great sciatic nerve |
| 43 | 41 | F. | February, 1900 | Varices in each leg which were only controlled when the external and internal saphena veins were compressed The patient had worn elastic stockings for years and even with them had great pain on standing and walking Felt "quite well down to her groins Both the internal and the external saphena veins were tied | Letter, February, 1902 "I have no pain, one leg is perfectly cured and the other just shows the vein I am often glad that I went through the operation |
| 44 | 59 | M | April, 1900 | Numerous large varices in the left leg involving the internal saphena vein and its branches, the main vein was enlarged up the lower half of the thigh and at the saphenous opening When the internal saphena vein was compressed two small varices in the calf partly filled out, when the external saphena vein was also compressed all the varices were kept empty Both the saphena veins were tied | Letter February, 1902: "I have never had a moment's trouble since my operation and my legs are in perfect condition |
| 45 | 53 | F | March 1900 | Many varices in the left leg and thigh which ached greatly when she stood Had had one attack of thrombosis | Letter February, 1902 "Veins are only slightly swollen No pain on standing or walking" |
| 46 | 30 | F | April, 1900 | The right internal saphena vein formed many tortuous loops up the leg from the foot to just above the knee There was aching pain Operation was advised in view of approaching marriage | Letter February, 1902 No pain or trouble Veins smaller Has had one child and one miscarriage No trouble during pregnancies |
| 47 | 39 | F | July, 1900 | Varices in the right thigh There were much aching and twitching pain on standing and walking | Seen February, 1902 The patient was very much better There was no pain now, she was able to do her work as a nurse without discomfort The veins were smaller |
| 48 | 44 | M | May 1901 | Many varices over the lower two thirds of the thighs and all down the legs to the ankles with prominent veins over each outer malleolus There was pain on long standing and on walking Both internal and external saphena veins were tied and the varix over each outer malleolus was excised | Seen February, 1902 There was much less pain—practically none The veins were smaller but were still visible |
| 49 | 29 | M | January, 1900 | Numerous varices in the right thigh and leg since 16 years of age The internal saphena vein was varicose below the middle of the thigh much so just below the knee there were several large veins all round the leg A large vein passed up the front of the thigh well to the outer side of the femoral vessels and appeared to enter the circumflex iliac vein Pressure on the internal saphena vein did not control the varices pressure on it and the vein to the outer side of the thigh did He had lately had several attacks of slight thrombosis Both veins were tied in the groin | Seen December, 1901 Was very much better He took active exercise—cycling golf shooting and hunting—without pain The internal saphena vein and tributaries had shrunk almost to normal size The outer vein on the thigh was not materially altered, it appeared to have a deep communication just above the middle of the thigh and through this it was filled by regurgitation |
| 50 | 38 | F | August 1901 | Moderate varices of the right internal saphena vein in the thigh and leg There were several dilated veins in the groin and the inner and upper part of the thigh She complained of a great deal of pain especially in the groin, which often unfitted her for her work | Seen February, 1902. She had lost her pain and was able to do hard work as a nurse without any discomfort—a thing that was impossible to her for years before The veins had many of them disappeared and all were much smaller |

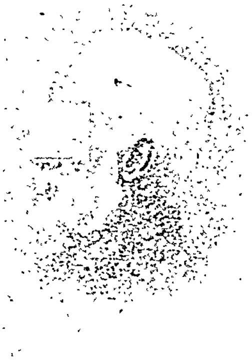
himself in the wards. He was less aggressive and he talked more freely and sensibly about incidents that had occurred in his past life. His sight was very good and his hearing tested with Galton's whistle was preternaturally sharp. His common sensation and other senses were normal. The heart and the lungs were unaffected and the blood-pressure was 130 millimetres (Hill and Barnard). The urine was normal. The history of his family obtained from his wife and himself was free from insanity. Born a Londoner, his father lived to the age of 78 years, and had not lost his hair, which was grey. His mother lived to the age of 76 years and had no grey hairs. His maternal grandfather died a very old man, older than did his father, and was said to have had no grey hairs. His maternal grandmother he could not remember. His paternal grandfather died at a good age, and his paternal grandmother was not grey when she died at the age of 78 years. He had one brother and two sisters; none of them had ever been in an asylum. His mother had five sisters and one brother. His father had one sister and two (? or three) brothers. None of the uncles or aunts were ever in an asylum. His four children (girls) were all well. None of the family had ever had gout or rheumatism. Reproductions of photographs of him are appended before and after the change in the hair. (Figs. 1, 2, and 3).

FIG. 1.



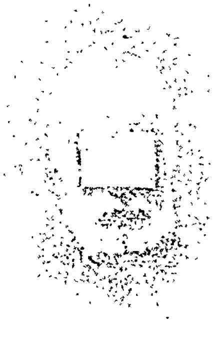
On admission.

FIG. 2.



After blanching.

FIG. 3



After blanching.

On microscopical examination the character of the hair as to number appeared to be normal and the following microscopical description given to me by Dr. J. S. Bolton from the pathological laboratory suggests that the condition was one of altered nutrition:—

> They are free from pigment and in their outer parts have an opaque and silvery appearance. The cuticle is extremely thin. The fibrous layer is atrophic and in the distal third of the hair is completely infiltrated with minute air lacunules; air is also present to a less extent in the middle third. The medullary portion is smaller and more varicose than usual. The bulbs are small and atrophic and are almost entirely free from adherent root-sheath.

FIG. 4.

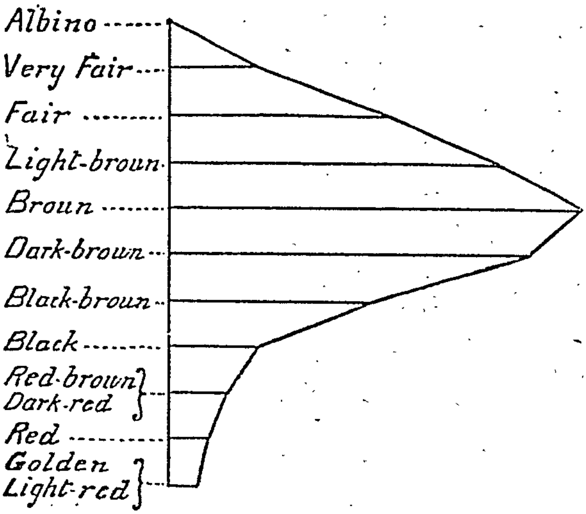


TABLE I.—*Giving the Colour of the Hair in 2393 Insane Persons.*

| — | Males. | | | Females. | | |
|---|---|---|---|---|---|---|
| | Percentage of total 993 | Percentage attending chapel. | Percentage attending entertainments. | Percentage of total 1400 | Percentage attending chapel. | Percentage attending entertainments. |
| Albino ... ... ... ... ... | — | — | — | — | — | — |
| Very fair ... ... ... ... | 3·3 | 0·6 | 0·5 | 0·9 | — | 0·4 |
| Fair ... ... ... ... ... | 5·9 | 0·4 | 1·3 | 4·3 | 1·0 | 1·1 |
| Light-brown ... ... ... | 11·3 | 2·1 | 2·6 | 14·8 | 3·0 | 3·2 |
| Brown ... ... ... ... ... | 10·8 | 2·1 | 1·2 | 17·7 | 0·7 | 1·8 |
| Dark-brown ... ... ... | 15·8 | 3·7 | 5·6 | 15·0 | 5·3 | 5·9 |
| Black-brown ... ... ... | 10·3 | 0·2 | 0·5 | 7·3 | 6·4 | 1·7 |
| Black ... ... ... ... ... | 12·8 | 2·2 | 1·3 | 1·4 | 0·5 | 0·6 |
| Red-brown, dark-red ... | 2·2 | — | — | 1·9 | 0·3 | 0·1 |
| Red ... ... ... ... ... | 0·3 | — | — | 0·8 | — | — |
| Golden, light-red ... ... | 1·0 | 0·2 | 0·2 | 0·5 | 0·3 | — |
| Grey ... ... ... ... ... | 19·8 | 4·3 | 2·7 | 24·3 | 4·0 | 2·6 |
| Very grey ... ... ... ... | 6·2 | 0·8 | 0·5 | 8·7 | 0·1 | 0·7 |
| Bald ... ... ... ... ... | 11·0 | 2·9 | 1·8 | 1·8 | — | — |
| Very bald ... ... ... ... | 4·5 | 0·1 | 0·5 | 0·4 | — | — |

REMARKS.

It is well known that certain coloured and certain textured hair accompanies and indicates certain temperaments and dispositions. This statement applies to individuals as well as to races. In Galton's observations,[2] taken from the report of the Anthropometric Committee of the British Association in 1880, the diagrammatic representation (Fig. 4) gives the proportion in which the various colours of the hair are found among the professional classes and this was found to be a fair representation of other classes of the community. I have taken a record in Claybury Asylum (based upon this classification) of 2393 insane persons (see Table I.) of varying ages—viz., 1400 females and 993 males (see Table II.)—and my investigations yield almost similar results. There are, however, more black-brown males, but comparatively fewer men at the red end of the scale. The hair in the maximum number of men was dark-brown, and not brown as in Galton's table, whereas the women corresponded with the table and a higher percentage of women than of men had light-brown and red hair, as also grey and very grey hair (not in Galton's table), but there was a greatly preponderating number of bald-headed and very bald-headed persons among the men. This seems to indicate a more marked loss of self-control among fair females than among males, but a greater proportion of baldness (as among the sane) in men than in women. I took a further record of the colour of the hair among those who attended the entertainments and dances, and compared this record with that obtaining among those who attended Divine services (Table I.). A preponderance of very fair and brown-haired women attended the dances rather than church or chapel services, these

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[2] Enquiries into Human Faculty, 1883.

*Influence of the operation upon pain* —Always excepting the cases already mentioned *all* the patients express themselves as being in less pain since than before the operation Many of them say that they are now quite free from pain (see Nos 3 6, 8 14 16 20 36 40 &c ) Some mention having slight discomfort after prolonged exercise (See Nos 1, 2 9 and 19) The effect of the operation upon the pain is then most marked and is nearly always entirely satisfactory

*Influence of the operation upon the veins* —Here we meet with considerable variation In no single case that I have seen has any increase of the varix or any new development of it been witnessed after the operation When we remember that in many cases there is a slow progression of varix for some years and notice the early age at which some of the operations were undertaken I think that we must acknowledge that we have here a distinct effect of the operation In many cases (see Nos 7, 13, 14 and 21) the operation is followed by the disappearance of the varices the subcutaneous veins exhibiting no departure from the normal In many others (see Nos 2 15 22 39 and 41) the varices shrink but do not disappear, they remain distinct but flaccid and less tense than before and as already said painless In a very small minority of cases the veins seem to be little if at all affected by the operation The veins in the thigh are more and more constantly affected than are those in the leg

*Influence of the operation upon thrombosis* —Some of the patients operated upon had suffered before the operation from recurring thrombosis It is certainly a most noteworthy point that the tendency to thrombosis seems to be very greatly lessened if not entirely removed by this operation In support of this statement I should like to mention one or two cases

CASE 4 —The patient was a woman 52 years of age, who had suffered very severely for many years from very extensive varices in both lower limbs She had for years worn elastic bandages from the feet to the groins and even with this support she was greatly hampered in her work as a nurse "never any comfort sitting standing or lying" Shortly before my operation in February, 1898 she had experienced four separate attacks of thrombosis which had kept her confined to bed for a long period and had greatly impaired her usefulness She has had no thrombosis since the operation she has lost all her pain has been able to dispense with the elastic bandages on the thighs and as she puts it she "hasn t felt so well for years as she does now" She is indeed very enthusiastic in her estimate of the value of the operation to her

CASE 5 —The patient was a healthy robust man 29 years of age who was sent to me by Dr J W Burton Fanning of Norwich His case was a little peculiar inasmuch as in addition to an enlarged internal saphena vein in the right thigh and numerous varices in the leg there was an enlarged vein running up the front of the thigh and entering apparently the circumflex iliac vein Pressure upon the saphena vein did not "control" the varices below unless this vein was also compressed This patient in addition to aching pains in the veins had suffered from several slight attacks of thrombosis just before he consulted me I ligatured and divided both of the veins in the thigh (No 49) and the result has been a distinct diminution in the size of the saphena vein and its tributaries but no such change in the other vein which seems to be "fed" by a deep communication about the middle of the thigh He is able to walk to ride to shoot to cycle and to play golf with comfort and he has had fewer and slighter attacks of thrombosis which now seems to have ceased

CASE 6 —This case is No 10 in the table The patient a woman 28 years of age had very frequent attacks of thrombosis—often every other month—up to the time of the operation Since then—a period of two and a quarter year — she has had two slight attacks only "very slight to what it used to be"

Where the varices are only "controlled" by pressure upon the external saphena vein as well as the internal I now obliterate the upper end of each vein, and I think that I have succeeded in benefiting cases by this means which in my earlier experience did not reap the full benefit of the operation

To sum up I would say that Trendelenburg s operation is not only a simple and safe proceeding but one that is very useful indeed in nearly all cases of varix It may be relied upon to relieve the aching pain so often felt it always stops further development of varices, it frequently leads to the shrinking or even to the disappearance, of varices and it exerts a strong influence in preventing thrombosis Its good effects are most pronounced where regurgitation into superficial veins is best marked Its superiority to excision of varices is greatest in cases of widely distributed and numerous varicose veins, for it exerts its influence upon all the veins emptying into the saphena trunks It is therefore useful in those widely distributed even general varicosities of the lower limbs for which excision is inapplicable To ensure success the vein or veins must be obliterated quite at their junction with the deep veins The fact that this operation has such a marked effect upon the course of varix is a strong proof of the important part that valvular defect plays in the history of cases of varicose veins

# GREY HAIR AND EMOTIONAL STATES
## AN ANTHROPOLOGICAL NOTE

BY ROBERT JONES, M D , B S LOND , F R C S ENG ,
RESIDENT PHYSICIAN TO AND SUPERINTENDENT OF THE LONDON COUNTY ASYLUM CLAYBURY

CASES of the hair turning "grey in a single night" are said occasionally to occur but it is uncommon to meet with well authenticated instances[1] The following case hardly comes under the category of "sudden blanching" as a period of five weeks in August and September last elapsed during which the hair and beard of this patient changed from a flecking of grey to absolutely pure white Owing to this change which an officer in charge of the patient described as having occurred "all at once, I hardly recognised the man upon my return after five weeks absence although I had seen him frequently, almost daily, since his admission into the asylum eight years before No other dermal or pigmentary changes occurred and there had been no affection of vision hearing or other of the special senses

The patient was a thin spare built man suffering from paranoia 53 years of age five feet eight inches in height and weighing 10 stones He was a clear complexioned, blue eyed intelligent and thoughtful looking man, with some reserve of manner For two or three months before admission into the asylum he gave way to drink as he had been much worried about his work in the electrical department of the General Post Office where he had been engaged for three years but during the whole time was "over trained" Previously to this he had been in India and Australia for about two years and with the above exception as to excessive use of alcohol was described as "always reserved and steady" He was married at the age of 23 years had never had syphilis and was said never to have had a day s illness in his life He developed delusions in regard to his occupation suspecting that a cable was connected with his house at a pressure of 10 000 volts, which would kill him his wife and his whole family (four children) He connected this persecution with those most intimately associated with him in bonds of affection and became aggressive and dangerous towards them Sleeplessness, fear and apprehensiveness preceded aural and sensory disturbances which dominated his reason and controlled his actions he became suicidal and was received into the Claybury Asylum in a low depressed condition with no appetite and very deluded The despondency increased he became feeble and emaciated and the delusions of persecution became very prominent He thought that he was being written about in all the papers He became violent very noisy abusive and aggressive and was for a time under the influence of either bromides, chloral or sulphonal He improved somewhat physically but latterly his emotional tone had become sombre and melancholy He stated that during the whole of August last a machine upon the roof shunted unbearable electrical currents upon him which so terrified him that he feared that each night would be his last as his life was to be destroyed He now talked less about his delusions—which however, still persisted—and he occupied enlargement presenting a rather large quantity of albumin in the urine while lying in bed which disappeared after they had been up for several hours. The albuminous urine was often high coloured, and, like the urine of backward pressure in cardiac disease, lithatic. In all my three cases he night urine was sometimes found to become free from lbumin.

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[1] Dr B Thornton THE LANCET November 1891 Dr H Gr[illegible] Ives THE LANCET April 23rd (1901) and 30th (p 963) Drs Gould and Pyle Anomalies and Curiosities of Medicine

It is, of course, necessary that the bladder should be emptied of urine when the patient gets up, otherwise an admixture of the albuminous urine, excreted while in the recumbent position, with the normal urine of the erect position will occur, and the patient may be thought to have continuous albuminuria. The existence of this hypostatic albuminuria, if the term may be used, should be borne in mind when dealing with cases where, as in hospitals, the sample of urine provided for examination is taken from the whole amount passed in the 24 hours or is that passed early in the morning while the patient is in bed.

While the albuminuria is probably due to the mechanical pressure of the spleen on the left renal vein in the recumbent posture, the occurrence of this intermittent or hypostatic albuminuria is very far from constant in cases of splenic enlargement. In this it resembles albuminuria from chronic venous engorgement induced in other ways, as, for example, in the backward pressure of mitral disease. It does not depend on the size of the spleen, for hypostatic albuminuria may be, and, indeed, usually is, absent when the spleen is very large, and may be present, as in two of my three cases, where the spleen is relatively smaller. It is possible that its occurrence or absence may depend on some difference, such as elongation, in the condition of the suspensory peritoneal ligaments of the spleen which thus determine or prevent direct pressure on the left renal vein. On this point there is as yet no anatomical evidence. It is also conceivable that the appearance of albuminuria is dependent on an underlying want of vitality or nutrition in the kidney which, though not sufficiently marked to induce albuminuria under ordinary conditions, does so when chronic venous engorgement is superadded. This is to some extent supported by the observation that in one of the more recent cases albuminuria disappeared from the night urine after the patient had been some time in the hospital, and had somewhat improved under treatment; subsequently after a slight attack of influenza the night urine again contained albumin.

It appears that the appearance of albuminuria in the recumbent position and its disappearance in the erect position is not absolutely constant even in those individuals with enlarged spleen in whom its presence has been noticed; but its temporary occurrence in three cases justifies the suggestion that it may not be so very infrequent.

This hypostatic albuminuria is the reverse of what usually occurs in cyclical albuminuria, but it is possible that there may be some cases of cyclical albuminuria in which albumin appears when the patient is lying down and disappears when he is up. I have not yet met with a case, but the possibility of such an event is suggested by Edel's[3] recent observations that a weak pulse and the appearance of albumin in the urine in cyclical albuminuria are related, and that if, by regular muscular exertion, such as marching or hill-climbing, always stopping short of fatigue, the heart's action is strengthened, the urine becomes free from albumin, lighter in colour, and more copious.

Upper Brook-street, W.

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[3] Munchener Medicinische Wochenschrift, 1901, Nos. 46, 47 (Abstract, Brit. Med. Jour., 1902, vol. i, epitome No 63).

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# REMOVAL OF A SARCOMATOUS TUMOU FROM THE TAIL OF THE PANCREAS OF A CHILD FOUR YEARS AND EIGHT MONTHS OLD;

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THE following case seems sufficiently interesting and rare to be put on record.

The patient was a female child and was born on March 9th, 1894. Her father and mother are both alive and well; they have one other child, a healthy girl, born in 1897. One of the patient's grandfathers was said to have died from a internal cancer at the age of 65 years. The patient had whooping-cough when she was three weeks old. It was not known that she had suffered from any lung trouble. The bowels were very constipated whilst she was under immediate observation. There was no albumin in the urine, which was scanty (sometimes only 12 ounces in 24 hours), and deposited urates, its specific gravity being usually about 1030. An abdominal swelling was first noticed in April, 1898, and Dr. R. L. Guthrie sent the patient to a well-known surgeon who diagnosed a tumour of the left kidney but advised that no operation should be performed. Dr. Guthrie asked me to see the patient in May of the same year. She had then an obvious swelling in the upper part of the left side of the abdomen. It was firmly held in the position of a renal tumour, but the attachments seemed sufficiently lax to allow of the growth being shelled out of its bed. The patient was, however, extremely emaciated and anæmic, having a cachectic appearance which seemed to contra-indicate surgical interference, and I therefore agreed with the opinion and advice already given.

Dr. Guthrie treated the child with iron and laxatives, and in October, 1898, he asked me to see her again. She then had improved very much in her general condition, had quite a good colour, and was not thinner. The tumour ha increased in size, but not to any great extent. It distended the hollow of the left loin, pushing the lower ribs upwards and forwards, bulging the side outwards, extending across the abdomen as far as the outer edge of the right rectus muscle and downwards to below the level of the anterior superior iliac spines. The greatest girth of the body was 23¼ inches a little above the level of the umbilicus. On palpation the mass was smooth and elastic. It could be grasped between a hand in front of the abdomen and the other hand behind the loin, and although it was firmly held, there was still a slight mobility of the tumour, sufficient to make me think that I could remove it. There were some easily fe glands in both axillæ and in both groins, but they were no enlarged. The veins over the upper part of the abdomen were distended. No disease of the heart or lungs was detected. In view of the greatly improved condition of the child's general health I told the parents that she had a tumour of the kidney and explained that an operation would involve extreme risks. I also told them that I knew of only three cases in which after the successful removal of a tumour of this kind from a child the patient had survived more than a few months.[2] On the other hand, I pointed out that death must occur soon if nothing were done. It was decided to accept the risks of an operation.

On Nov. 4th, 1898, chloroform was administered and the tumour then seemed decidedly more mobile. I opened the abdomen through the upper part of the left linea semilunaris, and exposed the growth, with the splenic flexure and adjacent portions of the colon fixed in front of it. The most convenient place to open the retro-peritoneal space, in which the tumour lay, was above the transverse colon, and when the peritoneum in that situation was divided I had no difficulty in separating the tumour from the connective tissue in which it was loosely imbedded. Some firm adhesions to the lower end of the spleen were separated, and the new

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[1] A paper communicated to the Pathological Society on Feb. 18th, 1902.

[2] The patient in one of these cases, which was published by my in the Transactions of the Clinical Society of London, 1894 and 1 is alive and well, more than nine years after the operation.

TABLE II.—*Giving the Ages of Patients Resident in the London County Asylum, Claybury.*

| Age. | Males. | Females. | Total. |
|---|---|---|---|
| Under 5 years . ... . .. .. .. | — | — | — |
| From 5 to 10 years .. .. .. | — | — | — |
| „ 10 „ 15 „ . .. ... | — | — | — |
| „ 15 „ 20 „ . .. . | 69 | 102 | 171 |
| „ 20 „ 25 „ .. . .. | 101 | 137 | 238 |
| „ 25 „ 30 „ .. ... . | 122 | 169 | 291 |
| „ 30 „ 35 „ .. . . | 141 | 195 | 336 |
| „ 35 „ 40 „ ... ... ... | 166 | 180 | 346 |
| „ 40 „ 45 „ ... ... | 122 | 131 | 253 |
| „ 45 „ 50 „ ... ... . | 85 | 125 | 210 |
| „ 50 „ 55 „ ... .. | 69 | 157 | 226 |
| „ 55 „ 60 „ .. . | 38 | 63 | 101 |
| „ 60 „ 65 „ ... .. . | 67 | 96 | 163 |
| „ 65 „ 70 „ .. . | 13 | 26 | 39 |
| „ 70 „ 75 „ ... . . | — | 19 | 19 |
| „ 75 „ 80 „ . .. | — | — | — |
| Totals ... ... . .. ... | 993 | 1400 | 2393 |

latter being of the darker, more sober, or atrabilious temperament, and this was also true of the men. In both sexes it was noticed that grey-haired persons attended services in preference to entertainments—the passive attitude of religious ministration being more appreciated by the old, whereas active indulgence in pleasurable pursuits prevailed among the young.

The influence of nervous changes upon the hair has not been fully worked out; but we are familiar with the harsh, dry hair and skin in melancholia, the sebaceous, oily condition of the latter in the dementia of general paralysis, and the up-standing shock of hair and peculiar odour of the skin emitted in certain cases of mania. Woods Hutchinson [3] insists that a due recognition of the "hereditary relationship and common ancestral origin" of the skin and cerebrospinal axis from the epiblastic layer of the blastoderm has been much overlooked, and also that the dignity and importance of the skin as an organ have not hitherto been fully acknowledged. The vaso-motor flushing of the skin in the mental disturbance of general paralysis, and the pinched, sallow look of melancholia, apart from the many changes that take place in the skin under normal mental states, indicate the control over it of the nervous system, as also over certain pigmentary changes such as accompany pregnancy, certain morbid utero-ovarian conditions and cachectic states (Addison's disease, cancer, &c.), and over the hair in certain diathetic conditions such as gout when the hair is thick but becomes white at a very early age. One of the most interesting papers by Lister to the Royal Society [4] was an experimental proof that the changes of colour in the skin of the frog were due to influences such as would excite the nervous system and that these influences were conveyed by nerves distributed to the skin. Normally the pigment is diffused naturally in the form of minute dark granules suspended in a colourless fluid in which those granules move freely throughout the cell and its branches, but when the skin becomes pale, as it does under the effect of stimulation or before death, the pigment accumulates in the centre of the cell The aggregation of the pigment-molecules can be excited at will either through the nerves directly or in a reflex manner by the stimulus of light upon the retina.[5] Upon those experiments Lister based his conclusion that the cerebro-spinal axis was chiefly, if not exclusively, concerned with regulating the functions of the pigment cells Further, Von Wittich also demonstrated many years previously to this experiment that the movement of pigment granules was dependent upon the nervous system It has not been precisely accepted what the organic changes are which occur in the progress of the growth of a hair. A slow permeation of a fluid from the root to the point of the hair has been stated to occur, and when this ceases from any sudden cause, such as the devitalising shock of a strong emotion, air lacunules occur in the cortical layers of the hair with a consequent appearance of whiteness.[6] Indeed, the air cells so abundantly found in the fibrous or cortical layer of white hairs, and not the absence of pigment only, are said to give them their characteristic appearance,[7] although the same appearance may certainly be due also to a general lack of pigment—as is noticed in the congenital defect known as albinism. It is noteworthy that although white hair is compatible with vigorous and perfect health, as is witnessed in the winter-whitening[8] of the fur of animals inhabiting polar regions, this is not the case with albinism which is generally accompanied by a marked deficiency of vital force—deafness often occurring in cats, defects of eye sight in horses, and both combined in human beings. In the winter-whitening of arctic birds and foxes this change is an adaptability to environment, enabling them either to avoid their enemies or to deceive their prey, and it is stated to occur instantaneously and to be determined by some sudden natural phenomenon, such as a fall of snow, which has an immediate correlative effect upon the nervous system of the animal, indicating the necessity of an equally sudden adaptation to its changed surroundings. May not such cases as that recorded by Staff Surgeon Parry (under his actual observation)[9] of sudden blanching through intense emotion be analogous to the change which is known to occur naturally in the lower animals, and thus be one of those reversions which we still meet with in the physical and mental deterioration of human beings, also indicating that a sudden influence through the nervous system is brought to bear upon the organism, necessitating sudden transformation if this organism is to continue its existence under its new environment? Whatever explanation is offered of sudden blanching, which without doubt does occasionally occur, the close physiological connexion between the cerebro spinal axis and the skin, which have a common genealogy, must be borne in mind; also (as already pointed out in the frog) the dominating control of the nervous over the pigmentary system in the batrachian may have a like influence in man. Finally, this nervous control when disturbed may exercise a correlative disturbance upon the baser tissues.

Claybury Asylum.

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[3] Studies in Human and Comparative Pathology, 1901.

[4] Proceedings of the Royal Society, 1857.

[5] Medico-Chirurgical Review, April, 1861. Dr. Thomas Laycock: Clinical Researches into Morbid Pigmentary Changes in the Complexion.

[6] Quain's Anatomy, vol. I., Part II., 1893, p. 239.

[7] London Medical Record, February, 1878. Imperial Medical Society of Vienna, Dr Wertheimer

[8] Spectator, Dec 21st, 1901.

[9] Medico-Chirurgical Review, 1870, Review of Flint's Physiology.

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# A NOTE ON HYPOSTATIC ALBUMINURIA OF SPLENIC ORIGIN.[1]

BY H. D. ROLLESTON, M.D. CANTAB., F.R.C.P. LOND.,

PHYSICIAN TO, AND LECTURER ON PATHOLOGY AT, ST. GEORGE'S HOSPITAL; EXAMINER IN MEDICINE TO THE UNIVERSITY OF DURHAM.

THIS short communication deals with a small point which has very probably often been observed before, but being an isolated observation has not been thought worthy of much notice The point, to which I wish to draw attention, is that in some patients with considerable splenic enlargement, rest in bed or in the recumbent position may be accompanied by albuminuria, and that the albumin may disappear from the urine when the patient assumes the erect position. This fact was first brought to my notice in a case of advanced leukæmia which I often saw with Dr. C. J. Heaton of Westgate-on-Sea who drew attention to the intermittent albuminuria and explained it on Falkenheim's[2] suggestion that in the recumbent position the spleen pressed on the left renal vein, interfered with the return of venous blood from the kidney and thus gave rise to albuminuria. This seems to be a very reasonable explanation of the occurrence. I have recently had under my care two other patients, with hepatic cirrhosis and splenic anæmia respectively, with considerable splenic enlargement presenting a rather large quantity of albumin in the urine while lying in bed which disappeared after they had been up for several hours. The albuminous urine was often high coloured, and, like the urine of backward pressure in cardiac disease, lithatic. In all my three cases the night urine was sometimes found to become free from albumin.

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[1] A paper read at the meeting of the Medical Society of London on Feb. 24th, 1902.

[2] Falkenheim (Deutsches Archiv fur Klinische Medicin, Band xxxv., S 446, 1884) described exactly this condition in a man, aged 50 years, with hepatic cirrhosis and a large spleen. He observed that lying on the right side and on the abdomen did not induce albuminuria.

It is, of course, necessary that the bladder should be emptied of urine when the patient gets up, otherwise an admixture of the albuminous urine, excreted while in the recumbent position, with the normal urine of the erect position will occur, and the patient may be thought to have continuous albuminuria. The existence of this hypostatic albuminuria, if the term may be used, should be borne in mind when dealing with cases where, as in hospitals, the sample of urine provided for examination is taken from the whole amount passed in the 24 hours or is that passed early in the morning while the patient is in bed.

While the albuminuria is probably due to the mechanical pressure of the spleen on the left renal vein in the recumbent posture, the occurrence of this intermittent or hypostatic albuminuria is very far from constant in cases of splenic enlargement. In this it resembles albuminuria from chronic venous engorgement induced in other ways, as, for example, in the backward pressure of mitral disease. It does not depend on the size of the spleen, for hypostatic albuminuria may be, and, indeed, usually is, absent when the spleen is very large, and may be present, as in two of my three cases, where the spleen is relatively smaller. It is possible that its occurrence or absence may depend on some difference, such as elongation, in the condition of the suspensory peritoneal ligaments of the spleen which thus determine or prevent direct pressure on the left renal vein. On this point there is as yet no anatomical evidence. It is also conceivable that the appearance of albuminuria is dependent on an underlying want of vitality or nutrition in the kidney which, though not sufficiently marked to induce albuminuria under ordinary conditions, does so when chronic venous engorgement is superadded. This is to some extent supported by the observation that in one of the more recent cases albuminuria disappeared from the night urine after the patient had been some time in the hospital, and had somewhat improved under treatment; subsequently after a slight attack of influenza the night urine again contained albumin.

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The patient was a female child and was born on March 9th, 1894. Her father and mother are both alive and well; they have one other child, a healthy girl, born in 1897. One of the patient's grandfathers was said to have died from an internal cancer at the age of 65 years. The patient had whooping-cough when she was three weeks old. It was not known that she had suffered from any lung trouble. The bowels were very constipated whilst she was under immediate observation. There was no albumin in the urine, which was scanty (sometimes only 12 ounces in 24 hours), and deposited urates, its specific gravity being usually about 1030. An abdominal swelling was first noticed in April, 1898, and Dr. R. L. Guthrie sent the patient to a well-known surgeon who diagnosed a tumour of the left kidney but advised that no operation should be performed. Dr. Guthrie asked me to see the patient in May of the same year. She had then an obvious swelling in the upper part of the left side of the abdomen. It was firmly held in the position of a renal tumour, but the attachments seemed sufficiently lax to allow of the growth being shelled out of its bed. The patient was, however, extremely emaciated and anæmic, having a cachectic appearance which seemed to contra-indicate surgical interference, and I therefore agreed with the opinion and advice already given.

Dr. Guthrie treated the child with iron and laxatives, and in October, 1898, he asked me to see her again. She then had improved very much in her general condition, had quite a good colour, and was not thinner. The tumour had increased in size, but not to any great extent. It distended the hollow of the left loin, pushing the lower ribs upwards and forwards, bulging the side outwards, extending across the abdomen as far as the outer edge of the right rectus muscle and downwards to below the level of the anterior superior iliac spines. The greatest girth of the body was 23¾ inches a little above the level of the umbilicus. On palpation the mass was smooth and elastic. It could be grasped between a hand in front of the abdomen and the other hand behind the loin, and although it was firmly held, there was still a slight mobility of the tumour, sufficient to make me think that I could remove it. There were some easily felt glands in both axillæ and in both groins, but they were not enlarged. The veins over the upper part of the abdomen were distended. No disease of the heart or lungs was detected. In view of the greatly improved condition of the child's general health I told the parents that she had a tumour of the kidney and explained that an operation would involve extreme risks. I also told them that I knew of only three cases in which after the successful removal of a tumour of this kind from a child the patient had survived more than a few months.[2] On the other hand, I pointed out that death must occur soon if nothing were done. It was decided to accept the risks of an operation.

On Nov. 4th, 1898, chloroform was administered and the tumour then seemed decidedly more mobile. I opened the abdomen through the upper part of the left linea semilunaris, and exposed the growth, with the splenic flexure and adjacent portions of the colon fixed in front of it. The most convenient place to open the retro-peritoneal space, in which the tumour lay, was above the transverse colon, and when the peritoneum in that situation was divided I had no difficulty in separating the tumour from the connective tissue in which it was loosely imbedded. Some firm adhesions to the lower end of the spleen were separated, and the new growth was then easily drawn out of the abdominal cavity, the tail of the pancreas being dragged out with it The tumour was then only attached to the pancreas and it was impossible to separate them without cutting through pancreatic tissue In doing this large vessels were divided, but hæmorrhage from them was easily controlled by ligatures. No ureter was seen during the operation There was a second new growth of about the size of a bantam's egg to the right of the cavity from which the tumour had been removed I thought that this was a collection of glands affected by malignant disease, but the patient was in such a serious state of collapse that it was out of the question to attempt an investigation of the nature and connexions of this second abnormal condition I therefore ligatured all bleeding points having much trouble in securing those on the spleen. I washed out the abdominal cavity with warm sterilised salt and water, leaving as much as possible inside, when the wound was sewn up, with a view to counteracting the shock of the operation, which, however, was not survived by the patient

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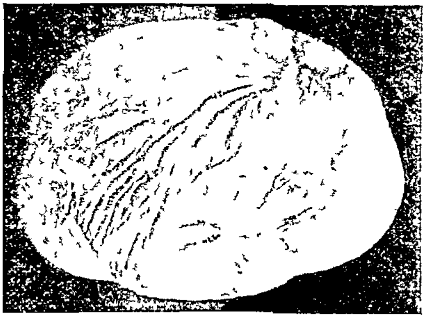
[1] A paper communicated to the Pathological Society on Feb. 18th, 1902.

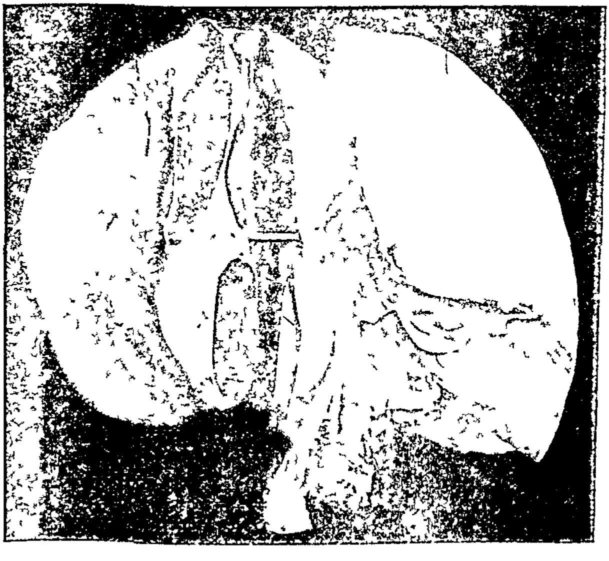
[2] The patient in one of these cases, which was published by myself in the Transactions of the Clinical Society of London, 1894 and 1895, is alive and well, more than nine years after the operation.

FIG 1



Tumour removed from the tail of the pancreas The figure is about half the actual size of the tumour which measured five inches in its longest diameter No 2336A, Royal College of Surgeons of England Museum

FIG 2



Under surface of the liver, parts of the stomach duodenum and gall bladder and the divided portal vein greatly distended In dividing the vein the tumour also was divided into two unequal parts the larger of which nearer the liver end of the vein was found to be quite unattached and has been removed a considerable portion of the remaining part of the tumour is also obviously unattached The vein was not occluded a bristle is seen passing by the side of the tumour through the lower portion of the vessel (Half size) No 2336B, Royal College of Surgeons of England Museum

At the necropsy, which was conducted by Dr Cuthbert H J Lockyer, caseating glands were found near the bifurcation of the bronchi and in the anterior mediastinum There were extensive old pleuritic adhesions on the right side There was no sign of peritonitis or of union of the lips of the wound The peritoneal cavity was full of fluid (the salt and water introduced at the operation), which at first flowed away clear, but that from the loin pouches was deeply blood stained The kidneys were healthy and were normal in position Part of the transverse colon was separated from its attachments its meso colon having been completely divided, and the omentum had been removed from all but the left one and a half inches of the stomach The left pleuro colic fold was intact The spleen had a wound on the lower end of its inner surface one and a half inches long The left half of the pancreas was absent, its cut surface presenting many ligatured points There was a smooth encapsuled growth situated in the gastro hepatic omentum with the bile duct and some vessels in front of it The neck of the gall bladder, and the transverse fissure of the liver were above it The foramen of Winslow was behind and the new growth seemed to be connected with the head of the pancreas below, the connexion between the two being much constricted

The parts were sent to the Royal College of Surgeons of England and when they had been dissected it was found that the mass in the lesser omentum was a new growth inside the portal vein and widely distending it. Mr Shattock has examined the tumours and both are fibro-sarcomatous in structure The specimens are preserved in the museum of the College and the accompanying illustrations (Figs 1 and 2), which are reproduced from photographs taken by Mr. H. George, give a very faithful representation of their appearance.

Although the nature of the tumour removed in this case was doubtful even at the end of the operation the conditions found at the post-mortem examination of the body showed that it certainly had grown from the pancreas, from which it had been noted that the chief blood supply of the new growth came; a larger portion of pancreas had been removed than I thought when operating. The differential diagnosis between an enlarged kidney and a tumour of the tail of the ancreas may be quite impossible. Once before[3] I operated n a tumour having almost exactly the same relations as in is case to the tail of the pancreas and to the surrounding uctures, and I was assisted in mistaking the tumour for a renal enlargement by three of the most experienced men in London. I removed a cystic tumour, having to divide the pancreatic tissue as in the case now recorded. In that case I examined the parts during the operation, and found the kidneys and spleen in their normal positions. The patient made a good recovery, is still alive, and has had no further trouble from the tumour or from the operation. In neither of these cases was there any difficulty in arresting hæmorrhage from the pancreatic tissue, although in the first case there was much trouble in finding a bleeding point. In the present case it did not seem to me that there was any great difficulty in arresting hæmorrhage from the torn spleen by pressure or even by ligatures except that it was very far from easy to expose the parts to view. But the presence of an obstruction in the portal vein and the fact that towards the end of the operation the patient was in a state of extreme collapse render observations on this point of little value in this case. It is obvious that no operation could have cured the patient, but it was not possible to discover the smaller secondary growth until the larger one was extracted. I was right, however, in considering that the tumour diagnosed was removeable. If there had not been a secondary growth there would have been a very fair prospect that the patient might have done well, and I regret that I did not recommend operative treatment when I first saw the child.

Portman-street, W.

# GENERAL REMARKS ON ASYLUM DYSENTERY AND ITS TREATMENT BY INJECTIONS OF PERMANGANATE OF POTASH.

BY P. W. MACDONALD, M.D. ABERD.,

MEDICAL SUPERINTENDENT, DORSET COUNTY ASYLUM.

AT a time when attention is being directed to irrigation of the bowel as a successful method of treating dysentery and allied conditions mainly in the light of experience gained during the South African campaign, it may be of interest to give a few details of the treatment of this troublesome complaint by means of injections of permanganate of potash.

Asylum dysentery, or so-called "colitis," has of late years been a source of much anxiety in many of the institutions for the insane in this country. The subject has been fully and lucidly dealt with by several able writers, but beyond mentioning the stock remedies the question of treatment has occupied a subsidiary place. The main object of the numerous workers, in what threatens to turn out a somewhat unprofitable field of research, would seem to be the elucidation of the causation and spread of this vexatious and recurring complaint At a recent meeting of the Epidemiological Society, the whole subject was re-discussed in all its bearings, and the two points on which there seemed to be a general agreement were the spread of the complaint by the removal of patients from one institution to another and the infectious nature of the disease as evidenced by its occurrence among patients sleeping in dormitories. While dysentery has been more common in asylums of late years than formerly, it must not be supposed that it is a new complaint in these institutions. There are records and particulars of its occurrence in asylums long before the present-day ideas of germs, bacilli, &c., were promulgated. Numerous as have been the attempts to trace the origin and spread of dysentery in asylums no very clear or definite ideas have yet been arrived at. Overcrowding, sanitation, ventilation, and so on, have respectively been penalised, but there is no consensus of opinion why dysentery should have become a troublesome complaint in a latter-day nineteenth-century asylum, and that, too, where none of the causes already mentioned exist. Defects in sanitary arrangements would be sufficient, but often none exist, and the attempts to associate the disease with a certain well-known system of warming and ventilation have completely failed. As regards overcrowding there are numerous instances of its appearance where overcrowding did not exist. At the same time, where there is congestion of space, if not actual overcrowding, the conditions are favourable, and if there is associated with these the unnatural craving for warming dormitory space I am of opinion that a fair explanation is offered for the occurrence of many cases of dysentery. In round numbers th fourths of asylum patients are physically hale and hea and should not, and do not, require artificially warmed spa after 8 P.M.

During the autumn of 1899 and the spring of 190 dysentery appeared in the Dorset County Asylum, and while the cases were not numerous, yet they were sufficient in number to cause inconvenience and anxiety. Starting on the female side, the cases were of the usual well-known type and character and the number of severe attacks were in about the usual proportion. After a time, and when there were no cases in the women's wards, cases began to appear on the male side, and these, if fewer in number, were more severe than among the women. At this time the ordinary therapeutic remedies were employed and in a few cases injections of a solution of nitrate of silver were tried, but the results were most discouraging. As far as practicable the cases were isolated and the complaint disappeared from our midst, only to reappear again in the winter of 1900. It was during this second outbreak that the use of injections of permanganate of potash was resorted to. As soon as the case was diagnosed to be one of dysentery the lower bowel was washed out night and morning with a weak solution (from two to four grains to th pint) of permanganate, the instrument used being an ordinary enema syringe. The motions rapidly lessened and seldom had the treatment to be prolonged beyond the third day. In every one of the cases—and several of them were severe—the patients recovered. Not only was the treatment successful, but by the early and judicious use of the injections the outbreak was cut short. At the time doubts were entertained as to the value of the treatment, but after a further experience these doubts were removed and now every case of a dysenteric nature or of severe diarrhœa is treated by this method. In each instance recovery has followed the treatment. Apparently the permanganate acts in its double capacity of a disinfectant and a styptic. In the more severe cases milk as an article of diet was found to be unsatisfactory. It was not only rejected but it increased the intestinal irritation. This, I believe, is not an uncommon experience. The main article of diet used was a mixture of special beef-tea and specially prepared rice, together with a liberal allowance of port wine. To ensure success the treatment should be commenced early and thoroughness is an essential precaution. In one case only after the permanganate treatment had been adopted has there been an opportunity of examining the bowel post mortem. This was the case of a demented melancholic who had a very severe attack of dysentery from which she made an excellent recovery. The injections were continued for five days and the patient was quite convalescent in three weeks. Soon afterwards she developed acute double pneumonia to which she succumbed. At the necropsy the mucous membrane of the rectum showed numerous healed ulcers, so different from the ulcerated congested state of the bowel in fatal cases from dysentery. Two classes of patients—the tuberculous and the general paralytic—invariably give bad results. The reason is too evident to need any explanation

While my experience of the permanganate has not been extensive I think it has been sufficient to warrant the results being made known and I am hopeful that this short paper may be the means of inducing others to try the treatment as opportunity occurs.

Dorchester.

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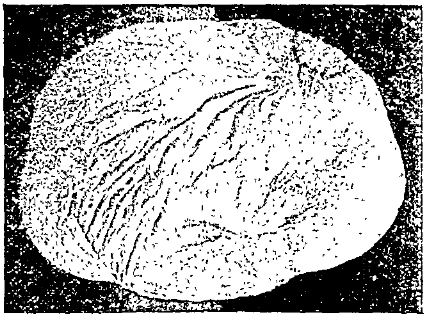
[3] Transactions of the Medical Society of London, 1893.

growth was then easily drawn out of the abdominal cavity, the tail of the pancreas being dragged out with it. The tumour was then only attached to the pancreas and it was impossible to separate them without cutting through pancreatic tissue. In doing this large vessels were divided, but hæmorrhage from them was easily controlled by ligatures. No ureter was seen during the operation. There was a second new growth, of about the size of a bantam's egg to the right of the cavity from which the tumour had been removed. I thought that this was a collection of glands affected by malignant disease, but the patient was in such a serious state of collapse that it was out of the question to attempt an investigation of the nature and connexions of this second abnormal condition. I therefore ligatured all bleeding points, having much trouble in securing those on the spleen. I washed out the abdominal cavity with warm sterilised salt and water, leaving as much as possible inside, when the wound was sewn up, with a view to counteracting the shock of the operation, which, however, was not survived by the patient.

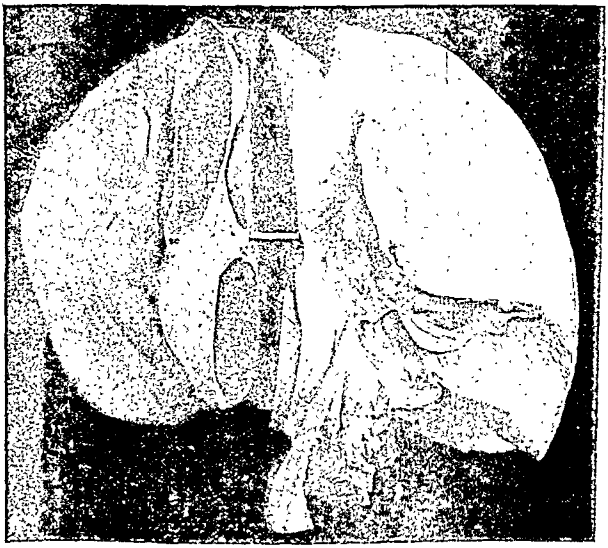
FIG. 1.



Tumour removed from the tail of the pancreas. The figure is about half the actual size of the tumour which measured five inches in its longest diameter. No. 2336A, Royal College of Surgeons of England Museum.

At the necropsy, which was conducted by Dr. Cuthbert H. J. Lockyer, caseating glands were found near the bifurcation of the bronchi and in the anterior mediastinum. There were extensive old pleuritic adhesions on the right side. There was no sign of peritonitis or of union of the lips of the wound. The peritoneal cavity was full of fluid (the salt and water introduced at the operation), which at first flowed away clear, but that from the loin pouches was deeply blood-stained. The kidneys were healthy and were normal in position. Part of the transverse colon was separated from its attachments, its meso-colon having been completely divided, and the omentum had been removed from all but the left one and a half inches of the stomach. The left pleuro-colic fold was intact. The spleen had a wound on the lower end of its inner surface one and a half inches long. The left half of the pancreas was absent, its cut surface presenting many ligatured points. There was a smooth encapsuled growth situated in the gastro-hepatic omentum with the bile-duct and some vessels in front of it. The neck of the gall-bladder, and the transverse fissure of the liver were above it. The foramen of Winslow was behind and the new growth seemed to be connected with the head of the pancreas below, the connexion between the two being much constricted.

FIG. 2.



Under surface of the liver, parts of the stomach, duodenum, and gall-bladder and the divided portal vein greatly distended. In dividing the vein the tumour also was divided into two unequal parts, the larger of which, nearer the liver end of the vein, was found to be quite unattached and has been removed; a considerable portion of the remaining part of the tumour is also obviously unattached. The vein was not occluded; a bristle is seen passing by the side of the tumour through the lower portion of the vessel. (Half size.) No. 2336B, Royal College of Surgeons of England Museum.

The parts were sent to the Royal College of Surgeons of England and when they had been dissected it was found that the mass in the lesser omentum was a new growth inside the portal vein and widely distending it. Mr. Shattock has examined the tumours and both are fibro-sarcomatous in structure. The specimens are preserved in the museum of the College and the accompanying illustrations (Figs. 1 and 2), surface becomes dulled by deposition of moisture upon it and the image is blurred. And this is apt to occur when the operator requires to have the part which is being operated upon most clearly in sight. Again, when electric light is used as the source of illumination the mirror must be warmed by holding it before a fire, over a spirit-lamp, or placed in hot water. The first two methods are inconvenient and not always within reach and the last is deleterious to the mirror. All laryngologists are painfully aware of the rapid destruction of mirrors regularly heated by immersion in hot water. To overcome this difficulty several methods, such as smearing the mirror with glycerine, &c., have been tried, but all of them so interfered with the reflecting quality of the mirror that they proved useless in practice.

Lately, and somewhat by accident, I fell upon the following plan, and it has been so eminently successful that I desire to call the attention of laryngologists particularly to it. An ordinary laryngeal mirror is taken and after polishing it with a soft cloth the surface of the mirror is rubbed or pencilled over with "*le crayon anti-buée*." This dulls the surface. The mirror is again wiped or polished with a soft cloth and the surface will again be clear and bright. It may then be breathed upon without its brightness being affected. After being so prepared the mirror may be used for laryngoscopical examination, and it may be retained in contact with the palate or in any part of the buccal or pharyngeal cavities as long as may be desired, or, as is ever necessary, without the reflecting surface being affected in the slightest degree by the breath-borne moisture. The crayon causes no scratching of the glass nor does its use interfere with the cleansing and sterilising of the mirror. I do not employ this method to the exclusion of heat, as the latter is much too convenient to be lightly discarded, but this method of preserving a clear, bright, reflecting surface will be found of great service under the following circumstances—namely, (1) in an examination to be made with electric light; (2) where a prolonged use of the mirror is necessary; (3) in examinations made away from home; and (4) in the examination of children whose timidity is so often increased by seeing the mirror held over the flame of the lamp before being used. Dentists may also find the "crayon" to be useful, and the eye-piece of a microscope may be kept perfectly clear and bright, even during a prolonged examination in warm weather. The crayon may be obtained in Glasgow from Messrs. W. B. Hilliard, 63, Renfield-street.

Glasgow.

# A Mirror

OF

# HOSPITAL PRACTICE, BRITISH AND FOREIGN.

> Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

## ST. GEORGE'S HOSPITAL.

### TWO CASES OF GASTRIC SURGERY.

(Under the care of Mr. HERBERT W. ALLINGHAM.)

THE modern treatment of gastric ulcer is in striking contrast to that which was employed only a few years ago. A chronic ulcer of the stomach may reasonably be submitted to operation if it has materially interfered with digestion and nutrition, even though no hæmatemesis may be present. The first of the following two cases is an excellent example of this recent surgical advance. In the second case pyloroplasty was employed for a fibrous stenosis of the pylorus. This operation has been somewhat discredited lately, chiefly because it has been performed in unsuitable cases. Koeppelin's "submucous pyloroplasty,"[1] though perhaps safer than the ordinary operation, must be of more limited applicability.

CASE 1. *Excision of a gastric ulcer.*—A woman, aged 34 years, was admitted into St. George's Hospital on Oct. 29th with a history that for about eight years she had suffered from pain in the stomach after food. The pain, which was severe and prevented her from following her occupation, came on immediately after food, as a rule, but at times was not felt until from half to one hour had elapsed. She was unable to take solid food without vomiting, but hæmatemesis had only occurred once about seven years previously. She had never passed blood by the bowel, but was always very constipated. She was not emaciated. On examining the abdomen nothing abnormal was found except slight tenderness which was always present at one particular spot in the epigastrium. Seeing that the condition had existed for so long and had persisted in spite of medical treatment operation was advised. On Nov. 7th Mr. Allingham made an incision in the middle line above the umbilicus and opened the abdomen. The stomach was drawn out and on the anterior wall a puckered mass of thickened tissue of about the size of a shilling was found. It was covered with lymph and was slightly adherent to the surrounding parts. The peritoneum having been protected by means of sponges the ulcer and the tissues immediately around were excised and the wound in the stomach was sewn up by means of two rows of sutures, the mucous membrane being first brought together and then the muscular coats and the peritoneum. In the latter Lembert's method was employed and in both rows silk alone was used. The abdomen was then closed without drainage. Recovery was uneventful, the wound healing by first intention and the patient left the hospital on Nov. 30th, having taken solid food without pain or discomfort for 14 days before her discharge.

CASE 2. *Pyloroplasty for pyloric stenosis caused by nitric acid.*—A man, aged 37 years, was admitted into St. George's Hospital on August 28th, under the care of Dr. Latham, complaining of constant vomiting and pain after food, which had existed for seven weeks, during which time he had been unable to retain any solids. Whilst under observation the vomiting only occurred about once every two days and after a few days, during which time he was fed on peptonised food, it ceased altogether. He stated that he had vomited blood on one occasion on August 10th, but never since. On examination of the abdomen the stomach was found to be much dilated, and the abdominal muscles were rigid and moved but slightly on respiration and he complained of some tenderness in the epigastrium. After some days he volunteered the statement that he had swallowed a quantity of nitric acid on July 16th in mistake for ginger beer and had never been well since. He looked ill and was a good deal wasted, but improved somewhat under treatment—i.e., stomach lavage and careful feeding; the dilatation of the stomach, however, did not diminish, so on Sept. 24th Mr. Allingham operated. The stomach was washed out immediately before the operation and 70 ounces were drawn off. By the phloroglucin-vanillin test no free hydrochloric acid was found in the vomited material. The abdomen having been opened in the middle line above the umbilicus the stomach was drawn out of the wound. It was much dilated and the pylorus was thick and hard. There were no adhesions. A longitudinal incision was made over the pylorus and the lumen was only found by means of a probe. The tissues of the stomach at the pyloric end were exceedingly tough and fibrous. Pyloroplasty was performed in the ordinary way and the wound was sutured in two layers over one of Allingham's bone-bobbins. The patient made an uninterrupted recovery and was discharged from the hospital on Oct. 22nd, having been able to take solid food without pain, discomfort, or sickness for some days previously.

*Remarks by* Mr. C. R. KEYSER.—Case 1 serves to illustrate several points which are gradually becoming recognised. In the first place, in cases of gastric ulcer which have resisted medical treatment and in which the patient is rendered a chronic invalid, or vomiting and hæmatemesis are constant, operation should be undertaken much earlier than has hitherto been the custom. The complications of gastric ulcer are so numerous and dangerous that, according to recent statistics,[2] 25 per cent. of all cases treated medically terminate fatally, whereas the mortality of those surgically treated is only 5 per cent., and it is practically certain that if, instead of waiting until the patients are emaciated and worn out with suffering, operation was resorted to at a comparatively early date, the mortality would be reduced still further. The operation which will be necessary depends entirely on the condition found after opening the abdomen and examining the stomach, and may be either excision of

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[1] Lyon Médical, Sept. 24th, 1899.

[2] Robson and Moynihan: Diseases of the Stomach, p. 110.

# Clinical Notes:

## MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

### GENERAL RESTRICTION OF DIET IN DIABETES.

BY G. S. KEITH, M.D., F.R C.P. EDIN.

THIS brief outline of a case of diabetes which has recently been under my care may be of interest to the readers of THE LANCET inasmuch as it bears out the beneficial results of a method of treatment which I have advocated for many years. In its results, however, it is no whit more satisfactory than I have found to be the case in innumerable instances of divers diseases which have been described in my "Plea for a Simpler Life" and "Fads of an Old Physician"

The patient, a man, aged 38 years, had resided for several years in a tropical but not unhealthy climate. He came home early last year as the heat did not seem to suit his health and since then he has been living in North Berwick where he could enjoy his favourite game of golf. He there consulted a medical man and was told that the immoderate thirst from which he was suffering was due to diabetes. The specific gravity of his urine was then found to be 1037. Subsequently he was advised to consult a London specialist who put him on the usual anti-diabetic diet. He was ordered to abstain from everything which contained starch or sugar and was given a long list of animal and albuminous foods in which he could indulge. No restriction whatever was put on the quantity of these and, further, he was recommended to take fatty substances *ad libitum*, with the view of restricting the waste of tissue which was going on very rapidly. He soon found that the fats which he consumed in large quantity did not agree with him and his medical adviser in Edinburgh advised him to discontinue their use; this he did with marked benefit.

I first saw the patient about the middle of October, 1901. He had then lost about two stones in weight, but his muscular strength was only slightly impaired, and he was still able to enjoy a game of golf. He had, however, an intense craving for food, suffered from severe thirst, and was likewise passing a very large quantity of urine. I recommended him, therefore, to reduce as rapidly as possible the total nitrogenous intake, and at the same time to introduce a small quantity of bread into his dietary. I saw him again three weeks later and during the interval he had reduced his total food to a very moderate allowance, while for the last week he had taken for breakfast a couple of ounces of bread which he enjoyed amazingly The craving for food and water had practically disappeared, while the amount of urine was now reduced to two and a half pints. An analysis of a sample gave the following results specific gravity, 1019; albumin, *nil;* and sugar, 0·32 per cent. His weight had increased in three weeks by six pounds—a fact which, as I pointed out to him, was no doubt owing to the retention in the system of water which had previously served as the vehicle for the discharge of waste products and in this way had been lost to the tissues. He now resolved to return to the tropics in order to resume the duties which he thought he had finally relinquished I saw him again two months later (Jan. 6th, 1902) and found that he had made arrangements to leave the country in the middle of the month. In the meantime he had a slight return of his former symptoms, owing probably to the fact that while still reducing his animal food he had indulged somewhat too freely in farinaceous and sweet articles of diet. On the adoption of the dietetic restrictions previously ordered the symptoms once again rapidly disappeared, and at the present moment he is on the point of carrying out his original intention of resuming work.

The interest of this case centres in the remarkable amelioration of the diabetic symptoms which followed a general restriction of diet without reference to particular elements of food. This is nothing new in face of my past experience and I attribute it, as I have endeavoured to show in my published works, to the curative influence of a restricted diet, more especially with regard to nitrogenous foodstuffs.

Currie, Midlothian.

### A CASE OF INFECTIVE PERIOSTITIS.

BY JOHN R GRIFFITH, M.R C.S. ENG., L.R.C.P. LOND.

A SHORT time ago I attended a child suffering from the above disease and as the case presented, to my mind, one or two interesting features I think it is worth recording.

The patient, a female child, aged 11 years, who had always enjoyed robust health, had been "out of sorts" for two or three days The morning on which I first saw her she had a rigor, and on examination her condition indicated a severe constitutional disturbance. The temperature was 103° F., the pulse was 120, the tongue was furred, and the breathing was quick. On inquiry the mother gave the information that the child did not complain of pain in any particular region and for a short time I was nonplussed to account for the constitutional disturbance. On further examination it was discovered that the child had a double talipes—i.e., right talipes equino-varus and left talipes equinus. Further, a puffiness located over the internal malleolus of the right leg was noticed. The veins were swollen, but the child did not cry out when the afflicted leg was being manipulated. I noticed that the vulva was inflamed and a purulent discharge was seen about the vulval orifice. The next morning (the second day) the general condition of the child was worse; the temperature was 104°, the breathing was rapid, and the usual symptoms which accompany pyrexia were present. On examining the afflicted leg it was noticed that the swelling had much increased, the whole of the shaft of the tibia being implicated up to the tubercle. The skin was becoming dusky red in colour, pitting on pressure, and the child now was in evident agony on the least handling. The nature of the case was fully explained to the parents and the necessity of an immediate operation having been fully laid before them they consented to its being carried out. Later in the morning my principal, the late Mr. D. E. Edwards of Llwynypia, and myself went to the house fully prepared to lay bare the whole shaft and to gouge parts of it away if thought necessary. The parents by this time had changed their minds and they absolutely refused treatment; therefore nothing was done. The condition of the patient went from bad to worse; on the third morning septic pleurisy supervened, and on the fourth pericarditis, and she died at 11 o'clock the same night.

The child, at any time of her existence, had not been treated for the talipes. I ascertained from the mother that the child was in the habit of falling about in walking and especially on trying to run. This undoubtedly accounts for the injury constituting one cause of the periostitis.

The point of interest of the case which appeals to me is whether one is justified in thinking that the entry of the virulent streptococci and staphylococci was through the vagina from this purulent discharge. The child had never had typhoid fever.

Blackwood, Mon.

### A METHOD BY WHICH DEPOSITION OF MOISTURE ON THE LARYNGEAL MIRROR MAY BE PREVENTED WITHOUT THE AID OF HEAT.

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WHEN about to make a laryngoscopic examination by means of reflected light the laryngeal mirror is warmed before being passed into the mouth with the object of preventing condensation of moisture from the breath on its reflecting surface When gas or oil is used as the illuminant the warming of the mirror by holding it over the flame is simple, very convenient, and eminently satisfactory for routine examination, and is quite devoid of risk so long as the examiner is careful to test the temperature of the mirror before passing it into the buccal cavity.

But if the mirror so warmed be retained for some time in the pharynx, as is frequently necessary during delicate intralaryngeal operations, it becomes cool, if not cold, and its by strata of proliferated connective-tissue cells. The neurilemma cells had a neuroblastic function and proceeded to form new axis-cylinders and medullary sheaths. The new fibres in the distal segment had a longitudinal direction from the outset, whilst in the intermediate scar-tissue between the proximal and distal segments their direction was wildly irregular. But the mode of formation was the same in every case. Thirdly, in the distal segment of a divided nerve in which the cut ends had been left widely separated, according to the "central" theory, it being impossible for new fibres to reach the distal segment from the proximal, regeneration could not occur. But such was not the case. Regeneration could occur in the distal segment of a nerve even when widely separated from the proximal segment, and the process was exactly the same as that which occurred in a reunited distal segment. It commenced, however, at a later date (four or five weeks after division, instead of three weeks, as in a reunited nerve), and progressed more slowly. Moreover, the new fibres did not attain beyond the sinuous, beaded stage characteristic of incomplete maturity. If, however, such a distal segment, already partially regenerated, be sutured to the proximal segment the new fibres quickly attained to adult proportions, thus illustrating the common truth that physiological activity was necessary for anatomical perfection. Cases where the distal segment was in a condition of inflammatory sclerosis—such neuritis being usually of microbic origin—might exhibit great delay or even total inhibition of the regenerative process. The paper further dealt with nerve grafts, primary and secondary suture. The following subjects were suggested as a possible basis for discussion: (1) the mode of regeneration of peripheral nerve-tissue; (2) the absence of regeneration in the spinal cord and brain after injuries, and its association with the absence of neurilemma cells in the central nervous system; (3) the bearing of this on the neuron theory; (4) indications and contra-indications for operative interference; and (5) comparative advantages of various operations.

Dr. STEWART said that the facts above recorded had obviously an important bearing upon the views as to the architecture of the peripheral nervous system. For the last 11 years Waldeyer's neuron theory had practically held the field. According to this theory every axis-cylinder was a mere outgrowth from a nerve-cell, which outgrowth degenerated when cut off from the parent cell and could only regenerate by a process of down-growth from that cell. Regeneration ought, therefore, to be impossible in the distal segment of a divided nerve whose ends remained widely separated. He said that the neuron theory, so far, at any rate, as the peripheral nervous system was concerned, must be discarded. Finally, with regard to the clinical side of the question, if the views which had been maintained were correct then operative re-union of peripheral nerves ought to be attempted in almost every case. Operation might be contra-indicated, firstly, for anatomical reasons. Thus, for example, in a case of rupture of all the roots of the brachial plexus close to the vertebral column a surgeon might perhaps hesitate before diving down into a deep dissection at the root of the neck. Secondly, on account of the total loss of galvanic excitability in the paralysed muscles. Obviously it was not worth while re-uniting a motor nerve if there were no muscle-fibres left for it to innervate. But total disappearance of muscle-fibres in such cases was certainly less frequent than was commonly supposed. He had found some reaction to galvanism in the atrophied muscles in a case 16 years after division of the motor nerve.

Professor C. S. SHERRINGTON (Liverpool) said that the paper had suggested that a nerve-fibre was not a single nerve-cell process but a series of nerve-cells. He pointed out that in the central nervous system no regeneration of the fibres in the posterior column of the cord took place and yet they were but the direct continuation of a peripheral nerve. He referred to the fact that after excision of the posterior root ganglion in the lumbar region the root of the cauda equina 55 days after contained several well-marked fine fibres and he thought that these might be fibres which had regenerated. The electrical delay in the transmission of a current along the nerve supported the view that the nerve-fibre was made up of a series of cells which might act as electrical condensers. On the other hand, it was difficult to see why if the nerve was a series of cells it should degenerate when cut off from the nerve cell.

Dr. R. KENNEDY (Glasgow) said that these researches fully corroborated the results of his own investigations published by the Royal Society some five years ago. He referred to the view that the higher up a nerve was divided the longer was the time taken for the restoration of sensation. In his experience this had not been the case, and restoration of sensation had occurred as rapidly when the nerve was divided at one point as at another. The demonstration of newly-formed fibres in the peripheral segment which had been for some time totally separated from the central segment was first made by Philipeaux and Vulpian and had been confirmed by other observers. These young fibres, however, never attained maturity while unconnected with the central end, for the reason that they had remained without an opportunity of performing their function of the normal transmission of impulses from the nerve cell. Dr. Kennedy then referred to the healing of divided nerves and the restoration of the normal paths for the transmission of impulses. If the non-corresponding ends of nerve-fibres were brought into apposition and united the consequence was that the peripheral terminations became in connexion with centres in the central nervous system to whose innervation they did not by nature belong. To determine this question he divided the sciatic nerve in dogs and reunited it so that the fibres on the external aspect of the central end were in contact with those on the internal aspect of the peripheral end and *vice versâ*. The result was that function was completely restored and that as rapidly as in control animals in which the nerve had been divided and united as accurately as possible. A second series of experiments were then undertaken. The median, ulnar, and musculo-cutaneous nerves were divided above the elbow in dogs and the musculo-spiral was divided at the same point; the central end of the musculo-spiral was then attached by suture to the peripheral ends of the three nerves which supplied the flexor muscles and *vice versâ*. The result was that the animal in which these cross sutures were made regained coördination of movement perfectly. In these animals after coördinated function had been restored the condition of the cerebral cortical areas associated respectively with flexion and extension of the paw were examined by cortical stimulation and it was found that the relative positions of the two areas had become reversed. In conclusion, he referred to a case in which he had for facial spasm divided the facial nerve and united it to the spinal accessory, with the result that the face recovered its power of movement to a great extent, but that whenever the patient lifted the right arm a spasm of the face was produced.

Dr R. A. FLEMING (Edinburgh) said that he was still an upholder of the "central" view of regeneration, and he did not see why it should not be compatible with the finding of new formed fibres in the distal segment of a divided nerve. He referred to some experiments which he had performed in which he had ligatured the sciatic nerve in two places, and he had been able to demonstrate axis-cylinders both in the part between the two ligatures and also in the peripheral part 18 weeks after the operation. He asked Mr. Ballance and Dr. Stewart what method of fixing they had adopted and in what medium the sections had been cut. He did not agree with their observations that the fine nerve-fibres degenerated more slowly than the larger fibres, but he thought, on the contrary, that they degenerated more rapidly. He considered that the neurilemma nuclei acted as trophic agents to the axis-cylinder which they protected. It was therefore not improbable that regeneration should take place from these cells.

Mr. W. THORBURN (Manchester) referred to the fact that so little confusion occurred after union of peripheral nerves. He mentioned a case in which there was severe damage to the brachial plexus. The distal and proximal end of the nerves were united, but it was impossible to unite each nerve to its corresponding trunk. No confusion in movements, however, resulted.

The meeting, on the motion of Dr. F. W. MOTT, was then adjourned.

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## MEDICAL SOCIETY OF LONDON.

### *Cardiac Pain.—Hypostatic Albuminuria of Splenic Origin*

A MEETING of this society was held on Feb. 24th, Dr. W. H. ALLCHIN, the President, being in the chair.

Dr. E. MARKHAM SKERRITT (Clifton) read a paper on Cardiac Pain. All pain was essentially conservative and protective, and heart pain tended to check strain that was a source of danger. Excluding from consideration the pain of acute disease and of neuralgia and neuritis, pain expressing the ulcer, or pylorectomy, gastro enterostomy, &c. The operation of gastro-enterostomy gives rest to the stomach and is, as a rule, a less severe measure than excision of the ulcer, which is therefore usually undertaken only when the patient is in good condition or when there is some doubt as to the innocence of the thickened and indurated tissues found at the time of operation.

Case 2 is an interesting one, especially as Mr. C. B Keetley[3] has drawn attention to the subject of pyloric stenosis so recently. No reference has been made here to any respiratory troubles following the act of swallowing the acid because no history of any such symptoms could be elicited from the patient. The reason why the pylorus is alone affected in these cases is difficult of explanation, but it seems possible that the irritation induced by the acid causes a violent contraction and immediate peristalsis of the stomach starting from the cardiac end, the part which is first touched by fluids entering from the œsophagus The effect of the peristalsis is to cause closure of the pylorus and, at the same time, to urge the gastric contents from left to right, so that the acid is in contact with the mucous membrane in the region of the pylorus for a much longer period of time than with any other. Nevertheless, it is strange that the acid does not cause ulceration of other parts of the stomach and of the œsophagus.

## LEEDS GENERAL INFIRMARY.

### A CASE OF INTUSSUSCEPTION; OPERATION; RECOVERY.

(Under the care of Mr. W. H. BROWN.)

THE most suitable treatment for irreducible intussusception cannot be said to be quite determined. Undoubtedly excision of the invagination with anastomosis of the two portions of bowel is theoretically the best, but a very large proportion of the children, on whom the operation has been performed, die. Attempts to establish an artificial anus or to short circuit the invaginated bowel have been made, but the mortality cannot be said to be less from these methods, and, moreover, the intussusception remains unrelieved. On the whole, therefore, simple excision of the affected portion of bowel with union of the two ends is probably the safest measure though the death-rate from shock and exhaustion will always remain high in these cases. For the notes of the case we are indebted to Mr. W. O. Greenwood, house surgeon.

A child, aged four years, was admitted into the Leeds General Infirmary on Jan 28th, 1902, with the usual symptoms of intussusception. The swelling could be felt stretching across the epigastrium; this was said to have existed for a month As some attempts at reduction had been made before admission Mr. W. H. Brown decided to operate at once. Under ether the abdomen was opened in the middle line by an incision about three inches long above the umbilicus. The tumour was brought out of the abdomen and the intussusception was found to consist of cæcum and ascending colon invaginated into the transverse colon. The reduction was easily effected with the exception of the last inch, which consisted of the cæcum and the vermiform appendix. This was so firmly impacted that no reasonable manipulation produced any effect. An incision was therefore made round the invaginated portion and this was excised; the parts removed comprised the vermiform appendix together with a circular portion of the cæcum of about the size of a two-shilling piece. The edges of the bowel were closed with silk sutures. The abdominal wound was treated in the usual manner. The child made an uneventful recovery.

*Remarks by* Mr. BROWN —I have had occasion to operate for the relief of intussusception upon many occasions, but this is the first time that I have been compelled to excise any portion of the intestine implicated. Had there been much distension or evidence of inflammation I should have made a fæcal fistula, for I hold very strongly the view that the right treatment for distended and inflamed intestine is to drain it and not to attempt immediate restoration of continuity. In the present instance these complications were absent and the child was fortunately spared the discomfort of a fæcal fistula.

ERRATUM.—In THE LANCET of Feb. 8th, p. 372, a case was reported in the Mirror of Hospital Practice which had been under the care of Dr. W. J. Collins at the London Temperance Hospital. In an editorial comment upon this case it was erroneously assumed that the duodenal ulcer, as well as the gastric ulcer, had perforated. As this was not so of course no idea of any secondary laparotomy could arise.

# Medical Societies.

## ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

### *Discussion on the Regeneration of Peripheral Nerves.*

A MEETING of this society was held on Feb. 25th, Sir THOMAS BARLOW, Bart, being in the chair.

Mr. CHARLES A BALLANCE and Dr. J. PURVES STEWART communicated a paper on the Regeneration of Peripheral Nerves. The fact had long been admitted that regeneration could occur in peripheral nerves if their opposing ends, previously divided, were brought into apposition. As to the process whereby this regeneration was accomplished, however, there had been two schools of opinion, which might be termed the "central" and "peripheral" respectively. According to the "central" school (supported by Renvier, Waller, His, Vanlair, Stroebe, Howell and Huber, and others), the new nerve-fibres which occurred in the distal segment of a reunited nerve-trunk were formed by a process of down growth from the proximal segment, and threaded their way gradually along the neurilemma sheaths of the distal segment, already rendered empty by the degeneration of the old axis-cylinders and medullary sheaths The new fibres were thereby guided ultimately to the periphery. The "peripheral" doctrine, hitherto a less popular one (amongst the chief supporters of which might be mentioned Tizzoni, Cattani, Bethe, Kennedy, and Galeotti and Levi), taught that the new nerve-fibres were formed locally in the distal segment from pre-existing elements there. This, in their opinion, was the correct view. If a peripheral nerve were cut across certain changes occurred in the lower part of the proximal segment and throughout the entire extent of the distal segment. These changes consisted of: (1) degeneration, and (2) regeneration The two processes overlapped in point of time; regenerative changes commenced before degeneration was complete. Degenerative changes affected the lower end of the proximal segment and the whole extent of the distal segment. They occurred simultaneously in these parts and did not spread from the centre to the periphery or *vice versâ*. Changes in the axis-cylinders and medullary sheaths were next described. The changes of regeneration were then dealt with, firstly in the proximal segment of a divided nerve which had not been reunited These consisted in the formation of the well-known so-called "end-bulb"—a dense, club-shaped swelling in which were numerous young nerve-fibres, coiled and intertwisted in all directions, embedded in fibrous tissue. According to the "central" theory of nerve regeneration these new fibres were to be regarded as outgrowths from the central end which, unable to find their way into the distal segment, had turned back on themselves in a futile manner like the apex of a fountain This, however, was not so. Every new fibre of the permanent end-bulb was laid down in separate short links, each in apposition to a neurilemma cell, thickest near the nucleus of the cell and tailing off at each extremity. These short lengths of young nerve-fibres were at first separated by some distance from the ends of the central axis cylinders. The end-bulb was not formed by a downgrowth and recurving of axis-cylinders, but by the development of new fibres in a structure which Mr. Ballance and Dr Stewart had named the "primitive end-bulb"—a mop like protuberance which was formed immediately the nerve trunk was divided, the result of the curling back upon themselves of the divided nerve fibres. In the "primitive end-bulb" degeneration occurred as above described and was followed by regeneration whereby the proliferated neurilemma cells secreted small islands of axis-cylinders and medullary sheaths These islands later overlapped in an imbricating fashion and ultimately fused together to form a long nerve-fibre continuous with one of the nerve-fibres of the proximal segment above [illegible] in the distal segment of a divided nerve, reunit[illegible] proximal segment by sutures, the proliferated n[illegible] cells arranged themselves in longitudinal columns the most frequent cause of angina pectoris. He referred to the term "cramp" which had been used in explanation of the condition angina pectoris and considered that it was a term inapplicable to cardiac muscle as the heart muscle did not undergo such contraction.—Dr. A. MORISON said that the term "cramp" was a useful term to use in description of certain cardiac conditions. In some cases of angina pectoris which had terminated fatally a condition of fragmentation of the muscle had been found, and he considered that this might indicate rupture of the fibres during an attack. With regard to the localisation of pain, he thought that they might assume that it originated in the heart itself. He considered that attacks of angina pectoris were frequent in cases of aortic regurgitation, but they also occurred in cases of aortic stenosis, although this latter lesion was of rare occurrence. He suggested that the pain of angina pectoris might be due to irritation of the nerves which were so abundant around the aortic orifice.—Dr. F. PARKES WEBER said that both cardiac muscle and unstriped muscle underwent "cramp." He thought that localised cramp might take place in the heart just as localised cramp occurred in the muscles of the limbs. He pointed out that the tissue-effects of waste products were produced by an insufficient blood-supply to wash out these products.—Dr. W. PASTEUR thought that cardiac pain was an uncommon manifestation of heart disease, but that it most frequently occurred in cases of degeneration of the cardiac muscle.—Dr. H. D. ROLLESTON suggested that if a localised "cramp" occurred it might effect the musculi papillares. He agreed with the last speaker in considering that cases of acute cardiac pain were rare and were most frequently associated with aortic disease. With regard to angina in young people it was difficult to diagnose and he quoted the case of a young man who had attacks of pain which he considered to be functional. The man died suddenly and atheroma of the vessels at the base of the heart was found. He doubted if fragmentation of the cardiac muscle could be regarded as evidence of "cramp," for the contraction of rigor mortis was much more severe and might produce such fragmentation.—Dr. H. CAMPBELL POPE said that the pain of angina pectoris was not infrequently referred to the right side of the chest and also to the left axilla. He referred to a case of sudden death in which there was atheroma of the coronary vessels, but there had been no angina. He thought that tea was a frequent cause of attacks of cardiac pain.—Dr. SKERRITT replied.

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[3] THE LANCET, Nov. 16th, 1901, p. 1323.

Dr. ROLLESTON read a note on Hypostatic Albuminuria of Splenic Origin. The paper is published in full on page 585.—Dr. SANSOM said that "postural albuminuria" had been described by Teissier. He suggested that it was of importance to eliminate the possibility of the albuminuria being due to some other cause than the mechanical one of pressure of the spleen on the left renal vein, for the albuminuria might be of malarial origin. He did not consider "postural albuminuria" to be of serious import.—Dr. ALLCHIN doubted if the enlarged spleen could press on the left renal vein, but the point could easily be decided by post-mortem observation.—Dr. ROLLESTON, in reply, pointed out that had the albuminuria in his case been due to a malarial nephritis it was improbable that it would have disappeared with the change of position.

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# BRITISH GYNÆCOLOGICAL SOCIETY.

### *Exhibition of Instruments and Specimens.—Presidential Address.*

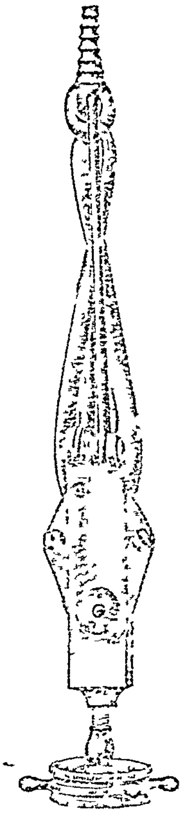
A MEETING of this society was held on Feb. 14th, Dr. J. HALLIDAY CROOM, the President, being in the chair.

Dr. F. WINSON RAMSAY exhibited a series of perforated, hollow, metal Uterine Dilators. He maintained that their use was not attended by the piston-like action of otherwise similar dilators, and that their introduction was consequently much more easy and free from any risk of forcing any deleterious matter into the Fallopian tubes.

Mr. R. T. A. O'CALLAGHAN showed Submucous and Intraligamentary Myomata and a Cancerous Uterus, all of which had been removed by abdominal hysterectomy.

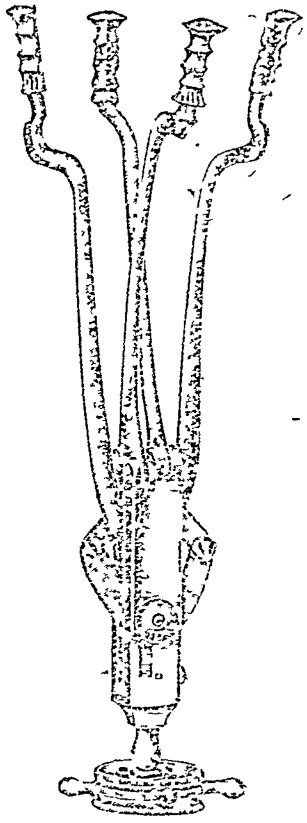
Dr. H. MACNAUGHTON-JONES exhibited the following:—1. Professor Bossi's Instrument for Rapid Dilatation of the Os and Cervix Uteri in cases of Eclampsia and Contracted Pelvis. He had seen it applied for the first time in October, 1901, when visiting Professor Leopold's clinic in Dresden. The illustrations (Figs. 1, 2, 3, and 4) show that the instrument has a special curve and that its branches or blades are grooved externally so as to prevent them from slipping in the cervical canal. By an arrangement of pivots the three branches, when the wheel handle is rotated, open simultaneously to an extent of ten centimetres, and the degree of separation is indicated on a quadrant. In the case in which Dr. Macnaughton-Jones saw Professor Leopold apply the dilator the pelvis was rachitic and had an internal conjugate diameter of seven centimetres, and there was a double promontory. In some 20 minutes the dilatation was sufficiently complete to admit of the perforation of the head and the application of the cephalotribe. The case was an exceptionally difficult one, but delivery was completed within another 20 minutes. In a number of cases reported by Professor Bossi, Dr. Giuseppe Zirolia, and Dr. G. de Paoli of the University of Genoa, dilatation to eight centimetres was effected within 20 minutes in cases of eclampsia, and delivery was then successfully completed by Simpson's forceps. The instrument had also been used in cases where dilatation by other methods for the induction of premature labour had failed. It was claimed for it that by its means rapid dilatation could be obtained within a period of from 15 to 30 or 35 minutes without interfering with the integrity of the cervix

FIG. 1.



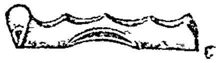
Dilator closed.

FIG. 2.



Dilator opened.

FIG 3.



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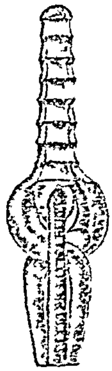
Detachable guard.

FIG. 4.



Closed end of dilator, the guards being removed. This enables the operator to dilate the cervix to a given extent when the four grooved guards can be fixed on the ends.

the overloading of the heart occurred in all degrees of intensity, there being no line of demarcation, clinical or pathological, between one extreme and the other. Heart pain due to the disturbance of the balance between power and work might occur (1) when the heart was normal but work was in excess; or (2) when the heart was diseased: (*a*) primarily in its valves, or (*b*) primarily in its walls Pain in the normal heart from overwork might be induced by over-exertion, such as hard riding when "out of condition"; it was not pronounced and it quickly passed off with rest. It was also met with in "vaso-motor angina," a neurosis of the cardio-vascular system increasing the peripheral resistance to the circulation by causing spasmodic contraction of the vessels and hence painful embarrassment of the heart's action, in some cases increased by anæmia of the cardiac muscle due to coincident contraction of the coronary vessels. Vaso-motor angina occurred mostly in early adult life and about the climacteric period in women of neurotic type and in men from excess in alcohol or tobacco. It might be induced by cold, by exertion attended with excitement, and especially by emotional disturbance. Certain blood conditions, especially the presence of uric acid, the absorption of ptomaines from the bowel, and the action of some drugs of the digitalis class, increased the general blood-pressure and therefore made it easier for the contraction of the peripheral vessels to embarrass the heart. Fatigue of the heart as a muscle attended its action, and Dr. Gaskell had shown that fatigue of muscle produced a tendency to cramps and that accumulation of the products of muscle waste induced acidity which caused paralysis. The symptoms of vaso-motor angina came on suddenly, with acute pain and oppression at the heart, palpitation, and dyspnœa, the pulse being small and quick, usually with increased tension. The latter quickly relaxed and the patient passed into a restless condition. Sir R. Douglas Powell stated that marked angina of this type was not common and the prognosis was good. Dr. Skerritt had met with it in gouty cases and also at the climacteric period, but not in young adults; and in his experience the climacteric cases usually did badly, going on to permanent cardio-vascular changes. In the second class the element disturbing the balance between work and power was disease of the heart, which might occur primarily in the valves or in its walls. Valvular disease, as a whole, was not an important cause of angina. Authorities agreed that pain was most often met with in disease of the aortic orifice. In Dr. Skerritt's experience the valvular lesion in which anginal symptoms were met with in a marked form was aortic regurgitation; but other observers were not of the same opinion, the late Dr. Walsh, for example, holding that aortic stenosis was the chief valvular cause of pain. Aortic stenosis, however (which might occur in all degrees), was the valvular lesion in which compensation by hypertrophy was most complete, maintaining the balance between work and power in such a way that heart distress was least likely to arise; while in aortic regurgitation the conditions were such as to tax the ventricle severely, causing marked dilatation and hypertrophy, and later degeneration in the cardiac wall—conditions most calculated to produce distress and pain of the heart. Degenerative changes in the heart wall were of by far the greatest importance in the causation of angina pectoris They were mostly secondary to narrowing of the coronary arteries by atheroma and calcification; and their effect was to weaken the heart as a muscle and to favour the occurrence of paralysis. When atheroma of the coronary arteries was marked the balance between heart-power and work was proportionately disturbed, so that the enfeebled organ could no longer carry on the work of the normal circulation without signs of distress. Much greater was this distress when the enfeebled heart was opposed by increased arterial tension, due to chronic renal disease or to the vascular degeneration of age. The type of cardiac action then indicated the danger which threatened; the notable feature of the pulse was its high tension; the short and toneless first sound was hurriedly followed by a ringing aortic sound, the ventricle being hardly able to hold its own until the strain was taken off by the closure of the aortic valves, and the patient plainly lived on the brink of a precipice. Various theories had been advanced as to the pathology of angina pectoris: that it was a neuralgia or a neuritis of the cardiac nerves and that it was due to the stretching of the nerves in the heart wall, and that it had its seat in the aorta and was caused by aortitis. Dr. Osler had drawn attention to the theory which Allan Burns advanced in 1809, that the condition was one of transient ischæmia of the heart muscle from disease or spasm of the coronary arteries. In "intermittent claudication," met with in the horse and also in man, transient paraplegia and spasm might follow exertion, owing to thrombosis of the abdominal aorta or the iliac arteries; the collateral circulation, ample when the limbs were at rest, being insufficient for active movement, relative ischæmia of muscle was induced with loss of power, which passed off with rest. A heart with calcified coronary arteries was in an analogous state and any extra exertion might cause ischæmia and spasm of the heart. Dr. Parkes Weber pointed out that the cramp pains and loss of power in muscle were both due to the accumulation of waste products and that they were more easily caused if the vascular supply was not enough to flush properly the muscle when in action; that the lymph fluid of all tissues at rest was alkaline; and that the activity of muscle was always accompanied by dilatation of its blood-vessels, brought about by the lessened alkalinity of the lymph fluid of the tissue during its activity, which relaxed their muscular coats. When the vessels were altered by disease the flushing of the tissues with blood while in action was interfered with, and hence the phenomena of paralysis and pain met with in angina pectoris. Time failed for the discussion of the treatment of cardiac pain except to point out that the balance between work and power might be restored (1) by increasing the power of the heart, or (2) by lessening its work. Practically the latter was usually the easier, and hence the diminution of vascular tension by means of the vaso-dilator remedies.—Dr. E. SYMES THOMPSON regretted that the paper had not dealt with the treatment of cardiac pain. He considered that functional disease more frequently gave rise to pain than organic lesions of the heart muscle or valves, and he thought that the heart was very liable to be put "out of gear" by emotional causes. In hysterical and hypochondriacal subjects the pain was often dependent upon causes which under other conditions of the individual gave rise to no pain.—Dr. A. E SANSOM said that the word "functional" as applied to these affections of the heart should be discarded, as it was probable that all had some organic origin. The vaso motor angina of Nothnagel gave rise rather to a sense of discomfort than to actual pain, and such conditions were the outcome of exertion. He considered that there were but few cases in which cardiac pain was persistent; the pain was due to dilatation of the right side of the heart, but the heart soon accommodated itself to its altered conditions and the pain passed off. He had seen great relief from cardiac pain obtained from regulated exercises He said that the greater number of cases of cardiac pain were due to neuralgia and to neuritis which might be of gouty origin. These he designated the extrinsic causes. He had for many years considered that true angina pectoris was always associated with thickened arteries, but he had somewhat altered his views on this point, for he had found that cases occurred in which there were neither hypertrophy of the heart nor thickening of the vessels. In one such patient there was a condition of anuria and probably also a contraction of the arterioles of the heart. The lesion of the valves most commonly associated with angina was aortic regurgitation and not aortic stenosis, and in aortic regurgitation there was a moment of intense strain for a very limited period of time on the heart wall. In regard to treatment he considered that phenacetin and antipyrin were to be preferred to opiates The use of vaso-dilators was as liable to abuse as were drugs with a sedative action. He had seen but little benefit from the use of nitrites.—Dr. F. DE HAVILLAND HALL related a case of a man between 50 and 60 years of age who had attacks of pain of the nature of angina pectoris accompanied by faintness. In this case nitro-glycerine did but little good, but the patient was benefited by a blue pill and a saline mixture. He continued to have attacks of pain for some years, but on one occasion he had a typical attack of hepatic colic, and from that time he suffered no more from the attacks of pain which had been considered anginal. He (Dr. Hall) thought that hepatic colic was not infrequently mistaken for angina pectoris.—The PRESIDENT said that it was a matter of great interest how far the pain was in the heart itself. In most cases in which there was disease of the heart the pain radiated over a considerable area and especially down the left arm. He pointed out that visceral disease gave rise to but little pain until the serous coat was affected. He thought that actual degeneration of the wall of the heart was minds of many to revolutionise, their ideas of the structural requirements for the treatment of active mental disease. Seclusion rooms and single rooms of all kinds, formerly regarded as indispensable for the excited and restless, were now found to be required only in a few exceptional cases. Almost all cases of acute insanity could be more efficiently treated in associated dormitories than in single rooms. Another recent development had brought wards for mental diseases more into line with ordinary hospital wards—that was the introduction of nursing by women into the male wards of asylums. Sir John Sibbald attached great importance to the circumstance that it tended to foster the feeling amongst the patients that they were from first to last regarded as suffering from illness which required medical treatment. As regarded the defects which existed in the present clinical teaching, there were two. The first was that the seats of teaching at Morningside and at Larbert were too distant from the medical schools. To make the teaching really efficient it ought to be given in the immediate neighbourhood of the schools, and in Germany every university now had its psychiatrical clinique close to the medical school. The example set by Germany was being followed by the other continental nations, and the United Kingdom might now be said to stand alone in being without such provision. The other defect was even more important. The clinical teaching should supply knowledge which would be useful to the student when he entered on general practice. But at present the only clinical teaching was given in lunatic asylums and consequently the only patients whom the student saw were those whom the general practitioner was not called upon to treat. Under present arrangements the ordinary medical student received no clinical teaching as to the treatment of the incipient and the transitory phases of mental disease. It was in the treatment of these phases of mental disease that he would in after life find himself in the presence of one of his most serious responsibilities, and it was only by the establishment of such wards as were proposed that he could be duly equipped for the discharge of these responsibilities, and Sir John Sibbald concluded by strongly urging the provision of such wards.

The MASTER OF POLWARTH, Chairman of the General Board of Lunacy, said that it had been the policy of the Board of Lunacy to see that not only the bare legal requirements were carried out, but also to encourage every new experiment which seemed likely to benefit those affected by mental disease. From this point of view the proposed scheme had a very particular interest, and he earnestly hoped that steps would be taken to carry it out and to keep Scotland in the forefront.

Sir JOHN BATTY TUKE said that for the last 20 years he had tried on every available occasion to lay before the public the advantages to be gained by the hospital treatment of acute mental diseases in the general hospitals of the country. The proposed scheme would reduce the number of lunatics and would exercise a great educational influence. The ratepayer was burdened by having to provide for the wants of the chronic lunatic, while little or nothing was done for the acutely diseased; nothing was done to avert the manufacture of the chronic lunatic. If general paralytics and epileptics were excluded and if they treated cases in the earlier stages they would get 70 per cent. of recoveries. The increase in insanity was not amongst the upper classes, where early and efficient treatment was obtained, but in the lower classes which could not get this. This proposal would tend to break down popular misconception by treating general and mental disease in the same hospital and might in time also affect legislation, especially in England. As regarded education, a general asylum was the worst possible place to learn about mental diseases and the early treatment of such cases by the general practitioner was of the greatest importance. He urged upon the managers of the Edinburgh Royal Infirmary the extreme importance of entertaining such a scheme as that proposed.

Dr. J. O. AFFLECK said that his experience as an infirmary physician had shown that frequently patients were brought suffering from mental disorders, due, perhaps, in many cases to bodily disease, and such cases would, he thought, be more beneficially treated in hospital wards than in an asylum. He admitted that there were serious practical difficulties, but he thought that these could be overcome by the managers.

Dr. J. S. CLOUSTON said that during the last two years 900 cases had been admitted to Morningside Asylum, and of these 80 were discharged recovered within from six to eight weeks and about 160 within two and a half months. These cases could have been treated in the infirmary and many patients who could be treated there could complete their convalescence at home. He thought that the parish council might arrange with the managers of the Royal Infirmary to pay, say, £50 for each patient sent to such wards and in this way save the cost of building two of the blocks at the new asylum. The ward treatment of such incipient cases would prevent the rates being increased by the prevention of such cases becoming chronic. Such a scheme would afford the poorer classes similar advantages to those which the rich now possessed and would give them the same chances of recovery. It was part of the original design of the infirmary to treat mental disease.

After Dr. ALEXANDER BRUCE and Dr. URQUHART had spoken, Mr. J. CARSWELL, adviser in lunacy to the Glasgow Parish Council, said that in Glasgow they hoped to have the first psychiatrical clinique in Scotland. In connexion with one of the poorhouse hospitals a mental block was being built for 50 patients, where they would be treated on hospital lines. Of 212 patients admitted last year 28 were removed to asylums, 10 died, 167 were discharged recovered, and seven remained under treatment at the end of the year.

Dr. G. R. WILSON of Mavisbank, Dr. SLOAN, and Dr. H. M. CHURCH having spoken, Sir JOHN BATTY TUKE finally moved :—

> That this meeting urges strongly on the managers of the Royal Infirmary the propriety of seriously considering the expediency of providing wards within or in the immediate vicinity of the institution for the treatment of incipient, transient, and recent cases of insanity.

The MASTER OF POLWARTH seconded this motion, which was adopted unanimously.

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# ROYAL ACADEMY OF MEDICINE IN IRELAND.

## SECTION OF OBSTETRICS.

### *Laparotomy for Ovarian Cystoma.—Induction of Labour followed by Enucleation of Tumour.*

A MEETING of this section was held on Jan. 7th, Dr. W. J. SMYLY being in the chair.

Dr. ALFRED J. SMITH read notes on Laparotomy for an Ovarian Cystoma which had ruptured six hours before removal, the specimen being also shown. Ovarian cysts, he said, might spontaneously rupture into the peritoneal cavity or into some neighbouring organs. The effect on the patient, of course, depended on the character of such a cyst and of its contents. Innocent ovarian tumours generally produced only trifling symptoms, some pain and profuse diuresis being the chief disturbance. Dr. Smith's case, however, showed that grave symptoms and profound shock might follow spontaneous rupture of a common multilocular glandular cystoma. In the result the patient made a good recovery.—Dr. SMYLY stated that he had found rupture of ovarian cysts to be caused by tapping, particularly if the operation had been repeated. In one case, after laparotomy had been performed, the contents of the cystoma escaped into the peritoneal cavity, and so much time was occupied by wiping the matter from the coils of intestines that the patient collapsed. Massage might also cause the rupture of such tumours. He had seen the daily practice of massage diminish an ovarian cystoma to the vanishing point—the tumour had been ruptured and its contents rubbed out of the sac. Even gentle palpation had caused rupture. In the Adelaide Hospital, whilst a tumour was being very carefully palpated it burst and he at once performed laparotomy. He found a malignant cystic tumour which he removed; the patient recovered from the operation well, but the disease recurred some months afterwards.

Dr. F. W. KIDD read notes on a case of Induction of Labour followed by Enucleation of a Fibroid Tumour in the Cervix. He had seen the patient when she was a little over four months pregnant and he thought that it would be quite possible to deliver her without operating provided—(1) that the tumour did not enlarge during further gestation; (2) that she came to Dublin again three months later; and (3) that he was successful in inducing labour. She returned at the appointed time, and as she had a large roomy pelvis and vagina it was resolved to induce labour and to attempt delivery. Labour was brought on by the introduction of a bougie between the membranes and the uterus. When she had been about 34 hours in or causing any injury to the presenting part. Before resorting to the use of the dilator the genitalia must be carefully disinfected, and during its application there must be complete narcosis.[1] 2 A complete Vertical Section of a Carcinomatous Uterus in the third month of pregnancy. The section, which was transparent, was that of a uterus removed in Professor Bumm's clinic in Halle. It had been treated with picric acid, alcohol, and colloidine, cut with a large microtome, and stained with carmine. 3. Professor Zweifel's new Broad Ligament Pressure Forceps for use in Vaginal and Abdominal Hysterectomy. 4 Some photographic card specimens of Ectopic Gestation, and specimens of Myoma with Deciduoma Malignum and Elephantiasis Vulvæ, taken in Professor Sanger's clinic in Prague.

The **PRESIDENT** then delivered his Inaugural Address. He pointed out the great advance that had been made in obstetrics since the beginning of the last century—an advance to be ascribed to the introduction of anæsthesia and antisepsis. Though no absolutely new instrument or operation had been devised, symphysiotomy had been revived, and unquestionably it had a future before it; the mortality from Cæsarean section was insignificant when compared with earlier results. Owing to improved knowledge of the mechanism of labour and the earlier recognition of pelvic deformities, operations involving the death of the fœtus might often be avoided by the use of axis traction forceps or by performing Cæsarean section before the patient had been exhausted by futile attempts at delivery. Eclampsia was the solitary exception in which little improvement had taken place in treatment Indiscriminate removal of the ovaries for all sorts of inflammatory trouble had ceased, but surgical interference was perfectly justifiable in cases in which complete rest—mental, bodily, and sexual—was impossible, even though condition together with local measures might effect a cure, provided the preservation of the reproductive powers was not essential. Non-interference in ovarian tumours, pelvic suppurations, and extra-uterine pregnancy meant certain ill-health and almost certain death In fibroid tumours the position was widely different; though pressure symptoms might render them dangerous they were rarely in themselves fatal. Rapidity in growth, recrudescence in later life, or degenerative changes were more important indications for interference than hæmorrhage. But a woman was not an appropriate subject for surgical interference merely because she had one or more fibroid tumours; operation for such might be expedient to add to her comfort, but it was seldom required for the saving of her life. Cancer of the uterus was enormously prevalent and was unhappily becoming more so. The vexed question of its ætiology did not as yet affect the question of its surgical treatment, in regard to which the desiderata were early recognition and some efficient method of dealing with the lymphatic glands and vessels No such method had yet been discovered, and in but few cases patients applied for treatment in hospitals in time for successful operation. So long as the uterus was of moderate size and fairly mobile, the bladder unaffected, and there was no evidence that the glands were involved, operation, especially when the disease was primary and limited to the fundus, was desirable, and vaginal hysterectomy was the most rapid and satisfactory method. But statistics had shown that when the disease was advanced life was not prolonged, neither was suffering alleviated, by operation, and interference should therefore be declined On the whole, the results of the surgical treatment of uterine cancer were by no means brilliant, and it seemed possible, and even likely, that the triumph of successfully combating this foe would be medical rather than surgical, by the discovery and destruction of its exciting cause

# EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

## *The Treatment and Teaching of Incipient and Transient Mental Disorders in the Royal Infirmary of Edinburgh.*

A SPECIAL meeting of this society was held on Feb 19th under the presidency of Professor T. R. FRASER to discuss "The Treatment and Teaching of Incipient and Transient Mental Disorders in the Royal Infirmary of Edinburgh." The meeting was a large and representative one, and most of the managers of the Royal Infirmary were present.

The **PRESIDENT**, in opening the discussion, said that there were two great problems to be faced: firstly, an accurate definition of those kinds of cases which could be most favourably treated in a hospital ward as contrasted with an asylum; and secondly, what accommodation would be required; how many cases could be so treated in this way and how far this could be carried out in the Royal Infirmary; to what extent could the financial resources of that institution be drawn upon; and how far such treatment would benefit patients or the general public.

**SIR JOHN SIBBALD** then read a paper, which he said had been written at the suggestion of Dr. T. S. Clouston and Dr. John Macpherson. The chief object was to elicit the views of the meeting in regard to what was deemed to be an important defect in the present arrangements for the treatment of mental disease and for giving clinical instruction in regard to it. He indicated that this defect might be best remedied by the establishment of wards in the Edinburgh Royal Infirmary for the treatment of incipient and transitory mental disorders Little needed to be said to show that the wards proposed would be useful from the charitable point of view, as patients in the early stages of mental disorder were at present almost neglected; general hospitals or lunatic asylums were the only institutions into which such cases might be received, but cases of mental disorder were usually excluded from the former and the cases which he had in view had not arrived at the stage which made relegation to an asylum either necessary or justifiable The considerations which seemed to show that hospital treatment in the Royal Infirmary would benefit such patients most might be summarised as follows: (1) in the treatment of this class of cases the special arrangements which distinguished asylums would not be essential; (2) everything which would suggest the idea of an asylum would be open to objection as tending to prevent patients and their friends from availing themselves of the benefits of these wards; (3) the wards would not differ appreciably from the wards of a general hospital; (4) it would be of the utmost importance that they should form part of an institution the purpose of which was recognised to be the cure of persons suffering from illness in order to stamp the wards with their true character in the eyes of the public; and (5) an out-patient department should, if possible, be attached to the wards, and such a department would be more resorted to by patients if it were connected with the infirmary than if it were connected with an institution devoted solely to the treatment of mental disease. It was necessary to bear in mind that it was not proposed that patients should be kept in these wards for long periods. Nor was it proposed that patients should be compulsorily detained in the wards, except in the sense that the wards of general hospitals sometimes were employed thus for patients suffering from ordinary diseases The limitation of the period of residence was important for this reason amongst others—that it helped to define the character of the cases to be treated. Sir John Sibbald would be satisfied with a limit of six weeks. Before the end of that time, if death or recovery had not taken place, it would in most cases have become evident that asylum treatment was inevitable In reference to the arrangements of wards the trend of medical opinion as to the treatment of mental disorders in the early stages must be kept in mind. An opinion had been steadily moving towards the adoption of methods resembling those employed in the treatment of bodily disease The main indications for treatment, especially for the incipient and transient phases of mental disorder, whether characterised by melancholic depression, maniacal excitement, mental confusion, or stupor, were to obtain repose, to induce cessation of effort both mental and bodily, and to restore the nutritive processes to healthy action. Such treatment as that advocated by Weir Mitchell for neurasthenia was equally applicable to the early stages of mental disorders and ought to be regarded as an essential element in the cure of a majority of such cases. Consideration of the improved system of nursing could not be omitted. This had developed *pari passu* with the bed treatment. One result of this had been to modify, and in the tendency, the disease was diagnosed as purely vaso-motor in origin. Within a year, however, a faint but distinct double aortic murmur was detected. The aortic regurgitation was never very great, as the left ventricle showed hardly any enlargement, nor was the pulse collapsing. The pulse *tracing* showed an anacrotic wave. The angina was much improved by rest and treatment, but the patient was never free from dyspeptic symptoms and persistent neuralgia of the right side of the head. Death occurred from heart failure five years from the onset of the symptoms. It was thought that there was sclerotic thickening of the aortic valves and orifices of the coronary arteries—probably of a syphilitic nature. Allusion was made to "pseudo-angina pectoris," an affection generally affecting women and showing itself before middle life and not as a rule fatal. The cases in which no coarse cardiac lesion could be detected often were, however, more grave than those in which there was obvious cardiac disease, for angina pectoris might be the only symptom of a serious condition, such as progressive occlusion of the coronary arteries.—The President, Dr. Handford, Dr. Tresidder, and Dr. F. H. Jacob discussed the subject.

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[1] Sulla Dilatazione Meccanica Immediata del Collo dell' Utero nel Campo Ostetrico, Annali di Ostetricia e Ginecologia, 1900 Contributo allo Studio della scelta del' intervento ginecologico nelle stenosi pelviche Dr. Giuseppe Zirolla, Assistente Clinica Ginecologica della Regia Universita di Genova, ibid, Sept. 12th, 1901. Contributo alla scelta dell' intervento nei Casi Gravi di Eclampsia, Dr. G. de Paoli, ibid.

**Cardiff Medical Society.** — The ordinary monthly meeting of this society was held in the lecture room of the Cardiff and County Public Health Laboratory on Feb. 6th, Dr. A. P. Fiddian being in the chair.—Mr. W. Hughes, the medical superintendent of the *Hamadryad* hospital ship, showed two cases of beri-beri from the "ship," and described the appearances, which were of the characteristic type. There were four cases in all at the *Hamadryad*.—Dr. E. Walford said that the cases arrived in the Norwegian barque *Collingwood,* which voyaged from Capetown to Rangoon, and thence to Queenstown and Cardiff. The disease appeared about six weeks after leaving Rangoon. It was suggested that it was due to shutting ports and heating the forecastle when the ship got into colder climates. The symptoms very much resembled those produced by arsenical poisoning. Arsenic had been found in the intestinal organs in some cases.—Dr. Swale Vincent suggested that the blood should be tested for cholin, set free by the degeneration of the nervous tissues.—Dr. W. G. Savage stated that his examination of the ship's provisions for arsenic had given a negative result. —Mr. W. B. C. Treasure described two cases which he had seen on a Chinese ship two months previously, in each of which the leading symptom was œdema.—Dr Savage read a paper on the Value of the Leucocyte Count and the Method of their Enumeration. He gave a brief account of the number and varieties of the leucocytes in health and disease and pointed out how their examination and the determination of the relative proportions of the different varieties were of great value in diagnosis and in prognosis. The conditions leading to an increase of white corpuscles in the blood were considered and the clinical significance of the leucocyte changes was insisted on. For the enumeration of the leucocytes the method advocated was Stengel's, somewhat modified, by means of which the red and white corpuscles could be counted in the same blood preparation. Full details were given.—Dr. Savage then read a paper entitled "Notes on the Serum Reaction of Typhoid Fever." The nature of the reaction was explained and the method of production of the agglutinating substances was touched upon. The microscopic and sedimentation methods of performing the reaction were demonstrated and the chief practical considerations, such as when the reaction first develops, its trustworthiness, possible fallacies, and causes of error, were explained.—A discussion followed each of these papers.—The meeting then adjourned to the bacteriological laboratory where an interesting exhibition of bacteriological, microscopical, and pathological specimens, arranged by Dr. Mitchell Stevens and Dr. Savage, was inspected.

**Plaistow and Canning Town Medical Society.** —A meeting of this society was held on Feb. 12th.—The Annual Report, which showed the steady and continued progress of the society, was read and passed.—Dr. T. D. Lister read a paper on Some Disorders of Adolescence in Women. He referred briefly to the physiology of growth and development in the woman and gave a list of the ailments which were most commonly found at this age. Speaking of chlorosis and the secondary anæmias, he urged the importance of differentiating them. He drew attention to the anæmia of overcrowding, both in dwellings and employments. Anæmia was frequently due to an excess of developmental energy beyond the hæmogenetic power of the patient. In the use of drugs iron was essential, and he considered that cow's milk was a very valuable restorative and stimulus to cell changes on account of its earthy salts, apart from its action as a food. He ascribed no value to alcoholic drinks containing traces of iron, nor any advantage to organic compounds of iron, which were in his opinion inferior to properly selected iron salts. In heart disease symptoms and not physical signs were the indications for treatment. Hysterical patients were often spoilt children. In neurasthenia, which was often akin to developmental anæmia, nerve stimulants should be avoided. Constipation was most often due to neglect and the abuse of purgatives was condemned. Dyspepsia was chiefly hyperacid or atonic. Hæmatemesis arose from vascular malnutrition in chlorosis as well as from gastric ulcer.—A short discussion followed.—Various patients were shown by Mr. Jordan Harvey and Dr. E. Hay. —The following gentlemen were elected office-bearers for the year.—President: Mr. Percy Rose. Vice-President: Mr. H. S. Beadles. Honorary treasurer: Dr. W. C. Taylor. Honorary secretaries: Dr. E. P. McLoughlin and Dr. Hay.

**Glasgow Southern Medical Society.**—A meeting of this society was held on Feb 20th, Dr. John Stewart, the President, being in the chair.—Dr. E. A. Gibson read a paper on Notes of Three Cases of Abdominal Section and showed Specimens. The cases were (1) an interstitial fibroid; (2) a large fibroid with accessory growths; and (3) dilated and hypertrophied Fallopian tubes. In the course of his notes on these three cases Dr. Gibson emphasised the following points as worthy of special mention. All the cases happened in unmarried women; in each the onset was sudden, with symptoms pointing to obstruction and retention of urine and absence in each of hæmorrhage notwithstanding the large size of the uterine cavity.—Dr. Andrew Wilson read a note on the Prevention and Treatment of Conjunctivitis in the New-born. In introducing the subject Dr. Wilson briefly reviewed the history of the disease and referred to the detection of the *gonococcus* by staining with methylene-blue. He detailed in a thorough manner the steps to be followed in the way of prophylaxis. The disease having been acquired the most important point in the treatment was the thorough cleansing of the eyes every hour, a matter of more moment than the use of any special antiseptic or astringent. If under daily direct medical supervision he recommended the daily application of 20 per cent solution of protargol, but if the patient was seen at the dispensary he gave a 10 per cent. solution to be dropped into the eyes by the mother three times daily. He thought that protargol had greater penetrating power than nitrate of silver and did not stain the lids even when used continuously. Dr. Wilson also indicated the importance of notification of such cases of disease of the eye, recommending it as a practical measure of which a modified form obtains in Germany.—Both papers gave rise to interesting discussions and at the close Dr. Gibson and Dr. Wilson received the thanks of the society for their contributions.

**Forfarshire Medical Association.**—A meeting of this society was held on Feb. 6th, Professor D. MacEwan, the President, being in the chair.—The President showed a girl on whom he had performed Astragalectomy for neglected Talipes Equinus with good results. He also gave details of a case of Extroversion of the Bladder which he had treated with lateral flaps with the result that the upper opening formed above the flaps was now practically closed. The bladder now had an anterior wall and the urine was escaping through an opening at the lower part.—Professor A. M. Stalker read notes of two cases showing Peculiar Mental Symptoms of Sudden Onset—loss of memory followed by coma, terminating in recovery, but with absolute inability to recall anything since the onset of the attack. He was inclined to the view that these and similar instances which he had seen arose from toxæmia. There was in neither of these cases any history of accident or any albuminuria.—Dr. A. R. Urquhart (Perth) referred to the medico-legal aspect of such cases and mentioned two cases of imposture resembling these. He was of opinion that one of Professor Stalker's cases might have been due to premature senility.—Dr. Urquhart then read a paper on Status Epilepticus, in which he stated that during 20 years at Murray's Asylum, Perth, out of 800 cases there had only been five deaths from epilepsy and only three which could be considered to be true cases of status epilepticus. One of the patients was found after death to labour the os was dilated sufficiently to enable two fingers to pass easily through it. She was then examined with the whole hand in the vagina under an anæsthetic; it was found that the tumour had invaded more tissue than was at first realised, so that the cervix could not possibly dilate sufficiently. Enucleation was done the same day under chloroform, the cavity left by the tumour being partly stitched and then packed with iodoform gauze. About seven hours after the operation all uterine pains and contractions ceased, having lasted between 40 and 48 hours, and did not return for 10 days, the os in the meantime closing very quickly, so that a finger could not be introduced. Owing to the packing of the cavity (where the tumours had been) being left off too soon it filled again with blood-clot and the discharge from it became distinctly fœtid; this occasioned renewed packing and washing out. About 12 hours after the baby was born the patient had a severe rigor and her temperature went up to 106·4° F.; this came down gradually in two or three days, the uterus remaining well contracted and free from pain, the lochia remaining of good quantity and colour and free from any taint. She suckled her child and went home to the country with it well within a month of its birth. Dr. Kidd said that he would never undertake such an operation except in a properly equipped hospital, whether private or public, and he would attempt the enucleation before resorting to the induction of labour.—Dr. SMYLY said that tumours of the cervix were very uncommon.

Various specimens were shown by Mr. A. J. HORNE, Dr. R. D. PUREFOY, and others.

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**LARYNGOLOGICAL SOCIETY OF LONDON.**—A meeting of this society was held on Feb. 7th, Mr. E. Cresswell Baber, the President, being in the chair.—Mr. R. Lake showed a case of Tuberculosis of the Larynx which had been previously under treatment in 1898. The patient had returned three weeks ago with the thyroid cartilage enormously thickened externally and rather hard. Internally there was a conical projection forwards of the right ventricular band. The opinion of the society was invited as to the nature of the thyroid swelling.—Dr. J. Dundas Grant considered it to be a case of tuberculous perichondritis and he advised that the swelling should be opened and explored. —Mr. L. A Lawrence showed a case of Rhinorrhœa of some years' duration in a woman, aged 36 years. There were deflection of the septum to the right and polypoid degeneration of both middle turbinals. The rhinorrhœa was absent only when the patient had a cold. Both local and internal treatment had been adopted for some time without avail.—Several members suggested that in this particular case the proper treatment would be to remove the polypi and possibly the anterior end of the middle turbinals. —Mr. F. G. Harvey showed a case of Lupus Nasi of many years' duration in a man —Dr. H. Lambert Lack showed a case of Partial Membranous Occlusion of the Right Posterior Choana. There existed, also, a perforation of the cartilaginous septum.—The President and others pointed out that the membrane passed upwards from the Eustachian cushion and was posterior to the choana and they considered it to be the result of cicatricial adhesions. The origin of the scarring was attributed by some to congenital syphilis and by others to adenoids.—Dr. Lack also showed a case of marked Chronic Œdema of the Right Arytenoid region in a man, aged 40 years, who had been under anti-syphilitic treatment for three months without benefit. The case was brought forward for diagnosis.—Mr. W. G Spencer excluded malignant disease and concluded that the case was probably syphilitic.—Dr. StClair Thomson suggested that the case might eventually prove to be tuberculous.—Dr. Atwood Thorne showed a case of Syphilitic Ulceration of the Soft Palate occurring during a course of anti-syphilitic treatment The patient was a man, aged 23 years, who contracted syphilis in May, 1901, and had been continuously treated with mercury and iodide of potassium for eight months His general health was very bad. In spite of treatment the uvula and part of the soft palate had been destroyed and ulceration had occurred on the posterior wall of the pharynx —Opinion was divided as to whether it was syphilis alone or a mixed case of syphilis and tubercle. —Dr. Thorne stated that there was distinct evidence of phthisis on physical examination, but no bacilli had been found in the sputum —Dr H. J. Davis showed (1) a case of Tertiary Syphilis of the Pharynx and Larynx in which the voice was produced by means of the ventricular bands; and (2) a case of Laryngeal Tuberculosis with Granulation Tissue between the Cords.—Mr. E. B. Waggett showed a case of Myeloma of the Nose in a woman, aged 30 years. There had been rapidly increasing nasal obstruction since June, 1901, with frequent epistaxis. Rouge's operation was performed and a large tumour was removed. Healing within the nose was rapid and the process was accompanied by so marked a diminution in the size of the cavity that Mr. Waggett asked whether this might be due to recurrence of the growth. It was thought that at present there were no definite signs of recurrence.—Dr. L. H. Pegler showed a case of Abeyance of Nasal Breathing in a female, aged 23 years, in whom the nasal passages were free. The patient also suffered from hysterical aphonia and rhinalgia. The patient's speech though aphonic was "clipped"—a defect known as "rhinolalia clausa." Dr. Pegler thought that both the nasal breathing and resonance were shut off by a spasmodic contraction of the soft palate and with this opinion Dr. Scanes Spicer agreed.—Dr. Pegler also showed a case of Abeyance of Nasal Breathing in which the nasal passages were free and the palate and fauces were hyperæsthetic. In this case also the patient had difficulties in pronouncing the letters *m* and *n*. Dr. Pegler had closed the patient's mouth with his hand, in spite of which she refused to breathe until cyanosis had set in, but finally she respired through the nose. Suspecting palatal spasm, he had fixed the palate by means of a tape passed through the nose and out of the mouth and the patient had been thus enabled to breathe comfortably through the nose with closed mouth —Dr. F. W. Bennett reported that in the case of progressive ulceration of the nose which he had shown at the last meeting he had explored the maxillary antra but had found no pus.—Mr. Hunter F. Tod showed a case of Œdema of the Larynx with thickening of the Palate, Uvula, and Fauces for diagnosis occurring in a boy, aged 10 years. There were no signs of pulmonary phthisis and no evidences of syphilis. Mr. Tod was supported by the opinions of the members present in his belief that the diagnosis lay between tuberculous laryngitis and congenital syphilis —Mr. Waggett showed a case of Ethmoidal Suppuration in a man who complained of excessive pain. The patient had been under treatment for many years, and though the intra-nasal condition was now satisfactory pain persisted. Mr. Waggett suggested that the pain was of neurotic origin, and with this opinion the members agreed.—Dr. Grant showed (1) a case of Subjective Nasal Obstruction which he considered to be due to anæsthesia of the nasal mucous membrane; and (2) some Glass Tubes specially constructed for the Inhalation of Medicinal Powders for the patient's own use.

**NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.**—A meeting of this society was held on Feb. 5th, Dr. E. C. Kingdon, the President, being in the chair.—Dr. J. Vincent Shaw (Ilkeston) read notes on a case of Lymphadenoma (?) and showed the patient who was a man, aged 33 years. He had been in good health until two years ago when he developed enlarged glands in the neck which grew rapidly and recurred after removal —The case was discussed by the President, Mr. W. M. Willis, Mr. R. G Hogarth, Dr. W. Hunter, Mr. J. Mackie, and Dr. W. E. Tresidder.—Dr. H. Handford showed a case of Hereditary Diabetes in a boy, aged 12 years, whose grandfather, father, paternal uncle and aunt had suffered from diabetes. Under regulated diet and opium the sugar very rapidly disappeared and the quantity of urine became normal. Two or three baked potatoes were taken daily with benefit, but on repeated occasions one ounce of toasted bread at once caused the reappearance of sugar.—Dr. Handford also read a short paper on the Value of Exercise in Heart Diseases. Exercise, he said, did good rather than harm if the pulse did not remain quickened after two or three hours' rest, if the taking of food was not impaired, or sleep disturbed, and if no undue fatigue remained next day. In many forms of heart disease, especially non-progressive valvular lesions in young persons with full compensation, exercises such as walking, riding, swimming, cricket, and cycling could be practised with moderation to the advantage of the patient. Cases were instanced in which considerable physical exertion had been taken for years with no apparent ill result.—The President, Dr. C. H Cattle, Mr. Hogarth, and D Mutch discussed the subject.—Dr. Cattle related t a woman who, at the age of 47 years, began to paroxysmal cardiac pain (angina pectoris) Considering her age, sex, and a certain far as possible rigidly excluded before the diagnosis of functional cardiac disease is made. It must be borne in mind that the most important signs of organic disease of the heart may be found in other organs. Dilatation and hypertrophy of the heart may follow upon purely functional disease and so change the nature of the case into one of organic disease. On the other hand, functional disturbance may supervene upon organic disease and may thus considerably aggravate the patient's condition.

In the account of the Management of cases of Functional Disease of the Heart the author says that the prophylaxis or avoidance of possible causes of the disease must be attended to. Sanatorium treatment is often to be recommended. Exercise-treatment, gymnastics, and massage are sometimes valuable, but they must not be overdone. The personal influence of the medical attendant is important Digitalis is suitable in a few cases; Nauheim should be avoided in cases presenting excitement. Health resorts more than 1000 metres above the sea and seaside places are not to be recommended.

The second or special part of the work begins with an account of the Functional Disturbances involving the Heart Muscle itself and Acute Dilatation. They are largely due to overstrain and present the symptoms of slight cardiac dilatation. The effects upon the heart of such agents as tobacco, coffee, tea, and the like in excess are next described. In the slighter forms of tobacco intoxication the heart may drop a beat and the intermission produce in the patient a most unpleasant sensation; in the more severe cases attacks may occur resembling angina pectoris. In the section on Functional Derangements of the Heart in the Acute Illnesses a word of caution is uttered as regards the use of antipyretic drugs, and the value of the application of cold, including baths and packs, in stimulating the heart is noted.

In the description of Functional Cardiac Affections occurring in Various Diseases hardly adequate space is given under Anæmia to the differential diagnosis of the functional murmurs, for occasionally considerable difficulty may arise in excluding organic disease of the heart in some cases of anæmia There is an interesting chapter on Organic Disease of the Extracardial Nerves. The urgent symptoms sometimes met with in acute diseases like diphtheria and due to the involvement of the vagus nerves are discussed here. Dr. Hoffmann describes at some length neurasthenia of the heart, the symptoms of which he divides into irritative and paralytic. There may be abnormal sensations in the cardiac region and the pulse may become frequent and even irregular. The diagnosis is said not to be difficult, at any rate when the patient is obviously neurasthenical. In a paragraph on Megrim a case is related in which an attack of tachycardia took the place of an ordinary attack of megrim. In the neuroses following injury the symptoms are said to resemble those of neurasthenia of the heart. The author seems disposed to attach some importance to Maunkopf's symptom in the recognition of a genuine case as against simulation.

In the section dealing with Reflex Disturbances of the Heart the chief attention is naturally given to those which are associated with gastric disease, both functional and organic. There may be abnormal sensations in the cardiac region, also increased rapidity of the heart's action, intermission, and irregularity. The diagnosis must be made with caution in people of advanced years, as, indeed, in all functional derangements of the heart. Adams-Stokes's disease, paroxysmal tachycardia, and Graves's disease are described in the section headed Diseases with a Well-defined Symptom-complex. In the last section the so-called Vascular Neuroses are discussed, such as pulsation of the abdominal aorta, eryphobia (blushing), erythromelalgia, Raynaud's disease, and acroparæsthesia, as well as Erb's angio-sclerotic intermittent dysbasia and intermittent joint effusions.

Dr. Hoffmann has certainly succeeded in giving in a comparatively small compass an interesting and excellent account of a subject to which well-recognised writers on cardiac disease have not always allotted sufficient space. The importance of functional disease of the heart will hardly be questioned, not only on account of its frequency, but also on account of the distress which it causes to those who suffer from it. The author's work constitutes a valuable guide to a knowledge of functional disease of the heart written by one who is obviously deeply read and practically versed in the subject.

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*A Manual of the Practice of Medicine.* By FREDERICK TAYLOR, M.D, F.R C.P. Lond., Senior Physician to, and Lecturer on Medicine at, Guy's Hospital, Consulting Physician to the Evelina Hospital for Sick Children. London: J. & A. Churchill. 1901. Pp. 1028. Price 16*s*.

THE first edition of this work was published in 1890; the volume now before us is the sixth edition. The success of the text-book, therefore, has been undoubted and we need say but few words as to its general characteristics. The aim of the author has been to offer a short yet complete account of the present state of medical practice which may be useful both to students and to practitioners. In this endeavour Dr. Taylor has been eminently successful. Most attention has been devoted to the description of symptoms, to diagnosis, and to prognosis and treatment. Etiology and pathology are also, of course, considered.

The present edition has been brought fully up to date by a careful revision of the text throughout, by re-writing some of the subjects, by the addition of some subjects not hitherto noticed, and by the insertion of some new illustrations. The subjects which have been most fully revised are malaria, plague, encephalitis, leukæmia, and the examination of the blood. The new matter includes the subjects of myasthenia gravis, paramyoclonus multiplex, acroparæsthesia and acrodactylia, cholecystitis, and polyorromenitis. The last-named term is given to the condition of simultaneous inflammation of two or more of the four great serous membranes, pericardium, pleuræ, and peritoneum—an association to which attention has been especially called by Italian writers. Some of the less common diseases of the skin are also noticed, such as adenoma sebaceum, keratosis, and pityriasis rosea.

Dr. Taylor has followed the arrangement now adopted in most modern text-books by transferring acute rheumatism and gonorrhœal synovitis from the group of diseases of the joints to the section of infectious diseases. This is in accordance with the views now generally held. We cordially endorse the author's remarks as to the loose way in which the term "rheumatic" is employed. Such terms as "rheumatic facial paralysis," "syphilitic rheumatism," and "rheumatic gout" should be excluded from a medical vocabulary, and acute rheumatism or rheumatic fever should be regarded as a definite disease, and as far as possible the term "rheumatic" should be limited to such lesions as can be shown to be directly associated with it.

We have no doubt that this edition of Dr. Taylor's book will attain the same success as that which attended its predecessors.

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*A Laboratory Course in Bacteriology for the Use of Medical, Agricultural, and Industrial Students.* By FREDERIC P. GORHAM, A.M., Associate Professor of Biology, Brown University, Bacteriologist, Health Department, Providence, R I With 97 Illustrations London and Philadelphia W. B. Saunders and Co. 1901 Pp. 192. Price 5*s*. net.

THE present work, which is described as a laboratory course, is also apparently intended to serve as a guide to the practical details of laboratory work. The author, wisely recognising that it is not the medical student alone who is now interested in bacteriology, has made have a stricture of the colon, which supported the toxæmic theory of insanity. He considered venesection to be of value in some cases. Hyoscine and morphia were not without danger and bromides only controlled the fits.—Dr. R. C. Buist, Dr. C. Kerr, and Professor Stalker discussed the paper.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The fifth meeting of the session was held on Feb. 12th, Dr. Barclay J. Baron being in the chair.—Dr. A. Ogilvy showed a patient with Double Macular Coloboma with persistent hyaloid arteries.—Dr. C. H. Walker spoke on the condition.—Dr. G. Parker showed a patient suffering from Chromidrosis.—Dr. P. W. Williams, Dr. H. E. Stack, and Dr. Ogilvy mentioned similar cases.—Dr. J. Odery Symes showed two brothers suffering from Idiopathic Muscular Atrophy.—Mr. W. H. Harsant showed a specimen of Abscess of the Cerebellum following Otitic Disease.—Mr. J. Paul Bush, C.M.G., Dr. H. Waldo, Dr. F. H. Edgeworth, and Dr. J. L. Firth discussed the specimen.—Mr. Bush showed a Gangrenous Ovary and Tube (due to torsion) that he had successfully removed from the sac of an inguinal hernia.—Mr. W. Roger Williams and Dr. W. C. Swayne spoke on the subject.—Dr. Parker showed a Tumour of the Brain from a patient who had suffered from ear disease.—Mr. Harsant, Dr. Firth, and Dr. Williams commented on the specimen.—Dr. E. W. H. Groves read a paper on Fibroid of the Uterus removed two years after Double Ovariotomy. The specimen was shown.—Dr. Swayne, Mr. Williams, Mr. Bush, and Dr. W. K. Wills remarked on the case.—Dr. B. M. H. Rogers read a paper on a case of Cirrhosis of the Liver in a child which he considered was due to beer-drinking. The specimen was shown.—Dr. T. Fisher, Dr. Stack, Dr. Waldo, Mr. Bush, Mr. Harsant, Dr. Firth, and Mr. J. Handcocke Wathen discussed the paper.

KIDDERMINSTER MEDICAL SOCIETY.—A meeting of this society was held on Feb. 7th, Mr. J. Lionel Stretton, the President, being in the chair.—The President showed: (1) A woman, aged 22 years, whose Elbow-joint he had Excised for Tuberculous Disease five years ago; (2) a girl, aged 22 years, whose Eleventh and Twelfth Ribs approached the Linea Semilunaris on Each Side; (3) a Malignant Kidney removed through the loin from a woman, aged 51 years; (4) the Head of a Femur removed by Amputation at the Hip-joint for Tuberculous Disease, from a lad, aged 17 years; and (5) a Malignant Mass in the Mesentery, with 12 inches of Intestine attached, removed from a man, aged 68 years.—Mr. W. H. Moore showed: (1) A Uterus which he had removed by the Intra-vaginal Method for Malignant Disease, the patient making a good recovery; (2) a Uterus showing Perforation through the Anterior Wall, the result of an attempt that had been made to produce abortion, death following from suppurative peritonitis; and (3) an Extra-uterine Fœtation showing Fœtus and Ruptured Tube.—Dr. O. C. P. Evans showed a girl, aged 15 years, upon whom he had operated for Cancrum Oris by splitting the cheek and scraping away the disease. She made a good recovery and there was likely to be little disfigurement.—Mr. A. C. Oldham read a paper on Rheumatism and a discussion followed.

ÆSCULAPIAN SOCIETY OF LONDON.—A meeting of this society was held on Feb. 21st, Dr. Arthur T. Davies, the President, being in the chair.—Mr. T. O. Goodchild showed a man who suffered from three attacks of severe Pain in the Right Iliac Region accompanied by the passing of copious coffee-coloured stools. Relapsing colitis was diagnosed as the cause of the symptoms.—The President showed a specimen of Left Cerebellar Hæmorrhage from a man, aged 63 years, who died in four hours from the initial symptom, headache. The left face and right extremities were paralysed. In a previous paper the President had pointed out that hæmorrhage occurred in the left cerebellar lobe in 33 out of 46 cases that he had collected.—Dr. Alexander Morison read a paper on Cardiac Inadequacy due to a disproportion in muscle bulk to the pumping needs of the organism. The paper was based on two carefully recorded cases of obvious heart failure in (1) an ex-policeman and (2) an ex-soldier. The hearts were found after death to be below the average size and weight and to contain an excess of intermuscular fibrous tissue. Lantern slides were shown to illustrate the heart failure by the sphygmogram and the fibrous overgrowth of the heart.

BIRKENHEAD MEDICAL SOCIETY.—A meeting of this society was held on Feb. 14th, Dr. J. Pinkerton, the President, being in the chair.—Dr. A. C. Ransome read a short note on the question of the Voluntary Notification of Phthisis. He considered that it was the duty of the medical profession to endeavour to prevent disease and not to wait for its occurrence before taking action. As phthisis was an infectious disease he advised that voluntary notification should be adopted. If this were done the houses of poor phthisical patients might be put into a more sanitary condition by the health authorities, and so the conditions under which the patients had to live would be improved. Voluntary notification had been adopted in Liverpool and Manchester with good results.—The President, Mr. F. Vacher, Mr. S. H. N. Harrington, Dr. J. H. Dixon, Dr. W. R. Floyd, and Dr. E. H. Brien spoke in the discussion which followed.—A discussion, adjourned from a previous meeting, on Motor-cars for Medical Men followed.—Mr. Wilkinson, in speaking of petrol cars, advocated them for the ease with which they could be got ready for taking out and also for the fact that they were much cheaper to run than steam cars.—Dr. Brien favoured steam cars, but admitted that they were more expensive in use than petrol cars.

# Reviews and Notices of Books.

*Pathologie und Therapie der Herzneurosen und der Functionellen Kreislaufstörungen.* (*Pathology and Treatment of the Neuroses and Functional Derangements of the Heart.*) Von Dr. AUGUST HOFFMANN in Düsseldorf. Wiesbaden: J. F. Bergmann. 1901. 8vo, pp. 307. Price 7s. 9d.

DR. HOFFMANN divides his subject into a general and a special part. In the former he discusses from a general standpoint the symptomatology of functional cardiac disease, the auscultatory and percussion signs, the relation of functional to organic disease, and the prognosis and treatment, in addition to the physiological and anatomical facts necessary to a proper understanding of the subject. The symptoms include those due to motor and sensory disturbances in the heart. Pain referred to the heart falls under the sensory group and here an interesting description will be found of pseudo-angina pectoris. It is to be distinguished, according to the author, from the genuine angina by its occurrence after psychical excitement but never after bodily exertion. The attack takes place during the waking state and not during sleep unless dreams be the cause of it. In the false form the patient is excited and cries out, and the attack may end in laughing or crying, whereas the mental condition in the true angina is one of silent and often intense anguish. The actual cause of pseudo-angina pectoris may lie in a spasm of the arteries of the heart. Among the motor symptoms alterations in the cardiac rhythm come under consideration. An elaborate and extensive table after Larcena of the causes of tachycardia will be found here. Some have divided bradycardia into a temporary and a permanent form, but this division does not commend itself to the author, since attacks of temporary bradycardia consist in the great majority of cases of merely an aggravation in attacks of a bradycardia permanently present. Something more might have been added to the discussion of bradycardia from the point of view of prognosis. The subject of arhythmia is fully dealt with, including its mode of production. Allorhythmia is to be distinguished from arhythmia, since in the former the departure from the normal rhythm follows in a regular sequence, as in pulsus bigeminus, alternans, and paradoxus.

Dr. Hoffmann quotes M. Huchard's opinion that attacks of arhythmia beginning and ending suddenly are characteristic of arterio-sclerosis. If this is so it would seem very probable that an actual alteration in the myocardium really lies at the bottom of these attacks, and this illustrates the difficulty that may exist in drawing the line between functional and organic disease. This latter subject is dwelt upon by the author in the next section, and he rather lays much stress on the fact that organic disease must

*Hospital Sketches.* By Lucas Galen. London: Grant Richards. 1902. Pp. 153 Price 1s.—These little sketches bear the stamp of truth, as anybody will recognise who has ever worked in a hospital out-patient room. "Lucas Galen" can write English and he has a keen eye for the humorous and, we may add, for the pathetic. Both these qualities are daily to be met with in the out-patient room. The sketches entitled "Placens Uxor" and "Obiter Dictum" will appeal forcibly to many of our readers, but perhaps the gem of the whole collection is "The School Board for London and Medical Certificates." We commend this sketch to the notice of Dr. James Kerr who is about to enter on the arduous duties of medical officer to the London School Board. Dr. Kerr will then see how the Board regards a medical certificate signed by a duly-qualified medical man. Another excellent sketch is "The Conclusion of the Whole Matter." We hope to hear more from "Lucas Galen."

*Brain: a Journal of Neurology. General Index for Volumes I. to XXIII.*—In the spring of 1901 the Council of the Neurological Society decided to publish an index to the first 23 volumes of *Brain* which had been prepared up to the end of the year 1900. A small sub-committee, consisting of the treasurer, the two secretaries, and Dr. R. Percy Smith (the editor), was formed, and the duty of seeing the index through the press devolved on Dr. Percy Smith who was assisted by Dr. W. S. Colman (the senior secretary). The correction of proofs was, we can well understand, an arduous work, as, to make such a book of reference as an index to *Brain* of any value, it is absolutely necessary that every name and title should be verified by reference to the original papers. This has been done throughout the whole of the 23 volumes, representing a large amount of unremitting and unremunerated time and labour for which the whole of the medical profession ought to be really grateful. The index is arranged in two parts—an index of authors and an index of subjects. Included in the index of authors are not only the names of the writers of original papers but also those of authors of books or papers which have been reviewed in *Brain*. In the index of subjects Dr. Percy Smith and Dr. Colman found themselves in the difficulty which every editor of medical and scientific works has found himself in of late: a nomenclature adopted at different periods with regard to the same subject allows that subject to be indexed under two or more headings, while the titles of many of the papers are so complex as to involve insertion under several headings. We congratulate the Neurological Society on placing in the hands of the medical profession a guide book to the storehouse of learning and knowledge contained in the back volumes of *Brain*.

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## JOURNALS AND MAGAZINES.

*The Library.*—The current number of this quarterly journal contains a very interesting article by Mr. Campbell Dodgson upon "Early Pestblätter." The article is a review of a series of reproductions of early, popular, devotional plague pictures with a descriptive text by Herr W. L Schreiber, published at Strasburg by Messrs. Heitz and Mundel. The chief saints invoked against the plague were the Blessed Virgin, St. Antony, St. Sebastian, and St. Roch The typically medical saints—namely, St Cosmas, St Damian, and St. Pantelemon—do not seem to have been specially invoked against the plague, but in Western Europe these saints were somewhat local celebrities. The cultus of St. Pantelemon (Pantaleone) was, we fancy, exclusively confined to Venice, and St. Cosmas and St. Damian were not much known outside Northern Italy—especially Florence. At first sight it seems difficult to see the connexion between St. Sebastian and the plague. However, as Mr. Dodgson points out, arrows are symbolical of plague, and St. Sebastian was martyred by being shot at with arrows. True, he recovered from the arrow wounds, having been shot at by experts who avoided the vital parts. Appearing more dead than alive before Diocletian, to remonstrate against his tyranny, he was taken out and clubbed to death. Plague, of course, was *plaga*, the blow *par excellence*, and a better quotation as exemplifying the verbal connexion of arrows and "plague" than that from Psalm xci., as quoted by Mr. Dodgson, is afforded by both the LXX. and Vulgate versions of Psalm lxiii., v. 8 (in the Authorised Version, Psalm lxiv., v. 7). The Vulgate runs: "Sagittæ parvulorum factae sunt plagæ eorum." The article is illustrated by a print of St. Roch—"Le très glorieux amy de Dieux, Monseigneur Saint Roch, vray preservateur de la peste," to give him his French title. The plague bubo, perhaps from motives of delicacy or possibly from artistic reasons, is represented at the junction of the lower and middle thirds of the thigh. Of the other articles, "English Book Illustrations of To-day" deals with "Decorative Illustrators." We suppose that "decorative" is used in the sense of "imaginative," but somehow none of the examples reproduced moves us like the work of Sandys. What a magnificent piece of work is the drawing in *Once a Week* to "Yet once more on the organ play," even though the organ pipes are reversed. The article is, however, only the first of a series, and we hope that in the coming numbers some examples will be given of the work of H. J. Ford and J. D. Batten. Wash drawings like those of J. R. Weguelin, who is certainly a decorative illustrator, could hardly be reproduced in *The Library* unless printed on a special paper.

*The Quarterly Journal of Microscopical Science.* Edited by E. Ray Lankester, F.R.S., Adam Sedgwick, F.R.S., W. F. R. Weldon, F.R S., and Sydney J. Hickson, F.R S. With lithographic plates and engravings on wood. London: J. and A. Churchill 1902. New series, No. 179. Vol. xlv., part 3 Pp. 167. Price 10s.—The contents of this part are—1. Dendrocometes Paradoxus. Part 1. Conjugation, by Sydney J. Hickson, D.Sc., F.R S., assisted by J. T. Wadsworth. With two plates. This species of the class acinetaria is obtainable at all times of the year from the commonest of crustaceans, the gammarus pulex, on the gills of which it is constantly to be found. Dr. Hickson states that, in his opinion, in the conjugation of Dendrocometes paradoxus there is a mixing or a shuffling of the molecules of all the essential plasms of the body—namely, of the micro-nucleoplasm, of the mega-nucleoplasm, and of the cytoplasm. 2. On the Oviparous Species of Onychophora, by Arthur Dendy, D.Sc , F.L.S., with four plates which exhibit the appearances presented by the living animals and their anatomica characters. 3 A New and Annectant Type of Chilopod by R J. Pocock, with a plate which depicts the structural features of Craterostigmus Tasmanianus. 4. The Trypanosoma Brucii, the organism found in nagana or tse-tse fly disease. Inoculated mice and rats die rapidly and a flagellated organism is found in great numbers in their blood. It proves fatal to guinea-pigs, rabbits, goats, dogs, and cats, affecting especially the spleen and lymphatic glands as well as being abundant in the blood. It kills the animals at periods varying from five days to 18 weeks. It is a flagellated organism which is apt to fuse with others to form a plasmodium. 5. Notes on Actinotrocha, by K. Ramunni Menon, assistant professor, Presidency College, Madras, with a plate. 6. Review of Mr. Iwaji Ikeda's observations on the Development, Structure, and Metamorphosis of Actinotrocha, by A. J. Masterman, Edinburgh.

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Wigan Medical Society.—The annual meeting of this society was held on Feb. 11th, when the following were elected officers for the ensuing year:—President: Mr. T. M. Angior. Committee: Mr Angior (president), Mr. W. Latham (vice-president), Mr. W. Mitchell Roocroft, Dr. R. P. White, Mr. C. M. Brady, Dr. John Blair, Dr. Matthew Benson, and Mr. C. R. Graham. Honorary treasurer: Mr E. H. Monks. Honorary secretary: Mr. W. Berry.

the course of such a general character that it may serve as a foundation for future work directed along agricultural and industrial as well as strictly medical lines. The plan of the book resembles that of the "Practical Bacteriology" of Kanthack and Drysdale. Courses of practical bacteriology are usually the outcome of the personal experience of the teacher directed by the special requirements of the institution in which the class is held, and it is not usually easy or satisfactory to graft a course devised for one laboratory on to the teaching of another. A practical laboratory handbook of methods, on the contrary, is of distinct value if those methods are well and accurately described. The present book, though in many respects excellent, suffers from a lack of definiteness of aim. The author is apparently uncertain whether he is writing a laboratory handbook or a course of study devised to give a more general acquaintance with bacteriology. If the latter were the aim the book might be greatly shortened; if the former, the descriptions of methods should be much more detailed and explicit. At present they are condensed to the verge of inaccuracy. Thus in the description of the "hanging drop" no mention is made of any sterilisation of the slide, cover-glass, or water used for suspension of the culture, nor are any precautions suggested for preventing contamination. Such a preparation, it is stated, is used for watching the reproduction of bacteria, but carried out as directed it would lead to strange results. Boni's method for the demonstration of capsules around organisms (p 33) will itself provide an artificial capsule for some organisms. There is in addition a considerable amount of matter which would appear to be more suitably placed in a systematic treatise than in a laboratory book. Of this nature are Chapter IV. on Classification and much of Chapter VII. embodying Chester's work on the systematic description and determination of organisms. It would have added much to the value of the illustrations of this portion of the book if it were distinctly stated which of the specific descriptive terms suggested should be applied to the culture or colony depicted. Chapter IX. deals with the Bacterial Analysis of Water, Milk, Air, and Soil, while the main portion of the rest of the book contains directions for a short study of pathogenic organisms. It is obvious that the ground covered by this book is very extensive, and as it consists of only 192 pages with a large amount of space occupied by illustrations the wonder is that so much accurate instruction and valuable information has been condensed into so small a space. The author rightly insists on the importance of the chemical actions of the organisms. The illustrations are in great part from the atlas of Fraenkel and Pfeiffer and are well reproduced.

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*The Morphia Habit* By W. OSCAR JENNINGS, M.R.C.S Eng, M D. Paris. London Baillière, Tindall, and Cox. 1901. Pp 210 Price 3s 6*d* net.

IN 1890 Dr Oscar Jennings published the first edition of his book, giving an account of his special treatment of the morphia habit, and in this, the second edition, he revises his previous work in the light of 11 years' additional experience, during which period he has but slightly modified his methods The author has always been a vigorous opponent of the sudden suppression of the drug as recommended by Levenstein and others, and has from the first advocated a rational treatment of the morphia craving upon therapeutic indications That he has found but little to alter in his method during the last decade and that several writers on the same subject in various countries have adopted the treatment first suggested by him, some without acknowledging the source of their inspirations, would seem to afford testimony to its excellence.

The book is written as a guide for patients as well as for practitioners, and perhaps for this reason the author does not give a full account of the symptoms and methods of diagnosis of the morphia habit, or of the dosage of some of the drugs which he employs to counteract the craving and the train of troubles induced by the withdrawal of the drug. The book is, however, well illustrated with notes of cases which supply to a certain extent this information, and the medical reader, though he may favour some method of treatment other than that of the author, cannot fail to profit by the indications as to general treatment which are to be found here. The addition of an index would largely increase the usefulness of the work.

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## LIBRARY TABLE.

*An Idler's Calendar.* By G. L. APPERSON. London: George Allen 1901. Pp. 213. Price 3s. 6*d.*—This is an elegant little volume of essays most of which have appeared in the columns of the *Globe* newspaper. The articles show wide reading and accurate knowledge of the country. The descriptions of "The English April," of "The Chaffinch," of "Blackberries," of "Autumn Haze," and of "The Apple Month" show accurate powers of observation as well as a pretty imagination.

*The Preservation of the Hair.* By R. W. LEFTWICH, M D. Aberd. Bristol: J. Wright and Co. London: Simpkin, Marshall, Hamilton, Kent, and Co. 1901. Pp. 127. Price 2*s* net —Dr. Leftwich has written a practical little book upon the preservation of the hair. He has made experiments on the elastic qualities of the hair, on the effect of toilet preparations and procedures upon the strength of the hair, and on the value of various forms of "brilliantines," "cleansers," and "bactericides." The book, which is written in simple language with a view of being intelligible to the general reader and in places to the hair-dresser, will correct many widely-spread false impressions among laymen.

*The Congress on Tuberculosis.* By Colonel W. LE POER TRENCH. Second edition. London: Published by the Author. 1901.—Colonel W. Le Poer Trench sends us a pamphlet which consists of reprints of correspondence in the *Times*, which, under the heading of "The Congress on Tuberculosis," resolved itself into a somewhat acrimonious discussion regarding a particular treatment of pulmonary tuberculosis. The fact that since the publication of the pamphlet Colonel Le Poer Trench has again written to the *Times* on the subject prevents us from dealing with the discussion as one that is finally closed, even if, for other reasons, we were not inclined to think that the matter does not concern a medical journal. While we think that Colonel Le Poer Trench is unfortunate in the attitude that he has taken up, we must testify to his obvious and transparent honesty as well as to his courtesy as a letter-writer.

*The Origin of Species.* By CHARLES DARWIN. London: John Murray. 1901. Pp. 432 Price 1*s.*—In view of the fact that one or two editions of Darwin's "Origin of Species" have been prepared to meet the approaching expiration of the copyright of the first edition of that book Mr Murray has placed upon the market a cheap copy of the work. The shilling edition is a popular impression of the corrected copyright edition issued with the approval of the author's executors, and Mr. Murray announces that the edition which has recently lost protection is the imperfect edition which has been reprinted without the authority or consent of Mr. Darwin's representatives. It is an excellent thing that the "Origin of Species" is published in such a form that it can reach the hands of a very large public, and, of course, it is advisable that all Darwin's corrections should be incorporated in the popular edition. We are under the impression, however, that the amount of correction which Darwin found it necessary to make is rather trivial.

THE LANCET.

*LONDON: SATURDAY, MARCH 1, 1902.*

# Publicity for Medical Men in the Lay Press.

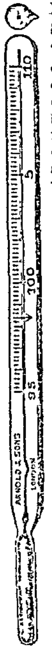
Our pages during the past weeks have borne evidence of the very natural indignation which has been aroused by the publication of the names and addresses of sundry medical men (with comments upon their ability) in a book entitled "What's What," a compilation intended to give information about all sorts of things for the benefit of the general reader. This week we publish a letter from yet another injured medical *confrère*. Mr. Harry Quilter, the editor of the work in question, has, we learn, owing to the indignation aroused by his procedure, withdrawn the offending paragraphs with a willingness which we commend. Truth to say, he could do no less, for he sinned deliberately and against the light, as his opening words in Appendix B to the work show. "This paragraph," he writes, "is medically speaking an unforgiveable sin," so that he cannot have been surprised at the resentment aroused. In general, of course, it is not to be expected that the average layman will, or can, understand the rules governing professional etiquette. The average layman looks in books of reference and finds lists more or less accurate of the best butcher or bootmaker or tailor or dressmaker, and he naturally enough thinks that it would be a good thing to be able to choose his "doctor" on the same plan. Mr. Quilter proposed to meet his wants and at the same time to do some persons a good turn by lauding them at large and giving their names and addresses. The state of mind both of Mr. Quilter and of the audience for which he has written with respect to such lists of recommended medical men is largely due to the fact that there is no marketable commodity which the ordinary person is so fond of getting for nothing as medical advice. If he wants special legal advice he knows that he must consult a barrister through a solicitor; if he wants special medical advice he will do anything rather than send for his usual medical attendant and ask his advice with regard to a consultant. In one class of life he will ask any medical man whom he happens to meet out at dinner for advice as to his symptoms or the best authority to consult, in another class of life he will write to a halfpenny evening newspaper. Mr. Quilter apparently decided to catch all these economical and misguided persons as readers of "What's What."

Mr. Quilter's letter which appeared at p. 549 of The Lancet of Feb. 22nd raises two most important points, though one might well have been passed by without comment had it not been that a medical paper has discussed it in an unfortunate manner. It is that the medical men mentioned by Mr. Quilter in his book have directly or indirectly been responsible for the insertion of their names, or have given him a *quid pro quo* for the insertion of their names. We may say at once that the reason why we animadvert upon Mr. Quilter's appendix has nothing whatever to do with such an infamous charge. No one acquainted with the traditions of British literary work or with the traditions of the medical profession could suppose for one instant that the appendix in question was written from a commercial point of view on either side. The editor of the *Medical Times* writing in our columns repudiates having made any insinuation of the sort and objects to this interpretation being put upon his words by Mr. Watson Cheyne and Mr. Quilter. We call his treatment of the situation unfortunate because it was particularly necessary that his words upon such a matter should not be liable to misconstruction and not because we doubt his explanation to be sincere. But it is in regard to the second point—namely, that the publication of medical names is for the public interest—that we differ from Mr. Quilter. The danger in such paragraphs lies in the fact that the public are quite incapable of sifting the chaff from the wheat. Anything which appears in print is taken by the average man for gospel. The medical men mentioned in "What's What" were in the front ranks. But in many instances the medical adviser put forward in a lay paper is very far from being an authority. Occasionally, we regret to say, a medical man himself will write to a lay paper and proclaim, indirectly of course, that he is the first authority upon something or other, and the layman who reads such an effusion is quite incapable of realising that A B, who writes under his own hand, is a pushing ignoramus, and not in the least in the same class as X Y who may be given as an authority, entirely against his will, in a book of reference. It will be a sorry day for the public as well as for medical men if practitioners of medicine ever come to be looked on as standing on the same footing as the purveyors of beef or of drapery, for the appraisement of whose merits no special or technical knowledge is required.

If once it be considered allowable for medical men to be advertised in the lay press the public will see no difference between the real leaders of the profession and the various medical and quasi-medical men recommended in the health and beauty columns of fashion papers, where they appear in company with the Canidias who profess to be able to arrest the ravages of time or to increase the size of the mammary glands. The recommendation of a consultant must be left to someone who knows the patient's constitution and that person is the general practitioner. We do not think that it requires any very subtle intellect to perceive this. It is common for our lay contemporaries to describe medical etiquette as being some impossible rigmarole of rules understood by no one and constructed by medical men to confound their critics. This view is the one usually taken by the lay press. It is generally put forward jocosely, but the joke is getting old, and we look forward to the time when the public will credit the medical profession with obeying a code of unwritten rules that is of the greatest benefit to their patients.

# New Inventions.

## IMPROVED "RELIANCE" CLINICAL THERMOMETER.

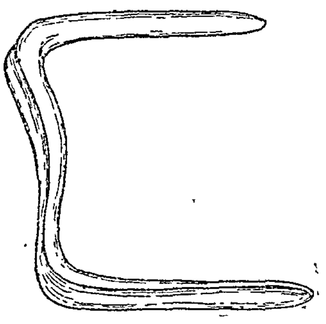


THE accompanying illustration shows a new form of "Reliance" clinical thermometer which has just been brought out by Messrs. Arnold and Sons of West Smithfield, London, E.C. It is of the ordinary round tube pattern, but has a ridge along the whole length of the stem on the reverse side to the index which effectually prevents rolling when placed on a desk or other inclined surface, being in this respect superior to the lens clinical. It is also claimed that it obviates breakage in re-setting the index, as so often occurs in the flat-backed variety which is specially weak owing to its formation and etching, the ridge on the "Reliance" thermometer giving great additional strength to the tube.

## A DUCK-BILL SPECULUM FOR THE FEMALE URETHRA.

CARUNCLE of the female urethra is a very common affection The growths, which are situated almost entirely on the lower floor in or near the meatus, are often somewhat deeply attached and for some distance up the tube. They easily break off and are very liable to recur, especially if the base of attachment is not freely removed The speculum shown in the accompanying illustration has been found very useful in both the examination and removal of these growths. It is made on the principle of a duck bill vaginal speculum; the concave surfaces on the two legs are of different width and are bevelled off at the ends. By hooking up the instrument over the vulva and depressing the upper blade the caruncle can be everted with the lower one and a light reflected on to it For removal with the thermo- or galvano-cautery this arrangement is invaluable I have found it to give a better view than either the ordinary Bryant's vulcanite speculum or the bivalve dilator and is much less painful to the patient than the latter. It has been made for me by Messrs. Wood and Co of York. CHARLES J. WRIGHT.

Leeds.



# ASYLUM REPORTS.

*London County Asylum, Banstead (Report for the year ending March 31st, 1901)*—The average number of patients resident during the year was 2443 The admissions during the year amounted to 547, and of these 463 were first admissions Dr. T. Claye Shaw, then the medical superintendent, states in his report that the number of admissions during the year was the largest since 1891 The mental and bodily condition of the patients admitted was much impaired, and some of the patients (transfers from other asylums) were of a very violent and incurable type. "Drink, privation, worry, and general disease were chiefly responsible for the attacks, and but little was attributable to influenza." In the early part of the year scarlet fever affected five nurses and two female patients, all of whom were treated in the isolation hospital. All made good recoveries. There was no other outbreak of epidemic disease during the year. Six patients escaped, but all were retaken. Two attendants sustained fractures of the leg through being pushed down by patients No other serious casualties occurred in the year. Two male attendants died, one from pneumonia and the other from pulmonary tuberculosis. In May, 1900, 14 nurses passed the examination of the Medico-Psychological Association and obtained certificates. "A practical masseuse has given lessons in massage [to the nurses] I have much hope," adds Dr. Claye Shaw, "from this treatment, especially in cases requiring artificial feeding in conditions of melancholia." The number of patients discharged as recovered during the year was 238, or 9·7 per cent. of the average number resident. The deaths amounted to 247, or 10·1 per cent. as calculated on the same basis. Of the deaths 11 were due to senile decay, 25 to epilepsy, 29 to cardiac disease, 45 to pulmonary tuberculosis, 47 to chronic brain atrophy, 57 to general paralysis, and the rest to other causes. The Commissioners in Lunacy state in their report that the wards and rooms were bright and clean and in very good condition, the appearance of the patients was neat, and the medical case-books and records were well kept.

# Looking Back.

FROM

## THE LANCET, *SUNDAY, FEB.* 29, 1824.

*To the Editor of The Lancet.*

SIR,—Reading in *The Lancet* this week the account of an experiment in transfusion, performed by Dr. BLUNDELL, assisted by myself and others, I beg leave to transmit a few more particulars respecting it. First, it was the blood taken from the carotid artery of one dog, that was injected into another dog, which had been drained till a state of apparent death was produced. Secondly, Dr. BLUNDELL does not recommend the injection of blood into the jugular vein of a woman, but into some vein more remote from the heart, as of the hand or arm for instance. Thirdly, it is not the blood of animals which Dr. BLUNDELL proposes to inject into the human veins, as he tells us in his physiological lectures that he doubts whether the blood of one genus of animals can be safely substituted for that of another, but human blood itself to be taken from the arm of another person by venesection. Fourthly and lastly, Dr BLUNDELL considers it essential to the success of the operation, that by means of a proper instrument the blood be injected into the vein of a patient, as fast as it issues from the vein of the person who emits it, without lodging in the cups of the syringe for more than a few seconds at most. It may not be amiss to add, that the syringe and joints of the instrument, which we employed in this experiment, are made to work under water, so as to preclude the possibility of the entrance of air into the apparatus, as air getting into the veins produces dangerous and even fatal effects

I am, Sir,
Your obedient Servant,
ROBERT JOHN LINTON.

*Guy's Hospital Feb.* 23, 1824.

P S—It is a fortnight since the experiment, and the dog is quite well.

### THE LATE EDWARD GRAINGER, ESQ.

The Friends of this highly talented young man are respectfully informed, that an Animated BUST, the size of Life, has been executed by Mr. HOLLINS, Sculptor of Birmingham, which has met with the decided approbation of his Family, and all who have seen it To meet the wishes of his numerous Pupils and Friends, Mr. H. has been induced to prepare *casts* of it at *Two Guineas each.*

**GIFTS TO HOSPITALS.**—The Leathersellers' Company has sent to the Chelsea Hospital for Women a donation of £10 10s—The Bishop of London, as trustee of the Marriott bequest, has sent a cheque for £1700 to the North-Eastern Hospital for Children, Hackney-road.

be only one head. The present difficulty, he believed, was due to the decision come to by the Council in 1885, and Dr. Russell, in the memorandum to which the Lord Provost referred, predicted the very state of things which had come about. He understood that there was a feeling on the part of some members that there were two distinct departments—the Health Department and the Sanitary Department—but he did not know where any formal statement to this effect was to be found. Throughout the minutes for a series of years they were described as one department, without any acknowledgment that they were two departments. He thought the mistake which had been made was in endeavouring to separate departments which were in their nature inseparable. The medical officer seemed to have acted in accordance with a preconceived idea of what he thought his department ought to be and had not sufficiently kept in mind what its position actually was. Mr. Hugh Alexander said that it seemed to him that the minute had been framed in order to get rid of Dr. Chalmers. If they wished to get rid of him, then let them do it in a straightforward manner, but if they were satisfied that the medical officer ought to be supreme, then why did they not recommend that he should be made supreme? Mr. Fife moved that the minute should be remitted back to the special committee to frame regulations and to define the duties of the medical officer of health and of the sanitary inspector, and their relations to each other, on the basis of the medical officer of health being the supreme and responsible head of all branches of the Public Health Department of the city. On the motion and amendments being put to the meeting Mr. W. F. Anderson's amendment was carried by a large majority. The minute submitted by the special committee was accordingly remitted back to them. We trust that nothing more will be heard of Dr. Chalmers's resignation. The value of his work to the city of Glasgow has been enormous, and the community owes him a heavy debt of gratitude.

## The Midwives Bill.

The Midwives Bill of 1902, which, in accordance with very general anticipation, has now passed its second reading, differs from the Midwives Bill which two years ago reached a similar stage in several of its provisions, while the alterations render it even more open to objection than its predecessor was. The particular alterations, to which we have already drawn attention, although made with little more than the stroke of a pen, are by no means matters of detail: they are of considerable, even of vital, importance to the measure, and transform it into one that in no circumstances ought to become law without very real alteration. The arguments for and against the registration of midwives have been given at length so often in our columns and we have summarised and compared them, substantiated and refuted them, so repeatedly, that it is unnecessary to reconsider the whole question here. Our readers know our views on the matter exactly, and we know theirs to a great extent: they do not all think alike, but a preponderating vote agrees that none of the measures which have yet seen the light is certain to supply the parturient poor with trustworthy attention. What, however, has to be considered now is not the general question but the particular Bill which has now been referred to the Grand Committee on Law. It remains for the medical profession to bring to bear all the influence that it possesses in order that as far as possible the Bill may be made to conform to the medical ideals of public safety. Not only must the latest modifications, which are all for the worse, be removed from the measure, but the many places where the Bill of 1900 failed to satisfy even amiable critics must be looked to.

The main points of difference between the measure of 1902 and that of 1900 are—they will bear repeating though we set them out as recently as in our last issue—(1) the omission of the words penalising the unlicensed practice of midwifery for gain; (2) the laying of the duty of the formation of a Central Midwives Board upon the Lord President of the Council instead of upon the President of the General Medical Council; and (3) the provision that the Central Midwives Board shall frame its rules subject to the approval of the Privy Council, after consultation with the General Medical Council, instead of the rules being framed subject to the approval of the General Medical Council. Among the suggested additions to the Bill of 1900 which should be made when the defaults of the 1902 measure have been attended to are the restriction of the practice of midwives under the Act to normal cases and the compulsory production of evidence of good character, as well as of training and experience, by applicants for midwives' certificates. With regard to the penalising of the practice of midwifery by persons who do not choose to avail themselves of whatever Act may be passed, this appears to us to be of the first importance. The Act will become a dead letter in many districts of the country at once if the unlicensed woman can compete without penalty with the licensed. The insertion of a penal provision constitutes an irresistible inducement to the best of the women who may now be practising as midwives to place themselves under the Act, simply because otherwise they will not be able to practise for gain at all. Undoubtedly the penal clause would also act as a protection to those other women who might be able, unless some provision to the contrary is made, to qualify under the Act as midwives, when their proper style is "Gamps," but this is an inherent fault, as far as we can see, in all Midwives Bills. And a "Gamp" under supervision is to some extent a limited danger, which is one of the things that can always be said in favour of the principle of the registration of midwives. An ignorant woman will naturally prefer to be subject to no restrictions in undertaking any responsibility in connexion with childbirth. She will prefer to retain a position of independence if this can be done without loss of employment. Certainly the penal clause should be re-inserted. The new Bill, as if to emphasise the completeness with which it divests itself of all control over, or interest in, the practice of such women as may not avail themselves of its offer to place them on its contemplated roll of midwives, gives a fresh and simple definition of midwife. A midwife in the new Act is to mean "a woman who is certified under this Act," and nothing more. There is no hint of a definition of the scope of her duties, which is to be left to the Privy Council, acting upon the advice of the General Medical Council. But the law preventing

# The Sanitary Administration of Glasgow.

We regret to learn that difficulties have arisen in connexion with the health department of Glasgow. It is admitted on all hands that as regards the practical carrying out of its work the administration of the department has been most efficient. Our columns have on numerous occasions borne witness to the ability and energy displayed by the medical officer of health of Glasgow and his staff, both in the management of epidemics and in the more prosaic routine duties which have for their object the improvement of the general health of the community. In all crowded populations, and especially in large cities, the conditions of life are now-a-days to a great extent artificial; the enjoyment of life is facilitated, its conveniences are multiplied, and so are the agencies which lower the health of the individual and favour the development of disease This fact, although long known, received little attention from the legislature until some 50 years ago, but an era of diminished urban death-rates was then inaugurated which affords conclusive evidence that medical science practically applied under the direction of the medical profession may be the means of saving thousands of lives every year. In course of time public health departments were formed all over the country, and—curiously enough when the value of the medical work to the community is considered—our columns have only too often recorded the settled tendency and the occasional active endeavours of the majority of these bodies to keep the medical officers in a *sort of tutelage and to limit their authority* as much as possible. Influences of this description have evidently been at work in Glasgow, although the town council in its corporate capacity has succeeded in maintaining an attitude of judicial impartiality, and one of its members has hinted not obscurely that the elastic policy of the Local Government Board for Scotland is in some degree responsible for the unfortunate complications which have arisen. Very important issues are involved, for a crisis has now been reached Matters apparently cannot be suffered to continue on their present footing, and whatever solution may be found the case can hardly fail to have a profound effect on the public health service in Scotland.

The thread of the story, as told in the *Glasgow Herald* of Feb. 19th and 20th, is not difficult to follow. It appears that the medical department and the sanitary department, as at present existing, are distinct from one another, and that the sanitary inspector, who is the head of the sanitary department, is not subject to the control of the medical officer of health The two departments must necessarily have a great many points of contact, with a correspondingly close relationship in the matter of duties, and human nature being as it is the system is evidently such that misunderstandings might be expected. They did not fail to occur, with the result that on July 25th, 1900, the town council appointed a special committee "to inquire into and consider and report as to the cause of certain officials of the Health Department not working in harmony, *and the effect thereof.*" *The report*, which in length does not exceed two columns of The Lancet, was only presented on Feb. 19th, 1902, a special meeting of the town council being held on that day for the purpose of considering it. *The following passages occur in it* :—

> "The special committee, with regret, but without hesitation, have to state that they have had abundant evidence submitted to them showing that want of harmony which the resolution of the corporation implied. ...... The special committee are agreed that distinct and definite regulations under the Public Health (Scotland) Act, 1897, are indispensable, but are of opinion that, before it is possible to frame those regulations, the general relations between the various branches of the department should be settled by the corporation. What those relations should be the committee have very carefully and anxiously considered. They are unanimous in thinking that, in view of the supreme importance of the health of the community, and of the direct bearing thereon of the work of all branches of the Public Health Department, the opinion and advice of the medical officer of health should be paramount, subject to such statutory enactments as may be contained in any Act of Parliament, and to such regulations as the corporation may adopt."

The Lord Provost moved the adoption of the special committee's report in a lengthy speech, commencing with an allusion to the difficulty and delicacy of the task which had been imposed on the committee. He subsequently pointed out that in 1885 Dr. James B Russell, the previous medical officer of health, submitted a memorandum in which he urged the corporation to make the health department include the sanitary department and to place the whole under the medical officer of health, but after heated discussions the corporation declined to accept that advice. The present committee, however, were unanimously of opinion that the medical officer of health should be paramount, and their solution of the difficulty was that a new medical officer of health should be appointed having control over both Dr A K Chalmers, the present medical officer of health, and Mr. Fyfe, the present sanitary inspector Now both these gentlemen are men of high personal character and great professional ability, while they cannot be dismissed because they are statutory officers responsible to the Local Government Board as well as to the corporation. Mr W. F. Anderson reminded the council that Dr. Russell's suggestion that the medical officer ought to be supreme was adopted by the health committee, but rejected by the town council by 25 to 17 votes. In 1897 they got a new Health Act, and the medical profession endeavoured to assert the position which was suggested in 1885 by Dr. Russell, but in both Houses of Parliament their proposals were rejected He quoted the regulations of the Local Government Board to show that the option lay with the town council to decide whether the sanitary inspector should or should not act under the superintendence of the medical officer of health, and he moved as an amendment that the corporation should remit the minute back to the committee with the addition of six members of the Health Committee to draft regulations and to frame by-laws in accordance with the fifteenth section of the Public Health (Scotland) Act, 1897.

On Mr R M Mitchell moving that the corporation should ask Dr Chalmers and Mr. Fyfe to resign their offices, Mr Murray, the city treasurer, said that the real question was whether there were one or two departments. If there were two departments there ought to be two heads, but if there were only *one* there could and it would have been wise for this to have been tested in like manner, as well as the garments which had been near the vaccinated spot. There is, further, the improbability that the plaster which was placed over the whole was so completely secured as to be impervious to dust, and the stocking worn over the leg is also a conceivable source of the bacilli. In these mysterious cases no stone should be left unturned in the attempt to discover the origin of the disease. Nothing can be dismissed as impossible, and no amount of improbability should be allowed to hinder a thorough investigation. Our knowledge of the nature of the virus points out clearly the lines of the inquiry, but we still know little of the channels by which access is gained to receptive surfaces. Moreover, the fact that the exact nature of the cases of tetanus supposed to be idiopathic is still obscure is an additional reason for taking the fullest advantage of every opportunity of learning more of the part which may be played by dust in the production of the disease. The free growth of the organisms in earth is well known, and so also is the great frequency with which the organisms are certainly inoculated where earth obtains access to a wounded surface. But little is known regarding the actual frequency with which the tetanus bacilli exist in the common dust of houses, dust which is inevitably abundant in all the houses of large towns. However strict may be the effort to maintain a high degree of cleanliness, there is probably no house in which sufficient dust does not accumulate in some places to constitute a source of these bacilli; and a thorough examination, however troublesome, should be neglected in no case in which the occurrence of the disease points to the possibility that the search may yield definite results.

## THE ACETYLENE LIGHT IN OMNIBUSES.

IT is not many weeks since the acetylene lamp was made to replace the dirty time-honoured oil lamp in most of the London omnibuses, and very general appreciation was expressed of the great improvement in the interior lighting of the vehicle which is thereby gained. The acetylene lamp undoubtedly gives a powerful white light and the consumption of gas for this brilliant effect is comparatively small. Unfortunately, the acetylene generated from carbide of calcium possesses a very disagreeable odour, suggesting at the same time garlic and the fumes from the moistened tip of a phosphorus match. The least escape of gas is thus instantly detected by the nose, and omnibus passengers have raised strong complaints about it, while the drivers themselves confess that it has sickened many of their number. It is doubtful whether pure acetylene is poisonous, and it is certainly only faintly odorous, but the gas from carbide of calcium is very impure and contains usually a very perceptible proportion of phosphoretted hydrogen and sulphuretted hydrogen to which is due its smell. The former gas is, of course, intensely poisonous, and may easily give rise to symptoms of poisoning, having an exciting action upon the respiratory tissues and an irritating action upon the skin. Sulphuretted hydrogen is also poisonous, but not to the same degree. Acetylene prepared from commercial carbide of calcium may therefore easily prove injurious to health, and there seems to be little doubt that some bad effects are being experienced by the drivers of the acetylene-lighted omnibuses. Health, however, must not be sacrificed for the sake of increased light and something should be done to remove this reproach from the acetylene lamp. The complaints which have been made pretty freely point, of course, to escape of gas, perhaps by draughts, which surely can be remedied, but, failing this, cannot carbide of calcium be purified from sulphur and phosphorus compounds which form highly poisonous gases during the generation of acetylene? "Phossy jaw" amongst omnibus drivers and travellers would be a startling sequel to the installation of acetylene lamps in London omnibuses.

## SMALL-POX IN LONDON.

THE returns of small-pox for the past week show the following figures. On Saturday, Feb. 22nd, there were 44 fresh cases notified and removed; on Sunday, the 23rd, there were 25 fresh cases; on Monday, the 24th, there were 58 fresh cases; on Tuesday, the 25th, there were 63 fresh cases; and on Wednesday, the 26th, there were 44 fresh cases. Within the county of Essex 378 cases have been reported from Jan. 1st to Feb. 22nd. Dr. J. C. Thresh, the medical officer of health of the county, reports under the date of Feb. 24th that there is grave reason to suspect that the disease is being spread by tramps. The medical officer of health of the metropolitan borough of Woolwich, Dr. Sidney Davies, has distributed two leaflets to every house in the borough. The one deals with small-pox and the truth about vaccination, giving plain simple statements which should convince anyone inclined to doubt the efficacy of vaccination, while the other leaflet contains simple hygienic precepts, the precautions to be taken against measles and consumption, and 14 simple rules for "feeding baby." The London County Council has issued a circular to medical practitioners within the county stating that the Council has made an arrangement with 37 medical men who are willing to act as consultants to facilitate the diagnosis of doubtful cases of small-pox. The fees of these gentlemen will be paid by the Council. This is a most important departure, and we believe that our readers will see in the action of the London County Council a real intent to be helpful to them in an arduous time. The difficulty of diagnosing small-pox is great, seeing that the majority of the medical profession in London, fortunately for the London public, have not any familiarity with the disease. It was not an easy task for the London County Council to select the medical men who would be able to assist in the diagnosis of doubtful cases of small-pox, and the list of names has not gone uncriticised. London medical men may, however, be certain that no pains were spared to choose practitioners, to act in an advisory capacity, who had had actual experience of the disease.

## FELLOWS' DINNER OF THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

A MOST successful dinner of the Fellows of the Royal Medical and Chirurgical Society was held in the Whitehall Rooms on the evening of Feb. 26th, and was attended by some 120 Fellows and their guests. The Vice-President, Dr. C. Theodore Williams, in the absence of the President, Dr. F. W. Pavy, took the chair. The guests of the society were Professor A. W. Rucker, F.R.S. (President of the University of London), Dr. A. Conan Doyle, Sir Walter Sendall, G.C.M.G., Surgeon-General W. Taylor, C.B. (Director-General of the Army Medical Service), Mr. Henry G. Howse (President of the Royal College of Surgeons of England), Sir William Turner, K.C.B., F.R.S. (President of the General Medical Council), Mr. Howard Marsh (President of the Clinical Society of London), Mr. W. Watson Cheyne, C.B., F.R.S. (President of the Pathological Society of London and of the Harveian Society of London), Dr. Peter Horrocks (President of the Obstetrical Society of London), Dr. Urban Pritchard (President of the Otological Society of the United Kingdom), and Mr. J. Y. W. MacAlister (the resident librarian of the society). Dr. Theodore Williams proposed the toast of "Our Patron" His Majesty the King, the third sovereign who had been graciously pleased to be patron of the society. After the toast of other women than a certain class of women from calling themselves "midwives" will not abolish the large existing body of persons using the title. To penalise their gains might stop their vocation, but to legislate about their right to a certain style will have no effect whatever.

The removal of the responsibility for the formation of the Central Midwives Board from the President of the General Medical Council to the Lord President of the Privy Council and the arrangement for the submission of the rules of this board when framed to the Privy Council, leaving the General Medical Council to act in an advisory capacity only, are both retrograde steps. They will, in our opinion, prevent the measure from working smoothly and effectively in the direction desired by its promoters—that is to say, for the good of parturient women of the poorer class. The General Medical Council must know better than the Privy Council whether the rules framed by the Central Midwives Board for the regulation of candidates for the midwives roll, and of their conduct when upon the roll, will conduce to efficiency and harmonious working with the medical profession. Sir **JOHN BATTY TUKE**, who moved the rejection of the Bill at the instance of the General Medical Council, laid no stress on this point. He showed himself to be in accord with the principle of the measure even while he considered its details faulty, and his speech displayed the temperate nature of the objections urged by the medical profession against the Bill. And those objections *are* temperate, although the leaders of the movement for the registration of midwives—those ardent spirits whom the Home Secretary described in his summary of the debate as "desiring much more than anything which was suggested in this Bill"—are wont to term them narrow and bitter. Medical men prove daily all over the country by the lives that they lead and the deeds that they do the reality and depth of their sympathy with the sick poor. General practitioners see more clearly than either obstetric physicians in their wards or philanthropic ladies in their drawing-rooms what the dangers of creating an inferior class of medical practitioners must be to those very women whom the registration of midwives is designed to assist. These dangers Sir **WALTER FOSTER** urged upon the House of Commons on Wednesday afternoon, and we, and many of our correspondents, have pointed them out time after time in the columns of THE LANCET. We trust sincerely that there will be a genuine attempt on the part of legislators to realise them and to provide against them before the Midwives Bill finds its way into the statute book.

# Annotations.

"Ne quid nimis."

## TETANUS AFTER VACCINATION.

THE extremely rare deserves study not less than the extremely common. That which is exceptional not only tests our rules and our inferences, but it often enables us to see facts more clearly and to apply conclusions more precisely. A striking example of the extremely rare is presented by the case of tetanus after revaccination which was recorded in THE LANCET of Feb 22nd, p. 506, by Dr. W. Findlay and Dr. J. W. Findlay. The case is one of great importance, but its importance is far less in regard to vaccination than in regard to tetanus. The danger that vaccination may be a cause of tetanus may be estimated from the fact that it has occurred in this country about once in 5,000,000 cases, and a risk that is represented by one in perhaps 5,000,000 is absolutely negligible. The frequency is somewhat greater, and the risk is correspondingly increased, in tetanogenic countries, but it may be doubted whether even in such countries it is greater than one in a million. It is in regard to the process by which the tetanus organisms may have been introduced into the system, and in regard to the general etiology of tetanus, that the case in question deserves careful thought. The tetanus bacilli cannot have been contained in the lymph employed. Apart from the fact that several other persons were vaccinated from the same tube without ill result, the precautions which are now employed to prevent the presence of extraneous organisms in vaccine lymph should afford perfect certainty on this point. The view of the writers of the paper is that the infection must be associated with the fact that the vaccination was on the leg, and they consider that the trailing skirts of modern days were probably answerable for the collection of the bacilli from the ground and streets and their presence on the skin at the seat of vaccination. The fact that the place inoculated was afterwards protected by a bunion plaster, covered to keep it in position by a strip of ordinary plaster and fixed soon after the vaccination, precludes, it is thought, any subsequent infection, but this view is open to challenge The authors assume that the bacilli must have been previously present in the skin. But it is difficult to dismiss so lightly as they do the inutility of the measures adopted to secure the destruction of organisms The skin was washed with turpentine, then with spirit, and then with a solution of 1 in 40 of carbolic acid. These measures are certainly very different from the "incantation" with which they are compared by the writers of the paper. We cannot think that the process employed would leave the tetanus bacillus within the glands or crypts of the skin, even supposing that they are accustomed to secrete themselves in such a situation. The subsequent access of the bacilli to the inoculated surface, seems much more likely The nearest analogy to tetanus after vaccination, probably, is its occurrence after burns. In these cases it is clearly impossible that the bacilli can have been introduced during the process of burning or that any organisms previously in or on the skin can have survived such application of heat and have been the means of infection. They must have reached the burnt surface afterwards from the air or from materials applied to the burn. Their presence in the air can scarcely be doubted when we remember that they have been found in abundance in the dust of rooms with wooden floors, and in cobwebs applied to arrest the bleeding of wounds. That it is the air from which they gain access to the burnt surfaces is suggested by the fact that tetanus is more frequent after extensive burns than after small burns. In one fatal case, the particulars of which are present to our memory, after a very extensive burn the patient was examined in a certainly dusty casualty room, in the air of which many kinds of organisms must assuredly have been present. In vaccination as now performed the exposure of the surface to the air for some time until the glycerinated lymph is dry is a point to be borne in mind in this connexion, while vaccination on the leg would involve more risk of contamination by dust from the floor than if it had been done on the arm. In any similar case it would at least be wise for dust from the corners of the room in which the vaccination was performed to be collected and an attempt made to ascertain whether it would yield any cultures of the bacilli. Moreover, the bunion plaster placed upon the spot is not likely to have been subjected to any disinfection, and incapacitated him from work. Various hypnotics had been administered without success, and when the patient was admitted into hospital under Dr. Scheib on August 3rd, 1901, his attack had already lasted a fortnight. He was also troubled with vertigo and vomiting. The knee-jerks were exaggerated but there was no Babinski reflex. Ophthalmoscopic examination showed slight papillary stasis but *no* neuritis or retinitis. The pulse was of high tension and the heart-beats were 90 per minute. The arteries were tortuous and slightly atheromatous. The urine contained four grammes of albumin per litre. He was placed on milk diet but this gave no relief or amelioration of symptoms. Lumbar puncture was accordingly performed and 20 cubic centimetres of fluid were slowly drawn off. Microscopic examination showed it to be free from corpuscles. The patient improved within a few hours and on the following day the headache had entirely disappeared. The degree of albuminuria was lessened by milk diet and diuresis was increased. Subsequently he had a second attack of intense cephalalgia like the first, with the addition of a rapidly developed œdema of the face and scalp, probably of angioneurotic character. Lumbar puncture was again performed and 30 cubic centimetres of fluid were withdrawn, after which the cephalalgia subsided. The patient, however, eventually became comatose, with marked constipation, vomiting, and fœtid breath, and died on Sept. 30th while in this state. Dr. Scheib points out that the withdrawal of the cerebrospinal fluid acts in two ways—viz., first by relieving the intracranial pressure, and, secondly, by diminishing the cerebral toxæmia, both of which are factors in the production of such forms of intense cephalalgia as occur in Bright's disease, and in view of the great relief which follows such treatment he recommends its adoption in cases similar to the above.

## SMALL-POX IN THE UNITED STATES.

THE Marine Hospital Service reports from Washington that there were on Feb. 10th last 12,122 cases of small-pox undergoing treatment in the United States. In 1901 at the same period there were but 4359 cases of small-pox throughout the States, and the deaths for the preceding week due to this cause numbered 55. This year during the corresponding week the deaths from small-pox reached the figure of 290. Thus, in the United States as well as in England there are this year conditions prevailing that seem specially to favour the spread of small-pox. Attempts are being made to cope with the disease by imposing quarantine on entire households. For instance, at Philadelphia 85 men have been quarantined at the Samaritan Inn because a case of small-pox was reported to have occurred among them. The police at once established patrols in front and at the rear of this establishment. The inmates were informed that they would be kept prisoners till the quarantine was removed, and that they would be fed at the public expense. This is precisely the same process that the Sultan adopted at Constantinople for all houses or blocks of dwellings in which one or more cases of cholera had occurred. Our Special Sanitary Commissioner, who visited some of these places in 1894, described[1] how the inhabitants regretted the cessation of the cholera epidemic, for they had never before been so well fed. This system, however, is far from meeting with general approval at the hands of the medical profession in the United States. Dr. Shoemaker, chairman of a special committee appointed at Philadelphia to investigate the question, holds that, with proper methods of fumigation and vaccination, quarantine is not necessary and this view is endorsed by three of the five physicians appointed on this committee. They will urge on the city authorities that when the patient has been removed, the other inhabitants of the house have been vaccinated, and the premises have been thoroughly fumigated, it is unnecessary to coop up the dwellers in quarantined houses. Dr. Benjamin Lee, secretary of the State Board of Health, is also an opponent of long quarantine but would compel the people who live in the house where a case had occurred to report themselves at specified times during the period of incubation to a physician appointed for that purpose by the health authorities.

## THE EYESIGHT OF SCHOOL-CHILDREN.

THE medical officer to the Derby School Board, Dr. L. H. Bryson, in his annual report for 1901, deals incidentally with the question of defective vision. He says:—

> I have made 26 visits to the schools, and reported on them separately in my half-yearly reports. Over 700 children were presented for inspection at these visits, two-thirds of whom were cases of defective eyesight. In dealing with these cases, the method adopted is to select the worst, and recommend them to see an oculist. I hope shortly to have a circular printed to send to the parents of those children, which will further impress upon them the necessity of having the eyes specially attended to. On account of their number it is scarcely possible to have the whole of the children with defective eyesight tested and provided with glasses, nor is it necessary, as in many of the cases the defect is slight, and not progressive, and many of the children will not have occasion to use their eyes for fine work after leaving school. In others, again, the effect is due to general malnutrition, or to their not having learned to properly use (accommodate) their eyes, and such cases may be expected to improve.

With reference to the question recently raised in London of having special ophthalmic surgeons to the School Board appointed, Dr. Bryson points out that it takes from 10 to 30 minutes properly to correct defects of vision; that in the case of children refraction cannot be properly estimated without the use of a mydriatic, and that the employment of this without the permission of the parents amounts to a technical assault. Dr. Bryson concludes this portion of his report by stating that instead of treating individual children "general prophylactic precautions must be taken and individual advice may be given, and this is being done in the Derby schools with satisfactory results."

## THE HUNTERIAN SOCIETY.

EPONYMOUS scientific societies or lectures must often seem to the orators and lecturers connected with them to be hard task-masters. It is difficult year by year to find something novel to say about any one man. The great Harvey in founding the Harveian Oration had in his mind that the benefactors of the Royal College of Physicians of London should be commemorated. Unmindful of this mercy, however, the Harveian orator not infrequently rather goes out of his way to commemorate, not so much benefactors in general as Harvey himself. But the Hunterian orator or lecturer has not so much latitude, and we are struck with the skill with which year by year the various improvements and new-old theories of medicine are made to depend from Hunter. Truth, it may be, is a gem with many facets, and Hunter, if anyone ever did, sought the truth. On Feb. 12th Dr. Arthur T. Davies delivered the Hunterian Oration of the Hunterian Society, taking for his subject Organo-therapy. At first sight Hunter and organo-therapy seem as wide apart as the poles. But the difficulty was easily surmounted. Hunter made various observations upon the influence of castration and the periodical changes in the sexual glands of birds and certain mammals. Hence he was led to consider that the testis had an internal secretion. Here at once is the *rationale* of organo-therapy. With equal skill Mr. Reginald Harrison in his Hunterian Lecture, delivered before the Hunterian Society on Feb. 26th, found in Hunter's work and practice lessons for the modern surgeon. The radical cure of hydrocele, the treatment of urinary fistula, and the avoidance of "catheter life" are all even nowadays deeply influenced by John Hunter, and modern surgeons in their treatment of diseases of the urinary apparatus are

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[1] THE LANCET, Nov. 24th (p. 1239), and Dec. 1st (p. 1301), 8th (p. 1370), and 15th (p. 1442), 1894.

"Her Majesty the Queen, the Prince and Princess of Wales, and the other members of the Royal Family," the Chairman proposed "The Royal Medical and Chirurgical Society." He said that the society had its foundation in 1805 when owing to dissensions in the old Medical Society the new society was formed. Since that date it had steadily advanced in prosperity, meeting at first in the Freemasons' Tavern, afterwards in Berners-street, and in 1890 moving to its present quarters in Hanover-square. The financial condition of the society was most satisfactory. Mr. Alfred Willett (the President Elect) proposed the health of the guests. The toast was responded to by Sir Walter Sendall *and by Dr. Conan Doyle—the latter of whom said that he felt* like a deserter dining with his own regiment and as a full private dining at the officers' mess. The study of medicine was one of the best trainings that a man could go through, and though he was far from wishing to people England with amateur doctors, he thought that the study of physiology, medicine, and surgery for a few years gave a man the truest basis for life and thought He held in the highest esteem *the parish practitioner, who without hope of fame, without* hope of riches, was yet content with duty done. Dr. George Ogilvie, in a humorous speech, showed how the invasion of England by the Scot dated from the Saurian period and had continued to the present day. England had benefited much by the invasion of the Scot, for he had brought with him several excellent things, among which was the game of golf which had introduced an excellent vocabulary *into the English language. The Scot* has also brought with him a song "Auld Lang Syne," which had done more to bring about the federation of the Empire than had Mr Chamberlain. Sir William Turner regretted the absence of the President and expressed his deep sympathy with him in his family affliction. He proposed the health of the chairman of the evening Dr. Theodore Williams replied and the guests separated after a *most enjoyable evening.*

## INTRA-CEREBRAL INJECTION OF ANTITETANIN IN THE HORSE.

IN the February number of the *Journal of Comparative Pathology and Therapeutics* there is a very interesting article by Mr. Sydney Villar, F.R.C.V.S, illustrating the value of the intra-cerebral injection of antitetanin in the treatment of tetanus in veterinary practice. The patient in the first case was a small pony showing visible signs of tetanus when admitted to Mr Villar's infirmary on June 9th. It had walked a distance of three miles and was somewhat distressed on arrival The initial treatment consisted in keeping the patient quiet in a loose box and administering a little belladonna in the drinking water. As trismus became very much more marked, on June 18th intracerebral injections of antitetanin were resorted to. Under antiseptic precautions and cocaine anæsthesia a small circular hole was made through the right parietal bone with an Archimedean drill, and by means of an ordinary hypodermic syringe three cubic centimetres of antitetanin were injected right into the substance of the cerebral hemisphere. The wound was dressed with iodoform and cotton-wool 24 hours later there was a marked abatement of the tetanic symptoms which gradually disappeared within the next 10 days, the pony making an excellent recovery On August 7th there was only a small scar to indicate the seat of operation. The animal was a trick pony belonging to a travelling circus, and it had not forgotten its performance, showing that its mental capacity was not affected in any way, and at no time was there any sign of ill effect from the injection into the brain substance. The second case was that of a hunter which had received a punctured wound in the heel on Nov. 2nd. Tetanus supervened on the 23rd, and by the 26th trismus was very marked, the spasms being very severe. On this date eight cubic centimetres of antitetanin were injected directly into the cranium to a depth of two inches. Immediately after the withdrawal of the needle the horse became very violent and appeared as though it were in an epileptic fit. These symptoms passed off in about five minutes, but it was impossible to dress the wound on the forehead thoroughly. The next day the symptoms had considerably lessened and on Dec. 8th the horse was able to go to walking exercise. As a general rule, if recovery takes place, the horse is at least a month or six weeks before being able to *leave the infirmary. In both the above cases the duration* was scarcely three weeks. These are the first cases which have been recorded in veterinary practice in England. Although a definite opinion can scarcely be formed from two cases, the results are sufficiently encouraging to show that this treatment is worthy of an extended trial.

## THE LIVERPOOL SCHOOL OF TROPICAL MEDICINE: DEPARTURE OF MAJOR RONALD ROSS FOR WEST AFRICA.

MAJOR RONALD ROSS, F.R.S., late I.M.S, sailed from Liverpool on Feb 22nd to join the expedition which is now engaged in sanitary work on the West Coast of Africa under the auspices of the Liverpool School of Tropical Medicine Major Ross has gone out to make an examination of the drainage operations now being carried out in Sierra Leone, and he intends also to prepare statistics as to how the work is progressing. He also purposes to inquire carefully whether any change for the better has taken place in the health of the natives. Among other places he will proceed to the Gambia to examine the drainage there. Sir George Denton, the Governor of the Gambia, and his staff have been engaged for some time in carrying out drainage operations in that colony. Dr. Logan Taylor has been in Sierra Leone for the past eight months and fortunately he has not suffered from malaria—a fact which points to the success of the drainage operations carried out under his directions. Major Ross intends to return to Liverpool at the end of April. Prior to his departure for West Africa he expressed the opinion that if the Government continued the work of drainage and pushed forward other improvements the health of the natives would be considerably improved and the health of the resident Europeans in West Africa would also be safeguarded. Major Ross was seen off by Mr. William Adamson (vice-chairman of the school), by Professor R. W. Boyce of University College, Liverpool, by several students of the school, and by a number of gentlemen who have taken an interest in the work of the expedition.

## INTRACRANIAL PRESSURE AND CEPHALALGIA IN BRIGHT'S DISEASE, WITH REFERENCE TO TREATMENT.

DR. G SCHERB in the *Revue Neurologique* of Jan. 1st last refers to the intense and agonising headache and cerebral toxæmia of Bright's disease and deals with the method of treatment by lumbar puncture which he believes to give almost complete relief. He refers to the recent observations of Dr Marie and Dr. Guillain of Paris who in the case of a patient *suffering from intense cephalalgia of the kind alluded* to above obtained great relief after lumbar puncture, and he cites a second case, confirmatory of the same, published by Legendre. Dr Marie has since then collected five other cases similarly and successfully treated for intense cephalalgia in Bright's disease and Dr. Scherb adds another rare and interesting case illustrating the method and results of treatment The patient was a man, aged 49 years, who suffered from Bright's disease with intense headache and pain in the occipital region of the head which utterly prostrated him

Watson Cheyne, President of the Pathological Society, and Mr. A. D. Fripp. A very enjoyable part of the evening's entertainment was contributed by Dr. A. G. Haydon who gave a violin solo.

### PRIMARY INTESTINAL TUBERCULOSIS IN CHILDREN.

DISCUSSING the question of the transmission of tuberculosis from cattle to the human subject Dr. David Bovaird, jun., of New York, remarks on the scantiness of the evidence to show that tuberculous milk has produced tuberculosis in children. In a paper read before the New York Academy of Medicine which is published in the December number of the *Archives of Pediatrics* he says that he has not been able to find records of more than 22 such cases, the references to which he gives. Moreover, according to most authorities, primary tuberculosis of the intestine is rather unusual. German and French reports unanimously take the view that when tuberculosis attacks children the infection enters by the respiratory tract in almost all cases. Three American reports, based on a total of 369 cases, all from New York city or its environs, give five cases of infection by the intestine—i.e., a fraction over 1 per cent. These reports were published in 1891 by Dr. Northrup, in 1896 by Dr. Holt, and in 1899 by Dr. Bovaird. The English reports present a striking contrast to these figures, for out of a total of 748 cases, 136, or 18 per cent. were cases of primary intestinal infection. Of the articles referred to by Dr. Bovaird as the English reports, one by Dr. G. S. Woodhead appeared in THE LANCET of July 14th, 1888, p. 51; another by Dr. J. W. Carr in THE LANCET of May 12th, 1894, p. 1177; and a third by Dr. L. G. Guthrie in THE LANCET of Feb. 4th, 1899, p. 286.

THE International Dermatological Congress, which was originally meant to take place in 1903 in Berlin, has been postponed till 1904, so that it may not clash with the General International Medical Congress which is to meet in Madrid in 1903. The International Dermatological Congress will meet in September, 1904, under the presidency of Professor E. Lesser. The general secretary of the Congress is Dr. O. Rosenthal, Berlin, to whom all communications should be addressed.

ON Wednesday, March 5th, at 8.30 P.M., at the rooms of the Medical Society of London, Dr. G. V. Poore, the President of the Life Assurance Medical Officers' Association, will shortly review the work of the society and will introduce a discussion on the Influence on Life Assurance of a History of Appendicitis and Insanity.

## LONDON'S PROTECTION AGAINST SMALL-POX.

### A SPECIAL INQUIRY MADE FOR THE LANCET.

ALTHOUGH more than a century has elapsed since Jenner placed in the hands of the medical profession an infallible protection against small-pox the authority in which is vested the control of infectious diseases in London is to-day pressing forward its preparations with all speed to cope with the not unlikely event of a greatly increased prevalence of the malady in the spring of this year. If we have to confess that our effort to eradicate small-pox from our midst has, thanks to the action of the anti-vaccinationists, been a failure we can at least claim with truth that we have not only enormously diminished the extent of its habitual prevalence in the community but also have lengthened the intervals between its epidemic outbursts.

We who live in the twentieth century, perhaps, scarcely realise the large share of deaths claimed by small-pox annually in pre-Jennerian times. In the eighteenth century Hahn asserted that 80 out of every 1000 deaths were caused by variola. De la Condamine held it responsible for 10 per cent. of the deaths in France; while Colin stated that its death toll numbered between 60,000 and 72,000 annually in the same country. In London the average death-rate per 1,000,000 from all causes in 1771–1780 was 50,000; and from small-pox 5020 per 1,000,000. From 1872 to 1890 the annual deaths per 1,000,000 from all causes averaged 21,400; and from small-pox during the same period 178. Since the introduction of vaccination the fraction contributed by small-pox to the total mortality has been reduced from $\frac{1}{10}$th to $\frac{1}{120}$th.

As regards its epidemic prevalence in London we find that during 47 years of the seventeenth century there were 15 outbreaks, and during the whole of the eighteenth century 34 epidemics. This gives a periodicity of one year in every three. The records of other cities show but little improvement on this state of affairs. Thus in Copenhagen in the latter half of the eighteenth century there were epidemics once in four years, in Geneva once in five years, in Edinburgh once in three years, and in Boston, U.S.A., once every fourth year. Coming to our own times we find that since 1870 there have occurred in London epidemics in 1871–1872, 1877–1878, 1881, 1884–1885, and 1893. So that during the last 32 years we have passed through five epidemics and are now on the threshold of a sixth. This is a gain of which we cannot boast much.

During the first five months of 1901 small-pox may be said to have been practically absent from London. From March up to May 29th not a single case occurred. On the last-mentioned day a patient was admitted from Islington, on June 10th one from Whitechapel, on June 29th one from Hackney, and on June 28th and 29th one on each day from Wandsworth. During July and up to August 21st single cases were notified from various parts of London. From this date onwards the disease obtained a hold on St. Pancras and Marylebone, and very soon afterwards cases were admitted from every one of the 31 Poor-law parishes and unions comprising the Metropolitan Asylum District.

In taking its rise during the late summer and spreading over London through the autumn and winter the present epidemic is considered to have pursued a most unusual course. In an ordinary way small-pox is most prevalent during the first seven months of the year, and especially so in the spring. Thus, during 1893 the bulk of the patients were admitted between January and the end of July. During that epidemic the largest number of patients under treatment on any one day occurred on May 15th when they reached 571; and the largest number—viz., 536—were also admitted to the hospitals during the same month. From the report of Dr. Brooke, who was stationed at the wharves in 1893, we gather that the number of admissions from March to July were for each month respectively: March, 241; April, 413; May, 511; June, 312; and July, 200.

Dr. Long, the second medical officer of the river ambulance service, who compiled the history of the epidemic of 1893, placed its start at the end of October, 1892. From that date it gradually increased until, by the end of January, 1893, there were foci of infection everywhere east of a line running north and south through Euston Station. Not long after this the disease had cropped up everywhere in the metropolis. As regards the seasonal prevalence a very similar course was followed in the other epidemics since 1871. If we may argue, therefore, from our experience in former years we must look forward, not to a decline, but to a serious increase of small-pox in the near future.

As small-pox is not only permanently established in London but is liable to attack the city in epidemic form it is necessary that the Metropolitan Asylums Board should make provision for the reception of patients, not only when the disease prevails to an average extent, but also that its resources should be sufficiently elastic to enable it to cope successfully with the most formidable of epidemics. What the exact amount of accommodation ought to be which the Board should have at its disposal is, however, by no means an easy question to answer, as the fluctuations in the amount of small-pox prevailing are enormous. Thus in 1884 and 1885 there were over 6000 cases under treatment annually; whereas in 1889 and 1898 only five persons suffered from this disease during each of these years. Nevertheless, to be of real use the Board must keep an isolation hospital in constant readiness, whether there are patients to occupy it or not. It is calculated that this provision will cost London £10,000 per annum—apparently a considerable outlay, but small when we remember that the but carrying out the principles laid down by him. In forthcoming numbers we hope to publish both the oration and the lecture referred to.

## THE DISTRIBUTION OF PLAGUE.

A TELEGRAM from the Governor of the Mauritius received at the Colonial Office on Feb 21st states that for the week ending Feb. 20th there were 13 cases of bubonic plague, of which 11 proved fatal. As regards Egypt during the week ending Feb. 16th 8 cases and 8 deaths from plague have been reported from all Egypt. 6 cases and 7 deaths were reported from Tantah and 2 cases and 1 death from Kom-el-Nur, a village near Mit-Ghamr. All these cases and deaths occurred among the native population. 5 of the deaths at Tantah and the one at Kom-el-Nur occurred out of Hospital.

## THE VACCINATION LEAGUE.

THOSE who are desirous of obtaining free literature dealing with the advantages of vaccination, or of organising popular illustrated lectures on the subject in their respective districts, should apply to the offices of the Vaccination League, 110, Strand, W.C Among the influential names recently added to the long list of vice-presidents of the Vaccination League are those of the Bishop of London, Archdeacon Sinclair, and Lord Newton. It will be remembered that Lord Newton recently introduced a Bill into the House of Lords on the subject of Vaccination

## ST. BARTHOLOMEW'S HOSPITAL AND CHRIST'S HOSPITAL.

LORD BALFOUR of BURLEIGH, the appointed arbitrator in the dispute between the authorities of St. Bartholomew's Hospital and Christ's Hospital, gave his decision on Feb 25th St Bartholomew's Hospital is given an area of 67,680 square feet at a cost of £238,781. Our readers will remember that in our issue of August 11th, 1900, p. 408, we published a map of the area in dispute The area now awarded is slightly in excess of that marked in the map St. Bartholomew's Hospital originally offered £117,000 for about 1½ acres. It now has to pay £238,781 for an area of a little more than 1½ acres, being an excess of £121,781.

## TYPHOID FEVER AT PHILADELPHIA.

FOLLOWING upon the winter rains, the disturbance of mud, and deposits by the torrential flow in the water-courses, another epidemic of typhoid fever has broken out in Philadelphia; and in the havoc achieved this disease is running a neck-to-neck race with diphtheria and small-pox. The city Bureau of Health reports that during January 334 cases of diphtheria, 433 cases of small-pox, and 432 cases of typhoid fever were notified. But during the week ending Feb. 1st there were 201 cases of typhoid fever and this already outstrips last year's record. The worst weeks in 1901 were those ending on May 25th with 142 cases and on August 31st with 152 cases. The water-supply is considered to be the cause of the present as it was of the previous epidemic, and 600 men are now employed, working day and night, in the construction of new filtering beds which are to yield 6,000,000 gallons every 24 hours But when the beds are completed the water must remain there for some time so as to press down the filtering materials and to impart sufficient compactness to ensure perfect filtration. Even when this is achieved the water can only be delivered at the low levels Another filtering bed of the same capacity is in course of construction at a higher level, and it will be necessary to pump the water up to this point. These more extensive works will not be completed till the month of May at the earliest, so that there is still ample time for the epidemic to spread. Considering the emphatic warning given by the numerous epidemics of typhoid fever which have occurred at Philadelphia it is difficult to explain why so important a city has been left for so long without a proper and safe water-supply.

## BRITISH CHILD-STUDY ASSOCIATION.

THE report of the committee of the London branch of the British Child-Study Association for the year 1901, of which Dr. Fletcher Beach is president, has just been issued. It states that 115 new members joined the branch during the past year, bringing the total of the roll to 216. The object of this association is to gather and to spread information about the life and training of children by (1) collecting records of careful observations of individual children; (2) collecting personal reminiscences of childhood; and (3) tabulating the results of studies of papers written by children These collections and the results so obtained are carefully studied and as far as possible conclusions are drawn from them. Various circles for study are also formed in connexion with the society, and lectures are delivered once a month in the Ruskin Room of the Sesame Club, Dover street, Piccadilly, W. The subscription is 2s 6d. a year, which entitles the member to a copy of the *Paidologist* the official organ. We regret to note that the subscriptions last year did not cover the expenses An association which does such good work ought not to be in need of funds, and we feel sure that if the association were better known to the public adequate support would be forthcoming.

## THE ANNUAL DINNER OF THE WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

THE West London Medico-Chirurgical Society held its annual dinner on Feb 19th at Frascati's Restaurant, Oxford-street, W. The President of the society, Mr. A Cooper, occupied the chair. The Director-General of the Army Medical Department, Surgeon-General W. Taylor, C B., in acknowledging the toast of "The Imperial Forces," proposed by Mr. C B. Keetley, said that he did not think that his was the only department that had shown shortcomings, and he was sure that the officers and men of the Royal Army Medical Corps could hold up their heads equally well with the members of any other department of the army. The officers of his department were members of the medical profession and they felt that the sympathy which they received from its civil members was their greatest reward. Dr. W. H. Allchin (President of the Medical Society of London), who replied to the toast of "The Kindred Societies" given by Mr. Swinford Edwards, referred to the relationship that existed between the Medical Society of London and the West London Medico-Chirurgical Society in that both were founded to embrace all branches of the profession. Mr. L. A Bidwell proposed "The Guests" which was replied to by Sir J. Crichton Browne who discoursed upon the appalling flood of medical literature Daylight and midnight oil, he said, could not suffice to carry a man through even a small portion of the works published, and he was compelled, like a swallow, to flit here and there and to pick up a miscellaneous cropful of undigested medical and surgical information. The toast of "The President" was proposed by Dr James B. Ball and that of "The Officers of the Society" by Dr. F. J. McCann The latter was acknowledged by Mr. H Percy Dunn, the editor of the journal of the society, and by Dr. L C. T Dobson, the senior secretary, who said that at their next meeting the number of the members would be over 600. Among the guests were Sir William Church, President of the Royal College of Physicians of London; Mr. H. G. Howse, President of the Royal College of Surgeons of England; Mr. W.

put to bed in one of the wards. A mild case is in a few days' time again put on board a steamer and carried to the opposite shore, whence he is conveyed by ambulance to the Upper Gore Farm Hospital. Bad cases are detained at the ships and when convalescent are drafted on to Gore Farm. When the permanent hospital at Joyce Green is finished and the ships are no longer in use the patient on arriving at the pier, Long Reach, will be lifted on his stretcher in a tramcar, and conveyed either to Joyce Green or, if there be no room there, to the Orchard Hospital, with which it is connected by a branch line. A patient will thus be carried on a stretcher from his own home in London and deposited in the Board's hospital at Dartford without being disturbed from the recumbent posture.

Every visitor to a patient—visitors being allowed only in the case of a patient who is dangerously ill—is pressed to be vaccinated, but acceptance of vaccination is not insisted on as a *sine quâ non* before seeing the sufferer. The precaution, however, is taken of forwarding the names and addresses of all visitors, whether vaccinated or not, to the medical officer of health in whose district they live.

The wealth of clinical material in the Board's small-pox hospitals has up to the present been practically wasted as a means of instruction. but arrangements are now being made for teaching medical students and qualified practitioners the diagnosis and treatment of variola by demonstration of typical cases. Every attendant at these classes must satisfy the medical superintendent that he has been efficiently revaccinated fairly recently or is protected otherwise against small-pox, and must observe the rules regarding clothing and disinfection while in the hospital.

We have endeavoured in this article, after sketching the history and growth of the present epidemic, to show what resources the Board had at its command to cope with the outbreak at its start and to trace the steps by which the managers of the Hospital Committee have strenuously endeavoured to grapple with the storm that threatened to overwhelm them. From a personal inspection of the Board's hospitals we can testify that the managers have the epidemic well in hand and that there was no overcrowding at the hospitals. We feel sanguine that the Metropolitan Asylums Board will accomplish the ideal it has set itself—viz., to extend its protection to every patient who seeks its help.

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# THE METROPOLITAN WATER-SUPPLY.

## THE EAST LONDON WATERWORKS COMPANY: SOME QUESTIONS FOR THE PRESIDENT OF THE LOCAL GOVERNMENT BOARD.

IT may be useful at the present time to recall certain facts in regard to the history and present condition of this company. From these it will be seen that—

1. The sources of supply of the company are inadequate.

2. The arrangements made by the company for the purification of the water which it abstracts from the Thames are unsatisfactory.

1. In regard to the first point it may be well to give a brief quotation from the last published annual report of the Water Examiner appointed by the Local Government Board.[1] It may not be out of place here to point out that the reports of this gentleman usually place the proceedings of the companies in the most favourable light possible. To cite one example only, from the last annual report, given in regard to the East London Company (p. 245), it is said: "The waste of water in the district is very considerable and there is great difficulty in controlling it." This statement evidently came from officials of the company, whose ideas of waste do not always correspond with those of water consumers. The fact that the East London Waterworks Company has failed in successive years to supply its customers may, however, best be given in the words of the official record: "In 1895 and 1896 and again in 1898 and 1899 ...... the East London Company owing to the inadequacy of their storage reservoirs were unable to deliver from their own sources of supply sufficient water to meet the requirements of their district. During the summer of 1895 an interruption in the constant supply took place which culminated on July 15th in the shutting off of the water-supply of the whole district, containing a population of 1,200,000, during 21 hours out of every 24." A constant service was not fully restored until Oct. 8th. In the year 1896, on July 17th, the company reverted to an intermittent system of supply, which was continued until Sept. 19th. On August 22nd the supply given again became intermittent and was reduced to two periods of three hours each daily. This state of things continued until Sept. 3rd, when the daily supply was further reduced to two periods of two hours each. Constant service was not given throughout the whole district until Dec. 14th. The condition of things in the East-end would have been more distressing than it actually was had it not been that water was obtained from some of the other metropolitan companies. The New River Company did not take its full draught from the Lee and the water was allowed to flow down to the East London Waterworks Company's intake. The Southwark and Vauxhall Company pumped water through a main which was quickly laid through the Tower Subway for the supply of the low-lying district just north of the Thames. The Kent Company sent some water through the Blackwall Tunnel for the supply of the Limehouse district. From July to November inclusive the East London Waterworks Company received no less than 1,158,010,000 gallons of water from sources other than its own; "but it may nevertheless be assumed," says the Water Examiner, "that during this period the supply was short of the demand to the extent of from 700 to 750 million gallons." During the summer of 1899 the sources of the East London Waterworks Company again proved inadequate, and from July to November inclusive no less than 1,898,846,000 gallons were received from other companies. Since this date improvements have been made, but the sources of supply of the company are still insufficient, as a study of the periodical reports of the Water Examiner clearly shows. The annual report will not presumably be published for some months, and the table which is given here has been compiled from the monthly reports.

*Table showing the Sources of the Water Supplied by the East London Waterworks Company and the Average Daily Amount derived during each Month of the Year 1901. (Compiled from the Tables given in the Monthly Reports of the Water Examiner to the Local Government Board.)*

| Month. | Sources. | | | | | Total. |
|---|---|---|---|---|---|---|
| | Lea and Storage. | Thames. | Hanworth Springs. | Wells. | Wells "per New River Company." | |
| Jan. | 23,559,000 | 7,731,000 | 1,543,000 | 6,688,000 | — | 39,521,000 |
| Feb. | 23,260 000 | 8,469,000 | 1,390,000 | 5,837,000 | — | 38,956,000 |
| March | 27,736,000 | 5,282,000 | 1,265,000 | 3,720,000 | — | 38,003,000 |
| April | 28,561,000 | 5,103,000 | 1,345,000 | 3,773,000 | — | 38,782,000 |
| May | 27,939,000 | 6,489,000 | 1,512,000 | 5,531,000 | — | 41,521,000 |
| June | 21,277,000 | 11,968,000 | 1,521,000 | 10,367,000 | — | 45,133,000 |
| July | 11,663,000 | 19,126,000 | 1,573,000 | 12,148,000 | 2,636,000 | 47,146,000 |
| August | 10,724,733 | 19,107,000 | 1,519,000 | 10,642,000 | 3,745,267 | 45,738,000 |
| Sept. | 9,928,264 | 19,317,000 | 1,544,000 | 11,799,000 | 1,740,736 | 44,329,000 |
| Oct. | 12,393,000 | 16 058,000 | 1,595,000 | 12,000,000 | — | 42,051,000 |
| Nov | 17,323,000 | 8 895,000 | 1,599,000 | 11,356,000 | — | 39,173,000 |
| Dec. | 19,829,348 | 7 151,000 | 1,524,000 | 8,207,000 | 443,652 | 37,155,000 |

2. The second point to which we wish to direct attention is that the arrangements at the Thames station of the company are inadequate to insure the purification of the water treated. The Thames water is pumped from Sunbury to Hanworth. The station at Hanworth possesses a "subsiding and storage reservoir" capable of holding 5,000,000 gallons of water. From this reservoir the water passes to the filter beds, of which there are six, which have a total area of five acres. It therefore practically happens that Thames flood water is introduced to the filter beds without undergoing the preliminary purification caused by subsidence.

Is the President of the Local Government Board aware that the Balfour Commission held that the water which flows down to the intakes of the companies "must be subjected to certain important processes before it can be brought into a suitable condition for delivery and consumption," and that epidemic in 1884 cost about a quarter of a million of money from the loss of lives and dislocation of trade.

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[1] Thirtieth Annual Report of the Local Government Board, 1900–1901. London, 1901.

In July, 1896, the Metropolitan Asylums Board submitted to the Local Government Board plans for the erection of a permanent small-pox hospital at Joyce Green for a total number of 940 beds—a number which the Board considered a not unreasonable provision for future contingencies. The Local Government Board, however, at that date declined to consider the proposal and held that the erection of pavilions should be limited to the accommodation of 400 patients only, any extra room to be provided for by the erection of temporary buildings in case of an epidemic. With this partial sanction of its scheme the Metropolitan Asylums Board was forced to rest content and instructed its architect to press on at once with the erection of 10 blocks for the reception of 436 beds, and with buildings for the accommodation of officers, nurses, and servants, kitchen and laundry. At the same time provision for heating, lighting, water, and drainage was provided for on a scale suitable for 940 beds. In November, 1901, in the face of a growing epidemic, the sanction of the Local Government Board was obtained for the erection of the remaining 12 blocks to hold 504 patients

The Joyce Green Hospital stands upon an inclosure of 100 acres of ground and consists of 22 pavilions built on each side of the arms of a wide V. There will be four isolation blocks capable of holding 60 patients whom it may be necessary to remove from the general wards for one reason or another. The wards are of an oblong shape and will contain 20 beds each with an adjoining room for two more patients who may be delirious or too seriously ill to be amongst the rest. There is a nurse's room at the end of each ward from which she is able to command a view of the whole through glass windows. The lavatories and a bathroom are separated from the ward by a lobby with cross ventilation. There are other blocks for the medical staff and employés and a house for the nurses in which each nurse and assistant nurse will have her own room. The hospital is lighted by gas and warmed by steam. It is provided with its own destructor furnace and a Lyons disinfecting chamber. The hospital will be supplied with water from the company's mains, but is provided with a reserve tank capable of storing 50,000 gallons of water. The total cost of the building will be £299,798, or about £320 per bed. It is probable that the first section of 10 blocks will be ready to receive patients in six months time. It is therefore doubtful whether this hospital will be of much use during the present epidemic.

We have seen that in 1896 the Metropolitan Asylums Board considered that the minimum permanent provision which it ought to have at its disposal for small pox should be 940 beds. Through no fault of its own the execution of this scheme was delayed; and at the outbreak of the present epidemic in the autumn of last year the Board found itself face to face with the unpleasant fact that it had only 250 available beds for small-pox at the hospital ships. The Royal Commission in 1882 gave it as its opinion that about 2700 beds should be provided for small-pox in London, the population of which then numbered about 3,900,000. Obviously, for the present epidemic spreading amongst a population of 4,500,000, at least that number would have to be got ready. The Board's only other available hospital, the Upper Gore Farm, was at that time being used for fever patients In the early autumn this hospital was cleared of those patients and disinfected; and on Oct. 30th small-pox patients were admitted to it On Nov. 2nd the Board ordered the erection of additional staff and isolation quarters at Gore Farm, and thereby freed the rest of the hospital for small-pox cases and secured a total of 1000 beds, making in all 1250 beds available

As small-pox showed no signs of decreasing the Board on Nov. 2nd determined on the erection of a temporary hospital at Long Reach, capable of holding 300 patients The Long Reach Hospital is built close to the banks of the river and consists of 12 blocks with additional pavilions for administrative and isolation purposes Each of the 12 blocks contains 24 beds and is built with a double wooden floor with felt between The walls are of weatherboarding lined with felt and finished on the inside with matchboard The roof is also lined with felt and covered with a thick waterproof cloth The blocks stand on footings of brick resting on a solid bed of concrete. Heating is by steam-pipes and the lighting is by gas. Close to the floor and near the steam-pipes are inlet ventilators, the outlet ventilators being the windows and shafts in the roof.

In the early part of January, 1902, the Board further ordered the erection of the Orchard Hospital for 800 beds on the Joyce Green estate. This hospital will be a temporary wooden structure built in pavilions arranged in three parallel lines, very much after the pattern of the hospital at Long Reach. The Shone system will be adopted in the disposal of the sewage of this hospital.

Finally, the Lower Gore Farm Hospital with 190 beds will also be pressed into the service of the small-pox hospitals, and orders for its extension have already been given, which when completed will bring the Board's total available small-pox provision to 3200 beds. The beds will be distributed as follows: hospital ships, 250; Long Reach, 300; Orchard, 800; Upper Gore Farm, 1000; and Lower Gore Farm, 850.

The present epidemic will probably be the last occasion on which the ships will be used as small-pox hospitals. We may therefore say a few words here as to their history and structure and as to the reasons that have induced the Board to discontinue their use. The hospital ships consist of three vessels, the *Atlas* and *Endymion*, which were purchased in 1881, and the *Castalia*, which was purchased in 1884. The two former were originally built for the navy, and the latter was a twin ship intended for service between Calais and Dover, for which she proved unsuitable. The *Atlas* and *Castalia* are used for patients and the *Endymion* for administrative purposes only. The three ships are connected together and moored in the Thames off Long Reach. Upon the upper deck of the *Castalia* five huts have been erected obliquely across the long axis of the vessel. These huts form the wards of the upper hospital, the lower hospital consisting of one single ward which runs the whole width of the vessel. There is one isolation room on the lower deck and two on the upper deck. At each end are lavatories, bath-rooms, reception rooms, &c. A laundry and other administrative buildings have been erected on shore close to the ships. Time and weather have told heavily on the ships, and they now stand greatly in need of considerable repairs. The extent of the latter cannot be gauged until the vessels have been dry-docked and overhauled thoroughly, but it is certain that if efficiently carried out several thousand pounds would have to be expended. The Board are of opinion, however, that for a small outlay the ships can be patched up sufficiently to enable them to continue in use until the permanent hospital at Joyce Green is ready Moreover, ships are an excessively costly form of hospital to administer, their upkeep, exclusive of patients' maintenance, entailing an annual expenditure of £9500. We might mention, amongst other disadvantages, the risks of delirious patients jumping overboard, the possibility of collision with passing vessels, and the dangers of fire. All these accidents have happened during the period the ships have been in use Again, quite recently they have been accused of disseminating small-pox at Purfleet and Orsett, and there seem to be good reasons in support of this view, as appeared from the report of Dr. J. C. Thresh which was published in THE LANCET of Feb. 22nd, p. 495

Not the least serious and important of the questions relating to small-pox is that of the disposal of the dead The Board have decided that this shall be by burial within the grounds of the Joyce Green Hospital. For this purpose a site three acres in extent has been fenced off at the south-east corner of the estate and laid out as a cemetery. At the present time it is impossible to see what other course the Board could have adopted than earth-burial. Possibly at some future time, when public opinion has been educated up to it and relatives' feelings will be less shocked by the proposal, a scheme may be formulated for the disposal by cremation of the bodies of all patients dying not only from small-pox but from other infectious diseases.

We may now briefly describe the steps whereby a patient suffering from small-pox is removed from his home and obtains admission to the Board's hospital. On receiving notice of the occurrence of a case of small-pox in a house within the Metropolitan Asylums district an ambulance with a nurse is despatched to the address. The patient, wrapped in blankets, is placed lying down at full length in the ambulance and is driven to the South Wharf, Rotherhithe. Here he is inspected by Mr. W. McC. Wanklyn, an expert in the diagnosis of small-pox. If the patient is found not to be suffering from small-pox he is sent back. Should the case be doubtful he is detained at the shelter until such time as the diagnosis becomes clear If the case be one of undoubted variola he is carried on his stretcher and placed on board a river ambulance steamer and conveyed down the Thames to the ships at Long Reach. Here he is in Newcastle, 32·7 in Plymouth, and 36·2 in Merthyr Tydfil. The 6959 deaths in these towns last week included 581 which were referred to the principal zymotic diseases, against 584 and 525 in the two preceding weeks; of these 581 deaths 145 resulted from measles, 139 from whooping-cough, 99 from diphtheria, 69 from small-pox, 49 from scarlet fever, 44 from "fever" (principally enteric), and 36 from diarrhœa. No death from any of these diseases was registered last week in Hornsey, Hastings, Aston Manor, Newport (Mon.), or Swansea; while the highest zymotic death-rates were recorded in Brighton, Hanley, Burton-on-Trent, Bootle, Burnley, Rotherham, Stockton-on-Tees, and Merthyr Tydfil. The greatest proportional mortality from measles occurred in Stockport, Burnley, Preston, and Merthyr Tydfil; from scarlet fever in Tottenham, South Shields, and Newcastle; from diphtheria in Hanley, Burton-on-Trent, King's Norton, and Stockton-on-Tees; from whooping-cough in Brighton, Bournemouth, Birmingham, Coventry, Bootle, and Gateshead; and from diarrhœa in St Helens. The mortality from "fever" showed no marked excess in any of the large towns. 69 deaths from small-pox were registered last week and of these 64 belonged to London, two to Tottenham, two to West Ham, and one to East Ham. The number of small-pox patients under treatment in the Metropolitan Asylums hospitals, which had been 1102 and 1185 on the two preceding Saturdays, had further risen to 1321 at the end of last week; 502 new cases were admitted during the week, against 499, 287, and 390 in the three preceding weeks. There were 2406 scarlet fever cases under treatment in these hospitals and in the London Fever Hospital on Saturday, Feb. 22nd, against numbers decreasing from 3137 to 2455 on the eight preceding Saturdays; 219 new cases were admitted during the week, against 226, 277, and 260 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 375, 486, and 681 in the three preceding weeks, further increased last week to 885, and were 363 above the corrected average number. Influenza was stated to be the primary cause of 107 deaths in London last week, against 26, 40, and 51 in the three preceding weeks. The causes of 101, or 1·4 per cent., of the deaths in the 76 towns last week were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Leicester, Nottingham, Salford, and 35 other smaller towns; the largest proportions of uncertified deaths were registered in Liverpool, St. Helens, Warrington, Halifax, South Shields, and Newport (Mon.).

### HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 21·8, 23·9, and 23·6 per 1000 in the three preceding weeks, rose again to 25·3 per 1000 during the week ending Feb. 22nd, and exceeded by 0·9 the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 22·1 in Edinburgh and 23·7 in Paisley to 28·4 in Leith and 37·1 in Greenock. The 817 deaths in these towns included 22 which were referred to diarrhœa, 20 to whooping-cough, 17 to measles, seven to small-pox, six to diphtheria, six to "fever," and three to scarlet fever. In all 81 deaths resulted from these principal zymotic diseases last week, against 83 and 66 in the two preceding weeks. These 81 deaths were equal to an annual rate of 2·5 per 1000, which was 0·5 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of diarrhœa, which had been 23 and 16 in the two preceding weeks, rose again last week to 22, of which 12 occurred in Glasgow, five in Dundee, and three in Edinburgh. The deaths from whooping-cough, which had been 19, 17, and 20 in the three preceding weeks, were again 20 last week, and included 15 in Glasgow and four in Aberdeen. The fatal cases of measles, which had been 23, 19, and 12 in the three preceding weeks, rose again last week to 17, of which seven were registered in Glasgow, four in Greenock, three in Dundee, and two in Paisley. The deaths from small-pox, which had been one, one, and two in the three preceding weeks, further rose to seven, and included six in Glasgow and one in Perth. The fatal cases of diphtheria, which had been eight and three in the two preceding weeks, rose again last week to six, of which three occurred in Greenock. The deaths referred to different forms of "fever," which had been three, five, and 10 in the three preceding weeks, declined again to six last week, and included four in Glasgow. The deaths attributed to diseases of the respiratory organs in these towns, which had been 141, 173, and 211 in the three preceding weeks, further increased last week to 224, and were 47 in excess of the number in the corresponding period of last year. The causes of 21, or nearly 3 per cent., of the deaths in these eight towns last week were not certified.

### HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 22·7, 23·8, and 25·7 per 1000 in the three preceding weeks, further rose to 33·3 per 1000 during the week ending Feb. 22nd. During the past four weeks the death-rate has averaged 26·4 per 1000, the rates during the same period being 24·1 in London and 22·2 in Edinburgh. The 242 deaths of persons belonging to Dublin registered during the week under notice showed an excess of 55 over the number in the preceding week, and included 11 which were referred to the principal zymotic diseases, against four, five, and 11 in the three preceding weeks; of these, three resulted from measles, three from "fever," two from whooping-cough, two from diarrhœa, and one from diphtheria. These 11 deaths were equal to an annual rate of 1·5 per 1000, the zymotic death-rates during the same period being 2·5 in London and 1·0 in Edinburgh The fatal cases of measles and of diarrhœa corresponded with the respective numbers in the preceding week, while the deaths from whooping-cough showed a slight decrease and those from "fever" an increase. The 242 deaths in Dublin last week included 39 of children under one year of age and 79 of persons aged upwards of 60 years; the deaths both of infants and of elderly persons showed a considerable excess over the numbers recorded in the preceding week. Four inquest cases and six deaths from violence were registered; and 101, or more than two-fifths, of the deaths occurred in public institutions The causes of eight, or more than 3 per cent., of the deaths in Dublin last week were not certified.

## THE SERVICES.

### ROYAL NAVY MEDICAL SERVICE.

Surgeon Philip Nicholas Randall has been allowed to withdraw from His Majesty's Naval Service with a gratuity.

### ROYAL ARMY MEDICAL CORPS.

Major Richard E. Kelly is placed on temporary half-pay on account of ill-health. Dated Feb. 6th, 1902.

Lieutenant A. J. Williamson is placed under orders for South Africa. Lieutenant-Colonel E. Fiset, Canadian Army, joins the depôt at Aldershot for a course of instruction Surgeon-Lieutenant M. Cholmeley is posted to the 3rd Station Hospital, Aldershot, for duty.

Captain C. E. Pollock assumes medical charge of troops, Station Hospital, &c., Glencorse, vice Surgeon-Captain G. Melville, A.M.R.

### ROYAL ARMY MEDICAL CORPS (MILITIA).

The undermentioned gentlemen to be Lieutenants:—Hewitt John Lysaght Bullen and John White Hopkins.

### IMPERIAL YEOMANRY.

Nottinghamshire (Southern Nottinghamshire): The undermentioned officer resigns his commission and receives new commission, subject to the provisions of the Militia and Yeomanry Act, 1901, retaining his present rank and seniority: Surgeon-Captain H. Williams. Westmoreland and Cumberland: Surgeon-Captain J. E Bowser resigns his commission.

### VOLUNTEER CORPS.

*Rifle:* 2nd Volunteer Battalion the Essex Regiment: Brigade-Surgeon-Lieutenant-Colonel E. Shedd resigns his commission, with permission to retain his rank and to wear the uniform of the battalion on retirement, vacating at the same time the appointment as Senior Medical Officer to the Essex Volunteer Infantry Brigade

### ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

The Aberdeen Company: Lieutenant A. W. Mackintosh to be Captain. The Maidstone Companies: Captain C. P. Oliver to be Major, and to command under paragraph 55A Volunteer Regulations.

"these processes consist of subsidence and filtration, and the quality of the water delivered depends largely upon the thoroughness with which they are carried out?" Is the President of the Local Government Board aware that it is the duty of his department to ensure that "every company shall effectually filter all water supplied by them within the metropolis for domestic use before the same shall pass into the pipes for distribution"? Has the President of the Local Government Board ever caused any examination to be made of the water supplied from the Hanworth station of the East London Waterworks Company during periods at which the river was in flood? If he has not done so why has he not done so? If he has done so, when did he do so, and with what results?

## INDIAN PLAGUE COMMISSION, 1898-99.[1]

WE have to apologise for the delay which has occurred in the publication of our notice of this very exhaustive and important report and of the series of blue books connected therewith. All that we can fairly urge in explanation and mitigation thereof is to be found in such considerations as the nature of the task involving the consumption of much time and leisure in order to read the report and the difficulty of deciding as to the best method of arranging and expressing what we have to say on so large a subject in such a relatively small space as is at the disposal of a weekly journal to devote to it. We owe it to the President and members of the Commission and to our readers to state however that the length of our notice of these volumes is not to be taken as a measure of the time which we have given to the study of them. Still less should it be taken as fully expressing our opinion of the great value of the report and our high appreciation of the extent and very laborious nature of the work and duty undertaken by the Commission. In these respects it would be difficult to overestimate what has been accomplished for the report is so exhaustive that every point seems to have been considered and as far as it was possible to do so consistently with our present knowledge, the whole of the ground has been covered by the inquiry, with the result that the report will always take its place as a most valuable and scientific work of reference in connexion with the history of plague.

Since the advent of epidemic plague in China and India a great deal has been learnt as to what to do and still more, perhaps as to what not to do if we would steer clear of futility and needless sources of popular vexation and worry occasionally caused by public health measures. No one can read the report of the Commission without recognising that two of its striking features are the careful weighing of evidence and the *spirit of moderation* which it displays. Instead of seeking to reach some ideal standard which would be practically unattainable or recommending methods and procedures which would be well adapted to and could be effectively carried out in a scientific laboratory but would only prove vexatious and impracticable under the ordinary conditions of daily life the Commission has as it seems to us exercised much care and moderation in this respect. It has striven as far as possible, to avoid recommending a lot of measures which would prove an endless source of worry irritation, and unpopularity to the governing and governed classes alike and which in the end might not repay the cost of carrying them out.

The Commission had Professor T. R. Fraser, M.D., LL.D., F.R.S., professor of materia medica in the University of Edinburgh for its President with four other members and a secretary. Some idea may be formed of the formidable nature of the task undertaken and of the work done from the following fact. The report itself consists of 540 pages and with the minutes of evidence (printed in double columns) appendices summary, indices, and glossary, comprises five blue books containing altogether between 2000 and 3000 foolscap pages. The Commission arrived at Bombay on Nov. 26th 1898 and left India on March 25th 1899 after having made numerous journeys to places in that country where plague had prevailed and having personally initiated and conducted many bacteriological and other researches. During its inquiry in India the Commission held 70 sittings for taking evidence and examined 260 witnesses—without counting those who were recalled for examination. On leaving India arrangements were made, moreover, for carrying on and completing certain bacteriological and other investigations which were still in progress. It will be seen therefore that the Commission spared no pains to make its inquiries as searching and thorough as possible. The questions into which it was directed to inquire by the reference from the Government of India were:—(1) the origin of the different outbreaks of plague; (2) the manner in which the disease is communicated, (3) the effects of the curative serums of Yersin and Lustig respectively and (4) the effects of preventive inoculation.

The Commission was informed that it had been constituted for the purpose of conducting an investigation of a scientific character. It was found, however, that in the course of the inquiry a mass of evidence had been recorded which it was difficult to exclude but which could not be held to be strictly relevant to a purely scientific aspect of the subject. The Government of India while desiring that the scientific side of the inquiry should be the main one nevertheless accepted the necessity of taking evidence regarding facts of administration and left it to the discretion of the Commission to determine how far it was necessary to comment on the facts recorded in evidence. The report was to be not only for the information of the Indian Government but for that of other nations generally. The Commission was, in point of fact very wisely given a wide range of discretionary power as to the extent and conduct of its investigations and in the preparation of its report. The report is drawn up in two parts the first dealing in a somewhat amplified way with the four questions referred to, while the second part is devoted to a description of the measures actually adopted to deal with outbreaks of plague and to an inquiry about the possibility of making any improvement in them.

The general report is signed by all the members, but several subjects are taken up and discussed in separate and special memoranda furnished by the President and by some other members of the Commission respectively. The President in particular has put on record an able and valuable summing up and commentary on the evidence and his own conclusions in regard to many points which may we think be advantageously read and considered even by those who are wedded to a belief in the infallibility of a majority.

To take up and consider *seriatim* a number of points presenting themselves for review, as we had first thought of doing would extend our notice to great length. It would be futile to attempt to analyse an elaborate and voluminous report of this kind nor would it be doing justice to the labours of the Commission to select a very few points out of the numerous subjects and details which present themselves for consideration. The report must as it seems to us, be referred to and regarded as a whole in order to form any adequate idea of it. Happily it is well arranged and indexed and everything has been done that could be done for facility of reference. We can only speak of its general character. About this we do not think there can be two opinions. We have no hesitation in saying that the report is a very able exhaustive, and valuable public document. Whether people agree or disagree with everything laid down in it is after all, immaterial. The fact remains that no one interested in the subject of plague will be able to set aside such a mine of trustworthy, well considered information regarding the history of plague in India as these volumes afford.

## VITAL STATISTICS

### HEALTH OF ENGLISH TOWNS

IN 76 of the largest English towns 8341 births and 6959 deaths were registered during the week ending Feb. 22nd. The annual rate of mortality in these towns, which had been 17·9 20·6 and 22·6 per 1000 in the three preceding weeks, further rose last week to 24·4 per 1000. In London the death-rate was 29·3 per 1000, while it averaged 22·3 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 13·1 in Ipswich 13·4 in Derby and in Barrow-in-Furness, 14·2 in West Bromwich and 14·7 in Portsmouth, the highest rates were 29·7 in Wigan, 29·8 in Rochdale and ruined," as Major Ross terms it, or whether my punishment may not after a time be considered to have been sufficient.

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[1] Report of the Indian Plague Commission with Appendices and Summary five volumes. Presented to both Houses of Parliament by command of His Majesty. London: Eyre and Spottiswoode. 1901. Price of Vol. V. (the Report) 4s. 6d.

I am, Sirs, yours faithfully,
G. W. P. DENNYS,
Lieutenant-Colonel I.M.S., Civil Surgeon.
Peshawar, India, Jan. 19th, 1902.

*To the Editors of* THE LANCET.

SIRS,—Everyone will admire the tone of Colonel Dennys's letter of Jan. 19th, 1902, and will admit the correctness of his own attitude in the matter. I hasten to explain, however, that he has misunderstood my intentions. I did not write my letter, published in THE LANCET of Dec. 21st, 1901, on his behalf personally. Had such been my object I should certainly have obtained his consent previously, either directly or through his friends, whereas I most carefully avoided doing anything of the kind. I wrote my letter, not in the interests of Colonel Dennys personally, but in the interests of justice and of the medical profession in general.

Colonel Dennys is quite right to acquiesce in the action of his employers, the Indian Government; but that is no reason why the rest of the profession should do so. Many of us have been long of opinion that the interests both of justice and of the medical profession have suffered by the action which the Government of India took in this case. We think that the punishment was an unjust one, and we have every right to say so.

In order to save any possibility of misunderstanding I repeat that I wrote what I did absolutely independently of Colonel Dennys. It is unnecessary to introduce the personal factor at all in the case.

I am, Sirs, yours faithfully,
Feb. 19th, 1902. RONALD ROSS.

⁂ In order that any remarks which Major Ross might wish to make should appear in the same issue of THE LANCET as that in which Colonel Dennys's letter was published, we sent a proof of that letter to Major Ross.—ED. L.

# THE DOSE AND LENGTH OF INCUBATION IN MEASLES AND VACCINATION.

*To the Editors of* THE LANCET.

SIRS,—My attention has been called to a letter of Dr. L. C. Dobson, published in THE LANCET of Feb. 15th, p 477, upon vaccination, in which Dr. Dobson writes that with the exception of the Government establishment the only institute in or around London that manufactures its own lymph and which openly invites any member of the profession who may be interested in the process to inspect it for themselves is the Jenner Institute.

I have for the last 21 years manufactured my own lymph with signal success, during which time I have received testimonials from the medical profession in every part of the kingdom, whereas the Jenner Institute has, I believe, been only for some few years in existence. When THE LANCET Special Commission on Glycerinated Calf Vaccine Lymphs was appointed some years ago for the examination of bacterial purity of vaccine mine was placed at the head of the list.[1] I have always openly invited everyone, including, of course, members of the medical profession, to inspect my methods, and of this invitation a very large number of persons have availed themselves. I should not trouble you with this letter containing these statements about myself but for the fact that the publication of Dr. Dobson's statement in your columns would be an injustice to me if it passed uncontradicted. I shall therefore esteem it if you would kindly find space for this letter.

I am, Sirs, yours faithfully,
C. RENNER, M.D. Würzburg.
Marylebone road, N.W., Feb. 17th, 1902.

# THE DECAY OF AUSCULTATION AND THE USE OF THE BINAURAL STETHOSCOPE.

*To the Editors of* THE LANCET.

SIRS,—The introduction of the binaural stethoscope marked a distinct advance upon its single-stemmed progenitor. And although few would deny that the wooden instrument has its own special value, yet it will generally be conceded that the latter must take a back seat. It was related of some of the physicians at Guy's Hospital at the time of the introduction of the stethoscope that they were wont to show their contempt for the instrument by placing in it a flower and carrying it so decorated through the wards—the stethoscope, however, had "come to stay." A man does not surely see less distinctly by using both eyes, neither is the use of two ears a disadvantage in auscultation. In the binaural stethoscope we have the advantages of both immediate and mediate auscultation combined. This can be seen by a simple experiment. Place the chest-piece of a binaural stethoscope on a watch and on listening the ears will, as it were, be taken to the source of the ticking, while if one tube be occluded by pinching it the sound is heard at the other ear, not at the watch as in the former observation. I am not aware that this point has been noticed generally. I think that most careful auscultators avail themselves of both instruments in doubtful cases, as I certainly do myself, though for convenience the binaural is most frequently resorted to. There can be no question that the pressure of a stem stethoscope may cause much suffering to the patient, whereas pressure is not only unnecessary but harmful with the binaural variety. The pain caused by frequent pressure of ivory ear-pieces can easily be avoided by the use of india-rubber ones.

I am, Sirs, yours faithfully,
Weymouth-street, W., Feb. 21st, 1902. CHAS. W. CHAPMAN.

# "WHAT'S WHAT."

*To the Editors of* THE LANCET.

SIRS,—As soon as I was aware that my name had been mentioned in "What's What" I wrote to the editor and I send you a copy of my letter and of his reply.

I am, Sirs, yours faithfully,
Feb. 24th, 1902. ANDERSON CRITCHETT.

[INCLOSURES.]

Harley-street, Feb. 15th, 1902.

DEAR SIR,—My attention has been called to the fact that in a book called "What's What," of which you are the editor, my name is mentioned in a manner which is likely to be misunderstood by the public and by the members of my profession. I have always strongly deprecated, and have done my best to avoid, any personal allusions in the lay press, and although I willingly acquit you of any intention to do me an injury I must beg that in any future editions of your book my name may be omitted.

Faithfully yours,
Harry Quilter, Esq. ANDERSON CRITCHETT.

9, Manchester-square, W., Feb. 18th, 1902.

DEAR SIR,—I beg to acknowledge your letter of the 15th, forwarded to me last night. If you will refer to either THE LANCET or the *Medical Journal* of last week you will find a letter from Mr. Watson Cheyne to myself on the same subject as your communication and my reply thereto. This will show you that I shall not in future be likely to repeat the atrocious crime of which you so pathetically complain. I much regret that in my desire to convey certain information to the public I should have caused any vexation by my allusions to special medical practitioners.

Yours faithfully,
HARRY QUILTER.

# THE DISSEMINATION OF KNOWLEDGE CONCERNING VACCINATION.

*To the Editors of* THE LANCET.

SIRS,—At the meeting of the Sanitary Institute last week, at which an interesting paper on the Prevention of Small-pox in the Metropolis was read by Mr. A. Wynter Blyth, medical officer of health of St Marylebone, it was not suggested that the public should be made acquainted with the facts concerning vaccination by means of popular lectures. The meetings of the Sanitary Institute, excellent as they are, are practically unknown to the general community. I would suggest that the Sanitary Institute, the National Health Society, the St. John Ambulance Association, the Royal Institution of Public Health, and the Incorporated Society of Medical Officers of Health should arrange that lectures should be given stating the facts in a popular and simple manner, and giving statistics (obtained from the present epidemic in London and from other former outbreaks) to prove the advantages resulting from efficient vaccination. To be effective the lectures must be given all over the country. Medical officers of health could themselves diffuse information in a similar manner. I am aware that some have already done so. Lantern-slides showing the typical course of vaccination, similar to the coloured plates published in the "Jenner Number" of the *British Medical Journal* of a few years ago, would be most useful. Also photographs to show what a real case of small-pox is—"modified," "confluent,"

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[1] THE LANCET, April 28th, 1900, p. 1234.

### Volunteer Infantry Brigade.

Essex: Surgeon-Captain H. T. Challis, 4th Volunteer Battalion the Essex Regiment, to be Brigade-Surgeon-Lieutenant-Colonel on appointment as Senior Medical Officer to the Brigade.

### South African War Notes.

Civil Surgeons Coffey, Laing, McDougall, Odonovan, and Lynch have been discharged from hospital to duty.

Lieutenant F. H. Merry, R.A.M.C. (invalided), Major H. J. Fletcher, R.A.M.C., and Civil Surgeons White (invalided), David (invalided), Leaming, Harris, and Wright are returning to England in the *Orient* which left Cape Town on Feb. 13th.

Captain E. M. Pilcher, R.A.M.C., Surgeon-Captain Joynt, Scottish Horse, and Civil Surgeons Clarke and McLelland are on passage home.

### An Ancient Ordinance dealing with Ship-Surgeons.

In France, says a writer in the *Archives de Médecine Navale* for January, it was customary to look upon the Royal Ordinance of August 4th, 1819, as the first real mark of solicitude on the part of the State for the health of its seafaring population, but according to an ancient "Règlement," of which a copy is printed by our contemporary, the abovementioned date is at least a century too late. The document in question, which is very quaintly spelt, consists of a preamble with nine articles, and is signed "Louis, par le Roy, le Duc d'Orleans Regent, present Phelypeaux." The date of promulgation of this law was June 5th, 1717, and it deals with the provision of "Chirurgiens" for merchant vessels, together with the mode of examination of candidates for such appointments. In the preamble "H.M. Louis, by the Grace of God King of France and of Navarre," informs all and sundry that in spite of the Ordinance of "Aoust, 1681," the people who act as surgeons at sea are no better than ignorant impostors who imperil the health and well-being of his faithful subjects. For the future, therefore, no one shall be permitted to embark on board a sea-going "bastimen" in the capacity of surgeon who has not been examined by two master surgeons and found qualified. Every vessel with a crew of 20 men and upwards shall carry a surgeon, and when the crew number more than 50 there must be at least two surgeons. For each examination the master surgeons shall receive five livres, "to divide between them," but if the vessel on which the candidate proposes to embark is of less than 150 tons burden the fee shall be reduced to three livres. Pains and penalties of various kinds are provided in case a grasping master surgeon should try to extract more, save and except in the event of his being required to inspect the surgeon's medicine chest, when he can demand 20 sols, a similar sum being payable to his coadjutor an "apoticaire."

### The Report of the Ladies' Committee on the Concentration Camps.

The report of the Ladies' Committee on the Concentration Camps in South Africa is, we need scarcely say, very much what might have been anticipated by all "level-headed" people. Great care was exercised in the selection of the members of the committee. It was not to be expected that they would find everything perfect everywhere they went, but their report is very satisfactory nevertheless. There is no doubt that a large amount of sickness, attended with a heavy mortality, occurred in these camps, more especially among the Boer children, but, however much this may be deplored, it was inevitable under the circumstances. The Boers deserted their families in order to fight against us, and the British authorities in the field out of humanity undertook the care of them rather than allow them to perish on the veldt. The Boers neglect the most elementary principles of hygiene and their notions of treating the diseases of childhood are worse than antiquated. The responsibility and difficulty of undertaking the care of their families were immense under such circumstances. All the stories about the camp hospitals are simply untrue. It will be curious to see how those who raised a protest against, as they allege, the wholesale murder of women and children will deal with this report of the Ladies' Committee.

### Recruiting for 1901.

The annual report of the Inspector General of Recruiting for 1901 is on the whole satisfactory. The total number of recruits for the regular army was 47,039, and for the militia 37,644. Speaking generally, recruiting for the first half of the year fell off, but it improved very much during the second half, the year's total being only 2000 below that reached in 1900, when the enthusiasm about the war in South Africa was in full force. The inspector-general's report contains a number of comments and remarks which have a distinctly medical bearing, such, for example, as the numbers medically inspected and rejected, the loss to the service of recruits owing to defective teeth, and so forth. We are glad to notice that the inspector-general strongly advocates the provision of suitable houses for recruiting purposes—a subject to which we have frequently drawn attention. Buildings, instead of being in slums and back streets, should be secured in more open, airy, and prominent thoroughfares than are now provided for the examination of recruits, and they should be properly furnished and equipped so as to be more attractive to young men than is at present the case; and if something could be done in the way of abolishing the system of "stoppages" it would, we think, have a good effect on recruiting.

### The Army Estimates.

Referring to the recently issued Memorandum of the Secretary of State for War relating to the Army Estimates for 1902–3 we may state that the sum-total amounts to £69,310,000, while the number of men to be voted is 420,000. This shows a financial reduction of over £23,500,000 as compared with last year. This reduction is mainly to be accounted for by a decreased provision for war services in South Africa and China. As regards Vote II., Medical Services, the decrease on the vote amounts to £63,600, of which £50,000 are for war and £13,000 for normal services.

### Volunteer Officers' Decoration.

The King has conferred the Volunteer Officers' Decoration upon the undermentioned officers:—*North-Eastern District: Artillery:* 1st West Riding of Yorkshire (Sheffield) Royal Engineers (Volunteers): Surgeon-Lieutenant-Colonel George Robinson. *Scottish District: Artillery:* 1st Ayrshire and Galloway Royal Garrison Artillery (Volunteers): Surgeon-Lieutenant-Colonel James Thomson. *Western District: Artillery:* 1st Cornwall (Duke of Cornwall's) Royal Garrison Artillery (Volunteers); Surgeon-Lieutenant James Mudge, jun.

## Correspondence.

"Audi alteram partem."

## A QUESTIONABLE PUNISHMENT.

*To the Editors of* THE LANCET.

SIRS,—In THE LANCET of Dec. 21st last (p. 1762) Major Ronald Ross, I.M.S. (retired), has addressed a letter to you under the above heading. I happen to be the civil surgeon to whom he refers in that letter and about whom he wishes to obtain the opinion of your readers "with a view to further action if deemed necessary." Though I fully appreciate the kindly motive that has prompted him to take this action on my behalf I feel I cannot allow the matter to go further without recording my most emphatic protest at any action whatsoever being taken by the medical profession in this matter.

Whatever may be the opinion of medical men in general as to the justice of the punishment that has been meted out to me by the Indian Government for the slip of the pen I was guilty of some years ago when writing a prescription, I have to recognise the fact that the punishment must have met with the approval of the head of the Indian Medical Service, who is their adviser in all matters concerning members of my service, and so long as I continue to serve under the Government of India it is obviously my duty to be loyal to that Government and to abide by its decisions.

I think I might mention in this connexion that a great deal more harm has been done to me by the efforts of my friends to be kind than ever would have occurred had they only left me alone. I am content to leave my future career in the hands of the Government under whom I serve with perfect confidence, and wish for no outside interference. It remains yet to be seen whether that career is "entirely

# SCIENTIFIC EXPERIMENTS IN HOUSE VENTILATION.

(From our Special Sanitary Commissioner.)

Any new suggestion in regard to ventilation is always welcome, but what is more particularly needed is some practical method of ventilating private houses. A theatre or a large assembly room costs so much to build and to keep in working order that it is comparatively easy to include in the outlay the expense necessary to secure more or less efficient ventilation. This is not the case with regard to the private house, and the problem will not easily be solved unless those concerned are willing to add to the ordinary cost of a private dwelling the cost of a scientific system of ventilation. Nevertheless, it is something to know that such a system can be worked satisfactorily even in the restricted space of a small room. Dr. Thomas Glover Lyon and Mr. James Cadett have between them devised and applied such a method. The experiment in question has been carried out in a small dining-room built over what used to be the back-yard of a house in a central and crowded part of London. Dr. Lyon showed and explained the details. Taking the Vienna Opera House as his model he calculates that each person should be supplied with 1600 cubic feet of fresh air per hour, and this cannot possibly be done regularly and in all weathers unless mechanical means are employed. He reckons that 12½ cubic feet of air weigh one pound. Therefore a theatre seating 1000 people will require 1,600,000 cubic feet per hour, or about 450 cubic feet per second, and this would correspond to 50 tons per hour or 30 pounds per second. To move this amount of air a 10 horse-power engine would be required or thereabouts. A private room, therefore, holding 12 persons, would need 19,200 cubic feet of fresh air and a motive power equal to moving one and one-eighth of a ton per hour. This is not to be obtained by the mere difference of indoor and outdoor temperature and the currents of air that result therefrom. Also, such currents, instead of being uniform, always vary in velocity according to the fluctuations in the temperature. For ventilation to be perfect doors and windows must be shut and no air admitted save that which is pumped into the room, and then only is it possible to supply precisely the proper quantity at the desired temperature. It is on these principles that the dining-room in Dr. Lyon's house has been ventilated. This work has been greatly simplified by the fact that the roof is immediately above the ceiling and that it is not necessary to go to the top of the house or to pierce the outer walls to find fresh air. Nor are there any windows in the walls. The light comes from the glass panes of a lantern above the centre of the room. Outside there is a small compartment large enough to hold an engine, an electrical apparatus, the propelling fan, and the trays for washing the air. The latter are placed in a sort of cupboard with the air inlet protruding on the roof above, which has to be protected in such a manner as not to be clogged up by a downfall of snow. As the air penetrates and descends it strikes upon and has to travel zigzag between a succession of long trays filled with mineral oil. This oil arrests the dust, the soot, and other heavy particles borne forward with the air. For such a purpose oil is preferable to water, as the particles sink to the bottom of the oil, whereas capillary attraction keeps a large portion of them floating on the top of water. Moreover, if water is employed it will evaporate and perhaps render the air too moist. Below the trays, against which the air must strike at least twice, there are hot-water coils to warm the air, and beyond is the fan. According to the velocity at which this fan revolves more or less air is drawn from outside the roof down on to the washing trays and the heating coils, and is then propelled into the duct for distribution in the room beyond. This duct being measured an anemometer placed inside will record the velocity at which the air travels and the number of cubic feet supplied can thus be accurately estimated. A few experiments will show at what rate the engine must work in order to provide the amount of air needed. Any sort of motive force to work the fan could be employed, but for private houses electricity is to be preferred because it is clean, produces the least noise, and can be turned on or off at once and just when it is wanted. For a small room the cost of electric power will not amount to more than 1d. per hour.

The cleaning, the warming, and the supplying of the right quantity of air constitute, however, only the minor or least difficult part of the problem. By far the most perplexing phase is to know how to distribute this air in the room in such a manner as not to inconvenience the persons within. For this purpose it does not suffice to have large inlet surfaces, for it would then be found that the air would come through one portion of these apertures with great velocity and hardly at all from the other parts of the openings. Therefore it is necessary to study and to ascertain where the current is strongest and there to place the greatest number of obstacles. For instance, in Dr. Lyon's dining-room there is a conduit or shaft running along within the top of a false inner wall. The impetus given to the air by the fan is such that it will travel in a straight line to the end of the conduit and not avail itself of the apertures on the road to enter the room. It is therefore by the opening nearest to the end of the conduit, where the air can no longer travel forward in a straight line, that the greatest amount would escape into the room. To meet this difficulty false inner walls have been built on two sides of the room, facing each other, the one to serve for the inlet and the other for the outlet of the air. This adds considerably to the complication and expense of the system, but it lends itself admirably to decorative purposes. The false wall, which can be made of wood, should stand six inches in front of the real wall. Only a portion of this space, six inches deep, is required for ventilation, and the rest can be employed for real cupboards or for bookshelves. The part used for ventilating purposes has the appearance of closed cupboards, about two feet wide and four feet high, and there are three of them on each of the two sides of the room which have false walls. Pilaster or panelling can be employed for these false cupboards, but behind this ornamentation there must be a perforated shutter or a wire gauze. These perforations being the same in all parts of the shutter or wire gauze, the air would not come through evenly from the entire surface but would rush out with greater velocity from that part of the cupboard or air-chamber where the pressure was greatest. Here, then, the same principle applies as that mentioned with regard to the air-conduit which runs horizontally along the room near the ceiling. In this case, however, the air propelled or pressed out of the horizontal conduit receives an impetus that makes it travel downwards in a vertical line to the bottom of the cupboard. There it is abruptly checked and begins to expand. It is consequently from the bottom of the cupboard that the largest quantity of air would come out into the room and perhaps create a draft. Therefore a baffling arrangement must be placed behind the shutter to counteract this tendency. For this purpose narrow slips of wood are fastened to the inside of the shutter. These slips are in the shape of very long and acute triangles. The triangles are placed with their broader part or base at the bottom of the shutter and they nearly touch each other, so that the apertures between them are smallest just where the pressure of the air is greatest, and become wider and wider as the upper part of the cupboard is reached. Thus between these four letters A A A A the space is much wider at the top than at the bottom; but we must imagine these angles to be much longer and narrower than is the case with ordinary type letters. The principle applied within each cupboard is also applied with regard to the relationship of the cupboards the one to the other. Therefore, at the inlet end of the air conduit—that is, where the air passes with the greatest impetus or velocity and is less likely to be diverted from its course so as to enter the air-chamber or cupboard—there the cupboard is largest and offers the least resistance. At the other end of the conduit, where, on the contrary, the air is suddenly stopped and can travel forward no further but must find some other exit, there the nearest chamber is the smallest and offers the most resistance. The pressure varies all along the conduit and inside the cupboards in consequence of the continual conflict between momentum and pressure. Hence the necessity of providing the largest outlets where the pressure is most feeble.

Having ensured by the means described that the velocity of the delivery of the air shall be uniform over the entire surface of the apertures, the next question to consider is what the air will do when it has entered the room. For the air outlets there are similar air-chambers or cupboards on the opposite side of the room, only the baffling triangular pieces "malignant," and "hæmorrhagic." These slides will bring before the public what it cannot otherwise form an opinion of, and they need not be made revolting in their character. They cannot be more terrible than the disease itself. Such representations of actual facts will do more to convince people than pages of written matter. If it is "brought home" to them how loathsome and dangerous a disease small-pox is, and how easily it can be stamped out by vaccination and with so infinitesimal a risk by this process, the anti-vaccinator will similarly be "stamped out" in time. The chairman at such lectures should be a gentleman whose name in the scientific world is well known, or some local magnate whose influence will carry weight with the audience.

I shall be pleased to lend my lantern for the purposes of such a lecture to any medical officer of health.

I am, Sirs, yours faithfully,
HERBERT W. G. MACLEOD, M.D. Edin.,
London, Feb. 23rd, 1902. D.P.H. Cantab. and Lond.

## SURGICAL OPERATIONS FOR MITRAL STENOSIS.

*To the Editors of* THE LANCET.

SIRS,—In reference to the correspondence in your columns with regard to Sir Lauder Brunton's preliminary communication upon the above subject, I can corroborate Mr. Arbuthnot Lane's statement that he and I fully discussed the matter at least 12 years ago. Mr. Lane introduced the subject to my notice and satisfied me that he probably could without any immediately harmful result temporarily enlarge, by surgical means, the orifice of a constricted mitral valve. Lest, however, it should appear from Mr. Lane's letter that I am still hoping to succeed "in finding a case likely to receive benefit" therefrom, I shall be obliged if you will allow me to state that the *à priori* arguments against the probability of any patient deriving benefit from this operation seemed to me so conclusive that I deliberately decided against regarding it as a justifiable therapeutic measure. These arguments are so clearly summarised in your leading article of Feb. 15th (p. 461) that your readers will, I think, agree with me that Sir Lauder Brunton's chief task is not to show his surgical colleagues that it is possible to enlarge the stenosed mitral orifice, but to persuade his medical colleagues that such a proceeding is useful. It is possible to do many things that are useless and some things that are harmful.

I am, Sirs, yours faithfully,
Harley-street, W., Feb. 25th, 1902. LAURISTON E. SHAW.

## BIRMINGHAM AND DISTRICT GENERAL MEDICAL PRACTITIONERS' UNION, EAST BIRMINGHAM BRANCH.

*To the Editors of* THE LANCET.

SIRS,—I have the honour to forward to you herewith a copy of resolutions recently passed by the above body which are self-explanatory.—I am, Sirs, yours faithfully,
H. W. POOLER, Honorary Secretary.
Great Brook-street, Birmingham, Feb. 19th, 1902.

[INCLOSURE.]

*Birmingham and District General Medical Practitioners' Union, East Birmingham Branch.*

The following is a copy of a resolution passed at a meeting of the above society held on Jan. 9th: "That the honorary secretary be instructed to write to the managers of the various medical aid societies working in East Birmingham and inquire whether they are prepared to adopt the course of action already adopted by the National Medical Aid Company and the London and Manchester Medical Aid Society, which societies have resolved under no circumstances whatever to admit new members or to re-enter lapsed ones, and, further, that the result of the correspondence be reported to the next meeting."

At a meeting held on Feb. 13th, 1902, the honorary secretary reported that each of the societies concerned had given a written guarantee to observe the conditions laid down in the above resolution and it was thereupon further resolved:—

"That this meeting is of opinion that the undertaking given by the managers of the various medical aid societies which are working in East Birmingham is perfectly satisfactory and calculated to deal effectually with the practice of canvassing; and, further, that this meeting trusts that the medical officers and managers of these societies in East Birmingham will take care that this undertaking is rigorously carried out."

"That this meeting is of opinion that the establishment of private medical clubs is not in accordance with the real interests of the public, is derogatory to the dignity of the medical profession, and is eminently unfair to those medical aid societies which have given undertakings not to accept new members, and, further, that all possible means will be taken to prevent the formation of such private clubs in East Birmingham."

"That copies of these resolutions be forwarded to each of the medical aid societies, to the council of the Union, and to the medical press."

## THE NEW DESIGNATION FOR THE VOLUNTEER MEDICAL STAFF CORPS.

*To the Editors of* THE LANCET.

SIRS,—Your correspondent in THE LANCET of Feb. 22nd, p. 547, hardly does the volunteer medical officer justice when he states that 11 are serving with the Royal Army Medical Corps, because a number of volunteer medical officers, realising how difficult it was unless they belonged to a bearer company to get their services accepted, have joined as civilians and obtained a higher rate of pay. The great obstacle to the discarding of compound ranks is the regimental system which follows exactly that of the various regiments of Guards, and the War Office has an idea that it is the wish of the regimental medical officers to remain so in order that they may still continue to wear the uniform of their regiments. My idea is that directly a regimental medical officer is gazetted he should become an officer in the Royal Army Medical Corps (Volunteers), and should wear departmental uniform; he is then always distinguishable and in the uniform for regimental or departmental duty. I will be glad if all volunteer medical officers will send me a postcard stating whether they agree or do not agree with my proposal. I will tabulate and publish the result and get the same presented to the Under Secretary of State for War.

I am, Sirs, yours faithfully,
P. B. GILES,
Brigade Surgeon Lieutenant Colonel S.M.O. Volunteer Ambulance School of Instruction.
Bletchley, Feb. 24th, 1902.

## TREATMENT OF RESPIRATORY INCAPACITY.

*To the Editors of* THE LANCET.

SIRS,—I shall be obliged if you will kindly find space to correct a misprint that somewhat confuses the meaning of the first sentence of the article on Cleft Palate in THE LANCET of Feb. 22nd, 1902, p. 493. Instead of "treatment of the sufferers from cleft palate" the words should read "treatment of the sufferers from respiratory incapacity."—I am, Sirs, yours faithfully,
Cavendish-square, W., Feb. 24th, 1902. W. ARBUTHNOT LANE.

## TETANUS FOLLOWING REVACCINATION.

*To the Editors of* THE LANCET.

SIRS,—I have read with interest the case of tetanus following revaccination on the leg in your issue of Feb. 22nd. With all due deference to the authors the most likely source of contamination does not seem to have been considered. After all their careful antiseptic measures they covered the wound with a "bunion plaster" and fixed this on with adhesive plaster. This would seem to be an ideal way of conveying tetanus and any other infection. I trust that public vaccinators as a rule follow their instructions more carefully and use an antiseptic dressing.

I am, Sirs, yours faithfully,
Feb. 23rd, 1902. ONE OF THEM.

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ROYAL MICROSCOPICAL SOCIETY.—At a meeting of this society held on Feb. 19th a very short paper on Polarising with the Microscope by Mr. E. M. Nelson was read by the secretary in the unavoidable absence of the author. The object of the paper was to recommend the employment of tourmalines in place of Nicol's prisms, both in the ordinary examination of polariscope specimens and in the production of rings and brushes. It was recommended that the polarising tourmaline should be placed not below the stage but close to the lamp, and that the analyser should be set in a cap which fitted over the eyepiece. One of the members who spoke subsequently remarked on the great difficulty of obtaining tourmalines sufficiently free from colour.

of Poor-law Unions held in London on Feb. 20th the Mayor of Cardiff, who is a member of the board of guardians, expressed the opinion that the fees were altogether too high and that if they were not reduced the Cardiff board was prepared, with the assistance of other boards, to take steps to secure a reduction. The members of the Cardiff board do not appear to realise that the fees payable under the Vaccination Act, 1898, are for services which are of a very responsible character and in the proper performance of which a great deal of time is expended. If the definite instructions of the Local Government Board with regard to the aseptic precautions which are to be taken by the public vaccinator when performing the operation are to be properly carried out an adequate fee must be paid by the authority responsible for payment.

### *Merthyr General Hospital.*

The Merthyr General Hospital was established in 1887 and has accommodation for 29 patients. The annual report of the executive board which has just been published is of a very satisfactory character, for it discloses the fact—a very unusual one in connexion with public hospitals—that extensive additions have been made to the nurses' home and electric light has been installed in the operating theatre without making any special call upon the supporters of the hospital and without encroaching upon the invested funds. During 1901 there were treated in the wards of the hospital 212 patients. The average weekly cost per patient is not stated.

### *Lodgers in Small Houses.*

At the recent assizes for the county of Monmouth Mr. Justice Phillimore in his charge to the grand jury drew their attention as magistrates and landowners to the dangers of the presence of lodgers in the small houses of working people and said that it looked as if much crime was due to the influence of lodgers upon the wife and children of the house. It is difficult for those who do not live among them to realise how many of the colliers in Glamorganshire and Monmouthshire live in "apartments." In the last annual report of the medical officer of health for the Rhondda valleys he states that among 2414 houses specially inspected there were 1242 in which lodgers were taken. There can be little doubt that the high death-rates which prevail in the colliery districts are closely connected with the overcrowding of the houses in these localities.

### *Wiltshire County Council.*

The parish of Westwood in Wiltshire has a population of about 500 persons who are very indifferently supplied with water from wells, and the sanitary authority—the Bradford-on-Avon Rural District Council—cannot be persuaded to take steps to improve the supply. The Wiltshire County Council has therefore given notice that if a proper supply is not provided within six months action will be taken under Section 16 of the Local Government Act, 1894. This section enables a county council, after complaint by a parish council of the default of a rural district council to carry out certain duties, to transfer those duties and the accompanying powers either to the county council or to some one person with instructions to carry out the duties of the defaulting district council.

### *The New Workhouse Dietary.*

The cost of the new dietary at the Frome Workhouse for the half-year ending Dec. 31st, 1901, was 3*s.* 6*d.* per head weekly (including special infirmary diets), and for the same period of 1900 (with the old dietary) the average weekly cost per head was 2*s.* 8*d.* The population of the Frome union is about 20,000 and the workhouse will accommodate 400 inmates.

### *Bath Eye Infirmary.*

The annual meeting of the Bath Eye Infirmary was held on Feb 21st, when it was reported that there was an adverse balance on the year's working of £25 in spite of the receipt of a special donation of £61 from the committee of the Bath Hospital for Women, an institution which is now closed. During 1901 there were treated at the infirmary 295 in-patients and 1898 out-patients. The Bath Eye Infirmary was established in the year 1811.

### *Death of Mr. C. E. G. Simons, M.B., C.M. Aberd., D.P.H.*

Through the death of Dr. Simons of Merthyr Tydfil, at the early age of 34 years, there has been lost to the medical profession one who gave promise of becoming noted in the public health world. For several years he was associated in practice with his uncle, the late Mr. T. J. Dyke, F.R C.S. Eng., who was the first medical officer of health for Merthyr Tydfil and the second medical officer of health to be appointed in the whole of England and Wales. For a few months Dr. Simons held the same position in Merthyr Tydfil, but gave up the post chiefly on account of ill-health. He died on Feb. 16th from pneumonia, though for some years he had been suffering from diabetes. He leaves a widow and two children.

### *Vaccination as Poor-law Relief.*

At the meeting of the Newton Abbot Board of Guardians held on Feb. 19th some of the guardians said that persons who were revaccinated by the public vaccinator became paupers. The clerk, however, stated that vaccination did not constitute parochial relief, and eventually the board decided to issue notices to the effect that revaccination would be performed free of charge.

### *Royal Devon and Exeter Hospital.*

The court of governors of this institution was held on Feb. 20th, under the presidency of the Bishop of Marlborough (Dean of Exeter). The medical report stated that 1258 in-patients had been treated during 1901, compared with 1219 in the preceding year. 5103 out-patients were treated, against 5067 in 1900. The average daily number of in-patients was 146. The financial statement showed that the total receipts for the year had been £14,825, which included £8390 from legacies. The total expenditure amounted to £9777. The Bishop of Marlborough was re-elected president for the ensuing year.

Feb. 24th.

## SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

### *Proposals for a Psychiatric Clinic in Edinburgh.*

A SPECIAL meeting of the Edinburgh Medico-Chirurgical Society was held on Feb. 19th in the hall of the Royal College of Physicians of Edinburgh to discuss the question of having wards in the Royal Infirmary set aside for the treatment of incipient and transitory cases of mental disorder. The meeting was held at the instigation of some of the more prominent alienists in Edinburgh and was attended by a number of laymen and by several ladies. Looking at the audience gathered on this particular occasion it could not have been inferred that the subject was one in which the local profession was deeply interested. While the meeting was nominally a meeting of the Medico-Chirurgical Society it would be presumptuous to regard its decision as the deliberate finding of the society. The alienists naturally took the most prominent part in the discussion of their own scheme. The general opinion seems to be that it is desirable to have accommodation for this special class of case in the Royal Infirmary, but it is felt that the annual sum required for the upkeep of the infirmary is already so large that the managers can hardly be expected to rush into the matter. At present there is neither building nor ground available for the purpose, and until some rich friends of the promoters come forward with an endowment the infirmary managers will have public feeling with them in taking up a position of sympathetic *laissez faire.* Another point which finds expression in the profession, although no voice was given to it at the meeting, is that if such wards ever are established they ought to be under the charge of one of the general physicians to the infirmary and not under a specialist. Part of the object in having such wards is to avoid the stigma attached to a person who is sent to an asylum, and it is seen that if a prominent alienist was in charge the wards would be looked upon by the public as the "mad wards" and as being under the care of a "mad doctor," and that the stigma would thus be as great as attaches to being sent to an asylum. The raising of the question may have an immediately good result in leading the managers to relax the present rules regarding the exclusion of persons showing any measure of mental derangement. Two of the members of the infirmary staff referred in the discussion to these rules and they might with advantage be relaxed so that the admission of threatening cases of mental derangement, associated as they so often are with physical disturbance, might be left to the judgment of the individual physician.

### *Public Health: the Examination of Pathological Products in Edinburgh.*

Within the past few weeks there has been a good deal of of wood are placed in the reverse way The inlet apertures are largest at the top of the cupboards and if the outlet apertures were similarly disposed then the air would simply travel across the upper portion of the room Consequently the broad bases of the triangles are placed at the top of the outlet cupboards and the widest openings are at the bottom The hot air being propelled downwards as it enters it meets the colder air and these two currents tumble over each other and create a rotary motion in the centre of the room This prevents stratification or the forming of layers of atmosphere, some of them moving rapidly and others slowly or not at all, and thus efficient ventilation is secured for all parts of the room Communicating with the outlet cupboards there is also a horizontal conduit leading to a second fan which, revolving in the reverse way acts as an exhaust and throws the air out above the roof, but at a point situated as far as possible from the inlet

The air, though delivered in great volume and at considerable velocity, is so baffled and evenly distributed that its passage cannot be felt The room may be filled with people smoking but the smoke is at once carried away the atmosphere remaining always clear and fresh This is a great comfort and the active ventilation has a distinct effect on the appetite of the people dining But it will be seen that these results are not attained without considerable trouble expense and minute attention to detail It is doubtful if this system could be applied to a room for much less than £150 There are not many persons who could afford such an outlay Dr Lyon however replies to this objection by supposing that some wealthy person was in the habit of giving dinners with on an average 20 guests at a cost of about £2 per head It would suffice to give three dinners less than usual to provide the means of defraying the cost of such a system of ventilation and ever afterwards the dinners given would be infinitely more enjoyable

## MANCHESTER

(FROM OUR OWN CORRESPONDENT )

### *Manchester Royal Infirmary*

AT the annual meeting of the trustees of the Manchester Royal Infirmary held on Feb 14th Sir Forbes Adam the chairman said that the most important part of the report related to the sub committee appointed nearly a year ago to form plans for the rebuilding of the infirmary on the present site He said that it had been reported to them by a previous meeting that a hospital on the non pavilion plan would be in every respect satisfactory The great majority of the authorities while still of opinion that the ideal plan was the pavilion plan saw no reason why if under the circumstances it was not possible to have on the site a pavilion hospital there should not be an absolutely satisfactory hospital on a plan other than the pavilion plan "The sub committee hoped very soon to hand their report to the board and it would be considered by the board in conjunction with the medical board and with any other competent expert outside gentleman whom the board might think fit to join them in their deliberations A new infirmary has long been needed and the medical board some time ago declared it to be a public scandal that Manchester should have no better hospital accommodation than the existing one That point is settled but the question of site may, perhaps even yet be open to discussion Authorities accept the pavilion plan as the ideal and any other is confessedly inferior to it There is no room on the present infirmary site for the ideal the pavilion hospital so that if it is rebuilt where it now stands Manchester must accept and try to be content with something below the best—i e, with an inferior hospital Yet according to Sir Forbes Adam the authorities see no reason why an inferior hospital should not be absolutely satisfactory which seems a *reductio ad absurdum* No one supposes that if there were sufficient space on the present site any but the pavilion plan would be entertained for a moment Insufficient space is driving all concerned to the adoption of an "absolutely satisfactory' inferior plan The chief reasons for the strong feeling on the part of many in favour of the present site are that it is central and of easy approach from the various railway stations, that it is on the whole as convenient as any other for the medical staff, and that it has stood where it now stands for a long time so that sentiment has grown up around it There are however, many objections to the Piccadilly site The space about it is so scanty that the wards are not far enough away from the surrounding streets busy with noisy traffic from early morning till late at night To many patients the noise especially with open windows is most distressing and there is no escape from it Then too the fog in the centre of the town is often dense to a degree and singularly pungent and choking causing injury with much distress in breathing and coughing to those suffering from chest ailments The financial question is also an important one If the infirmary is to be rebuilt where it now stands the money required will have to be raised where there are already numerous charitable calls, where almost all the hospitals are in debt and where their reports are full of grievous lamentations over the customary annual deficit Should however, another site be chosen as for example that of Stanley Grove the sale of the Piccadilly site would provide funds for rebuilding without having to ask the expert outside gentleman to solve the problem of how to get an absolutely satisfactory hospital by an inferior method As regards the financial position the institution on its present basis shows a surplus but as the chairman regretted to say it was entirely eaten up by the deficit on the Barnes Convalescent Home

### *Teaching to Check Infantile Mortality*

The Cheshire County Council is doing a good work in one branch of education At the quarterly meeting held on Feb 13th the chairman of the Technical Instruction Committee said that 46 scholarships in physiology and infant hygiene had been granted the object being to give good and thorough instruction in these subjects to mistresses of elementary schools so as to qualify them to teach them in day and evening schools, in the hope of overcoming the ignorance which prevailed as to the feeding and proper care of infants It was mentioned that at Hyde where the infant mortality has been high several of the mistresses had taken scholarships and it was hoped that mistresses from the adjoining towns of Stalybridge and Dukinfield would do so At Sandbach National School this teaching forms a special subject

### *Arsenic in Beer*

At the same meeting of the Cheshire County Council the report of Mr Carter Bell the county analyst stated that the beers which he had analysed were practically free from arsenic In some cases they contained from $\frac{1}{500}$th to $\frac{1}{300}$th part of a grain to the gallon so that a person would have to drink 300 gallons to obtain one grain of arsenic

### *Red Lead in Beer*

At the Manchester Police court on Feb 17th a man was charged with wilful and malicious injury to property by putting a quantity of red lead into a brew of beer valued at £60 He had had notice to leave When charged he said that he had done it "not with the intention of poisoning anyone but simply to spoil the reputation of the brewer This would seem to be a sufficiently serious matter and one cannot well see any room for much sympathy towards the offender But the prosecution and the bench were apparently alike tenderly disposed to the prisoner who had the grace to say that he was ashamed of the wrong done and as is customary asked for mercy for the sake of his wife and child and aged parents The chairman of the magistrates said that he had taken a very *stupid* feeling against the brewer and sapiently added that he ' might have done a good deal of harm An ordinary person would perhaps have used the word ' wicked instead of *stupid* The bench decided to deal leniently with the prisoner, so he was ordered to pay £5 as damages and a fine of a guinea and costs or to go to prison for a month Why should such special tenderness be shown in a case of wholesale and reckless poisoning of beer?

Feb 25th

## WALES AND WESTERN COUNTIES

(FROM OUR OWN CORRESPONDENTS )

### *Vaccination Fees at Cardiff*

THE Cardiff Board of Guardians has always resented the payment of increased fees to the public vaccinators of the union and at a meeting of the committee of the Association dose of five centigrammes was administered a blood-count on the following day showed rapid regeneration of the red blood cells, and within 48 hours the number of red blood cells per cubic millimetre passed from 2,740,000 to 3,420,000 in one case and in another from 3,800,000 to 5,022.000. This drug, it would seem, therefore, has a great future before it in the various colonies.

### *Public Hygiene and Mortality.*

With reference to the question of the depopulation of France M. Papillon recently read a most striking paper before the Statistical Society of Paris. He commenced by pointing out that in France the statistics of births and deaths were very incomplete. France, continued M. Papillon, enjoys a temperate climate and possesses a soil so fertile as to produce everything that she can require. Yet her birth-rate is the lowest in Europe and her mortality grievously high. This is not due to natural causes, but to the customs of the country. Of a population of 38,000,000 150,000 die annually from tuberculosis, while Great Britain with a population of 41,000,000 only loses 60,000 from the same cause. In every other European country tuberculosis is decreasing, in France it is increasing, because in every other European country alcoholism is decreasing while in France it is on the increase. Here are some figures. Between two censuses the tuberculosis mortality has increased in France by 68 per 100,000 inhabitants. In Germany it has decreased by 109 per 100,000 inhabitants, a difference of 177 per 100,000. This means that nearly 68,000 lives have been lost to France each year by tuberculosis that could have been preserved. Again, there is typhoid fever, a disease which is eminently preventable. The mortality from this disease amounts each year to from 10,000 to 12,000 and these deaths are of young persons just on the threshold of the procreative period of life. In France small-pox kills annually 3000 people, while in Germany the same disease kills one or two. Rabies is unknown in England owing to the strict muzzling and quarantine regulations. The eruptive fevers exact a heavy toll of life in France owing to non-disinfection of houses and personal belongings. These diseases could easily be avoided altogether or at least kept from spreading Another cause of depopulation is syphilis which either brings about sterility or gives rise to a progeny blighted from the birth. If the money value of a middle-aged man be taken at 5000 francs France has to submit to an annual loss of 400,000,000 francs of human capital, to say nothing of dilapidations of human energy caused by an excess of infectious disease. France, together with Germany and England, possesses excellent laws, but they are not carried out because outside the diseases enumerated in statistical tables there is another disease not mentioned in international nomenclature, probably because it is national. It is the electoral disease of drink-shops and public-houses which are not obliged to possess even a municipal licence because producers of alcohol are considered as merchants of the same class as those producing other goods. Dogs are far too lightly taxed, revaccination is only occasionally carried out, and the water-supply is in the hands of an engineer, while at Berlin the chief of the water-supply is a skilled hygienist. With regard to tuberculosis there are laws against insanitary dwellings, but they are not enforced owing to local interests. Cowsheds are not properly supervised, piggeries have no supervision whatever, and private slaughter-houses are still allowed to exist. After 17 years' consideration the two Chambers have just formulated a law with regard to the protection of the public health, but it will come to nothing, for there is no one charged with seeing that its provisions are carried out. If the various prefects are charged with its administration they will consider matters of convenience rather than those of health. In France sanitary powers and responsibilities are scattered abroad amongst three departments—those of the Minister of the Interior, of the Minister of Commerce, and of the Minister of Agriculture. All these administrations should be centralised under one under-secretary with an organisation at his command of sanitary medical officers who should have a free hand. Moral responsibility would thus be increased and statistics of death would no longer be tabulated under the two headings of "cause unknown" and "other causes."

### *The Diagnosis of Real from Apparent Death.*

The Dugaste prize of the Academy of Sciences for 1900 was awarded to Dr. Icard of Marseilles for a method devised by him of diagnosing by means of fluorescine when death has actually taken place. The test depends upon an absolute physiological fact. No absorbable substance can be taken up by all the body tissues except the circulation be in action. Any absorbable substance injected subcutaneously will be absorbed if the circulation persists. If, then, a substance injected into the leg is after a certain lapse of time found in the tissues of the arm it must have been carried thither by the blood-stream and it can therefore be definitely affirmed that at the moment of injection the circulation, or in other words life, was present. Dr. Icard makes use of a solution of fluorescine. So great is the tinctorial power of fluorescine that one gramme will colour 45,000 litres of water. It is not poisonous, caustic, or irritant. Within two minutes after the injection of fluorescine under the skin of a living body the skin and the mucous membranes show an intense colouration and the subject appears to be suffering from acute jaundice. The tissues of the eye are stained a bright green colour, the pupil disappears, and it looks as if a magnificent emerald had been set in the orbit. The tears, the saliva, and the urine are all coloured and one drop of blood or urine added to a glass of water makes it of a bright grass-green tint. Within an hour or two all these symptoms disappear, the fluorescine having been eliminated by the kidneys.

Feb. 25th.

## CANADA.

(FROM OUR OWN CORRESPONDENT.)

### *Royal Victoria Hospital, Montreal.*

AT the annual meeting of the governors of this institution held early in January it was announced that extensive additions were to be made to the hospital during the present year, including two new operating theatres, one for the gynæcological department and another for special cases. The annual medical report was submitted and showed that during 1901 2579 patients had been admitted to the hospital, 421 being private ward patients. On Jan. 1st, 1901, there were 194 patients in residence. During the year 2600 were discharged, of whom 1583 recovered, 792 improved, 59 did not improve, 51 were not treated, 115 died, and 173 remained in the hospital at the end of December, 1901. The death-rate for the year has been 4 42 per cent., or, if 23 who died within 48 hours of admission are deducted, the death-rate would be 3 54 per cent. In the out patient department the total number treated was 3601. The income of the hospital for the year amounted to $130,738 40, while the ordinary expenditure amounted to $112,280 20, leaving a balance or $18,458·20 which is being applied towards the cost of a new power house and isolation pavilion.

### *Quarantine on the Pacific Coast.*

With the permission of Dr. Montizambert, the Director-General of Public Health, quarantine arrangements on the Pacific Coast have been made affecting the Empress line of steamers plying between Vancouver and the Far East. Formerly these steamers were compelled to go into quarantine at the Williams Head Station and remain there for four or five hours, often at great inconvenience to the passengers, even when there was no case of contagious disease on board. Under the new order the steamers will be obliged to touch at quarantine only when any contagious disease has developed on the voyage. Better connexions will thus be established for the overland trains from Vancouver.

### *Reforming the Ontario Medical Council.*

A Bill is now before the Ontario Legislature which seeks to make radical changes in the constitution of the Ontario Medical Council, the governing body of the College of Physicians and Surgeons of the province. As at present constituted, the council consists of 30 members, five of whom represent homœopathic practitioners and eight are non-elected appointees from the medical colleges connected with four of the universities in the province—viz., Toronto, Queen's, Trinity, and the Western at London. The other 17 members are elected by the regular profession throughout the province. There are only about 40 homœopathic practitioners in the province, while each elective representative of the regular profession has a constituency of 250, hence the present constitution of the council is considered to be very unfair to the regular profession. The proposed amendment to the Medical Act seeks to abolish this special provision for the homœopathists and the College representation on the heartburning in Edinburgh over the question of the examination of pathological products for the public health authorities. For some time past the work has been done in the laboratory of the Royal College of Physicians of Edinburgh at a small charge for each specimen examined. The trustees of the Usher Institute of Public Health which is attached to the University of Edinburgh have meanwhile approached the Public Health Committee of the town council with a view to having the bacteriological examination of products from suspected cases of infectious disease transferred to that institute. The Royal College of Physicians, supported by the Royal College of Surgeons, very naturally objected to this move on the part of the University and called a meeting of the profession in Edinburgh to consider the matter. The meeting was duly held, but, as so often happens, the profession as a whole showed no burning interest in the question. A resolution was, however, carried to the effect that the profession in Edinburgh was entirely satisfied with the manner in which the work had been done at the laboratory of the Royal College of Physicians. The matter thereafter came up before the Public Health Committee of the town council. That body very wisely determined that no arrangement could be regarded as final and satisfactory which did not provide for the class of work referred to being undertaken directly by the public health authorities, and decided that as the present arrangement with the Royal College of Physicians of Edinburgh was a temporary one it should not be disturbed at present.

Feb. 24th.

## IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

### *Small-pox in Dublin.*

No fresh case of small-pox has appeared in Dublin, and the isolation hospital at Findlas contains only three patients. The warning has probably been useful, for revaccination is being largely practised in mercantile establishments and in colleges. It is satisfactory to note Dr. E. J. McWeeney's statement that the anti-vaccinationist is almost entirely unknown in Ireland.

### *A Case of Poisoning by Belladonna.*

A case came before Master Courtenay and a jury on Feb. 21st in which a young girl named Jane Crinion brought an action for damages against T. W. Britain, a pharmaceutical chemist, carrying on business in Drogheda, for negligence alleged to have been caused in preparing medicine. It appeared that two drachms of extract of belladonna were given to the plaintiff in mistake for confection of senna. A few moments after swallowing the dose the girl fell to the ground, and it was then discovered that she had taken about 120 grains of extract of belladonna. An emetic was administered and the stomach-pump was made use of as soon as possible, but it was many hours before she recovered consciousness. She complained that her eyesight and heart were still affected, although it is now more than seven months since the act of alleged negligence occurred. Damages were fixed by consent at £200.

### *Dublin Sanitary Association.*

The annual general meeting of the Dublin Sanitary Association was held on Feb. 20th at Leinster House, Kildare-street. Sir Christopher Nixon, President of the Royal College of Physicians of Ireland, in moving the adoption of the report, alluded to what he stigmatised as the absurd position taken by Kingstown, Blackrock, and Dalkey in connexion with the compulsory notification of infectious diseases. He considered that it was quite time that the law with regard to this matter should be assimilated to that which prevails in England. He would also advocate the extension of the law generally as it exists in England and Scotland, especially as to the appointment of officers of health for certain areas who could give their entire time to the work. He made an important suggestion in reference to the almost complete absence in Dublin of accommodation for patients suffering from consumption who were not fit subjects for a general hospital. The authorities of the Mater Misericordiæ Hospital had recently provided a convalescent home in Santry and had acquired there from 110 to 120 acres of land—ground enough for the erection of suitable cottage hospitals. He thought it possible that this ground might be given over for the erection of sanatoriums if it was required for that meritorious purpose. After the adoption of the report Dr. Charles F. Moore, the learned president of the association, delivered a very interesting address dealing with the necessity for compulsory revaccination and with other matters of medical and public importance.

### *The Belfast Maternity Hospital.*

At the annual meeting of the supporters of this charity, held on Feb. 20th, it was reported that during the year 304 patients were treated and 271 children were born (141 males and 130 females), with only one death. 582 patients had been treated in the extern department.

### *The Small-pox Epidemic.*

So far no cases of small-pox have occurred in Ulster, with the exception of one case reported from Kilrea, where a young woman, a workmistress in the National School in Kilrea, county Derry, developed the disease at the end of last week. She was removed to Ballymoney Hospital. How she contracted the disease remains a mystery. Some think that it was conveyed through letters from Glasgow; others that it was through a visit from a friend from that city. The Limavady Board of Guardians has had before it the question of purchasing the iron hospital at Magilligan, formerly used as an intercepting hospital, to be used if required as a small-pox hospital in the workhouse grounds.

### *Death of Mr. S. A. K. Strahan, M.D. R.U.I., L.R.C.P. Edin.*

The death in London on Feb. 21st of Dr. Strahan is announced. He graduated as M.D. of the Royal University of Ireland in 1879 and devoted himself to the study of mental disease.

### *The Cork School of Medicine and the Examining Board of the Royal University of Ireland.*

For many years the gravest dissatisfaction has existed in the Cork School of Medicine owing to the manner in which the board of examiners of the Royal University of Ireland is constituted. Though a large number of medical students from Cork have graduated at that University, yet since its foundation not even once has an examiner in medicine or surgery been appointed from Cork,, neither for nearly 20 years has the Cork school been represented by an examiner in midwifery. The medical students in Cork have come to realise the situation and they present themselves for the Royal examinations in fewer and fewer numbers every year. The council of Queen's College, Cork, and the Cork Medical and Surgical Society have addressed communications to the Senate of the Royal University on the subject, and it is to be hoped that their remonstrances will have an effect, as it seems a pity that so many students from Cork should consider it desirable to incur the expense of crossing over to Scotland for their qualifications.

Feb. 25th.

## PARIS.

(FROM OUR OWN CORRESPONDENT.)

### *Arrhenal.*

AT a meeting of the Academy of Medicine held on Feb. 11th M. Armand Gautier, to whom is due the introduction into therapeutics of that remarkable drug cacodylate of sodium, brought forward a new arsenical compound closely allied to the cacodylate—namely, di-sodic methyl arsenate. This substance M. Gautier has called for short "arrhenal," arrhen being an early name for arsenic. Arrhenal is no more poisonous than is cacodylate and possesses the same therapeutic properties, only it acts with greater vigour. It has without giving rise to any unpleasant consequences, whereas the great advantage of *being administrable* by the mouth cacodylate decomposes in the alimentary canal, giving off the toxic oxide of cacodyle, so that it can only be administered by hypodermic injection. Arrhenal is a powerful tonic and acts admirably in all cachectic states, even in tubercle and in cancer if given at an early date. M. Gautier has used it specially in malarial cachexia and found it superior to quinine. M. Billet has made trials of it in the military hospital at Constantine. Patients suffering from a severe form of quotidian fever showed a normal temperature on the day after taking it and some of them remained for three months without a relapse. Moreover, when the blood of such patients was examined under the microscope the process of phagocytosis of the malarial hæmatozoa could be watched. If one

# THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

A SPECIAL session of the General Medical Council was opened on Tuesday last, Feb. 25th. The President of the Council, Sir William Turner, K.C.B., presided over a full meeting of the Council, including the three new members, Dr. D. W. Finlay, Dr. J. Y. Mackay, and Mr. George Jackson.

The session was summoned, it will be remembered, to consider the report of a committee appointed to inquire into the differences existing between certain licensing bodies and the Council regarding the courses and conditions of medical study. But when the Council found itself meeting on the eve of the second reading of the Midwives Bill it very rightly decided to consider this measure before proceeding to the special business. As a result the Council came to the conclusion to adhere to its previous resolutions in regard to the Midwives Registration Bill. and decided, as we foreshadowed in our leading article last week, that the measure read in the House of Commons for the second time on Feb 26th was not in accordance with its resolutions. The Council therefore requested Sir John Batty Tuke, in the event of the Bill being read a second time, to communicate its views to the Grand Committee on Law. As all our readers know, the Bill was read for the second time on Wednesday last without a division, in spite of the efforts of Sir John Batty Tuke, who moved its rejection, of Sir Walter Foster, Mr. Ambrose, Mr. T. P. O'Connor, and others.

Dr. D. C. McVail's committee then presented its report, to consider which the special session had been summoned. The interesting observations and conclusions of this committee, which we reproduce in full, should be studied by all our readers. Certain points in medical education are summarised in a clear and comprehensive manner in the report. Two opinions relating to the subject from the counsel to the General Medical Council, Mr. Muir Mackenzie, were entered upon the minutes and will be found in our columns. In both Mr. Muir Mackenzie advises the Council that it has jurisdiction over the different courses of study to be gone through by candidates for registration. Dr. McVail then urged the adoption of the report by the Council, upon which would follow recourse to the Privy Council if the licensing bodies in question continued to differ from the view of the General Medical Council. Dr. Norman Moore, after pointing out that he and Mr. Bryant had sat on the committee not as representatives of the English Royal Colleges but as members of the General Medical Council, advocated an inquiry by the Council into the particular courses and institutions considered to be at fault before the Privy Council was approached.

The rest of the debate on the medical curriculum foreshadowed that when a division was taken the report of the Special Committee would be adopted; but at the same time the gravity of referring the matter to the Privy Council on the ground of the "insufficiency" of the Royal Colleges was fully recognised. In the end the Council voted by 17 to 4 to adopt the report "as far as page 53"—i.e., as far as Dr. McVail's motion had reference. A motion by Dr. MacAlister, seconded by Dr. McVail, was in the end unanimously agreed to, which put off appeal to the Privy Council, by requiring the Conjoint Examining Board in England to furnish the General Medical Council with certain information concerning the examinations of the Board in the preliminary subjects of medical study.

The special session concluded its work on Wednesday afternoon, Feb. 26th.

## SPECIAL SESSION.

### TUESDAY, FEB. 25TH.

The special session of the Council was opened in the Council Chamber, Oxford-street, Sir WILLIAM TURNER, K.C.B., President of the Council, occupying the chair.

### *Introduction of New Members.*

The following new members were introduced—namely, Dr. David White Finlay, representative of the University of Aberdeen; Dr. John Yule Mackay, representative of the University of St. Andrews; and Mr. George Jackson, F.R.C.S., one of the recently elected Direct Representatives for England. Dr. Finlay and Dr. Mackay were introduced by Sir William Gairdner and Mr. Jackson by Mr. George Brown.

### THE PRESIDENT'S ADDRESS.

The PRESIDENT said: Since the last meeting of the Council several changes have taken place in its *personnel.* As a result of the election of two Direct Representatives of the profession in England the seat for so many years occupied by Dr. Glover, whose impending retirement on account of health I intimated in November, has been filled by the election of Mr. George Jackson, and Mr. George Brown has again been chosen. Dr. William Bruce has also been re-elected by the registered practitioners resident in Scotland. Dr. Pettigrew has retired from the representation of his University. With one exception he had occupied a seat at our Council Board for a greater length of time than any other member. Originally chosen in 1877 to represent the Universities of Glasgow and St. Andrews, and 10 years afterwards as the representative of St. Andrews, when the Act of 1886 gave to the latter University the power to elect its own member, he has been in continuous occupation of his seat for 25 years. Dr. Pettigrew took a strong personal interest in the work of the Council. We shall miss his genial presence, and the experience which he gained during so many years in the management of our affairs. Dr. John Yule Mackay, Principal of University College, Dundee, which is now a constituent part of the University of St. Andrews, has been appointed his successor. Dr. Robert William Reid, who for five years represented the University of Aberdeen, and who during his period of office took an active interest in the subjects which came under the consideration of the Council, more especially in the work of the Education Committee, has been succeeded by Dr. David White Finlay, professor of medicine in that university. The Council welcome to their board the new and the re-elected members. The Council will recollect that on Dec. 3rd of last year it was resolved to appoint a committee to report on the differences that exist between certain licensing bodies on the one hand and the General Medical Council on the other regarding the courses and conditions of study and the recognition of the institutions and schools in which the required courses may be taken, and that a special meeting of the Council to consider the report should take place on the fourth Tuesday in February of this year. This is the reason why we have been called together at this unusual period. The committee's report has been for some days in your hands, and members of Council, in view of the momentous issues which have been raised in it, will, I feel sure, have given it their close attention. It is, I have no doubt, in the knowledge of all of you that a Midwives Bill has been introduced into the House of Commons during the present session and is to be read a second time during this week. I instructed our Registrar to obtain copies of the Bill as soon as it was printed, and to forward one to each Member of Council. You will observe from the programme of business that a copy of the Bill has been sent officially by the Lord President of the Privy Council for our information. As the consideration of a Midwives Bill formed no part of the business specified in the resolution of December last by which this meeting was fixed it will be necessary, in accordance with Standing Order 1 (3), should the Council desire to discuss this Bill and to offer an opinion on it, that a motion to this effect should be agreed to by the Council before any discussion can take place. I shall therefore put to the council and to provide that all the members should be elected by the whole profession throughout the province. The Bill is now before a special committee of the House on which all the medical and legal members are serving.

### *The South-Western Medical Association of Manitoba.*

Two or three months ago the members of the profession in the south-west part of the province of Manitoba met and organised themselves into an association with the above title. Out of 70 practitioners in the district it speaks well for the medical body when it is stated that 67 of these immediately signed the roll, and there are good prospects of the remaining three doing likewise in the near future. The objects of this organisation are set forth as follows in a circular letter issued to the profession in Manitoba. Insurance companies will have to pay $5 for an examination, lodges with no insurance $2, and lodges with insurance $3 Lodge practice is discountenanced. A provisional tariff of fees has been fixed and all will endeavour to adhere to it as closely as possible. The organisation has also decided that it will be better in the interests of the profession if all render their accounts at least quarterly. A strong effort will be made to bring the whole profession in the province of Manitoba into the organisation.

### *Ontario Death-roll in 1901.*

A statement recently issued by the Board of Health of the province gives the details regarding the deaths from contagious diseases occurring in 1901, 90 per cent. of the population reporting. The total deaths from all causes number 25,736, or 13·1 per 1000 as compared with 25,382 occurring in 1900 Tuberculosis caused more deaths than any other contagious disease—viz., 2286. This was not so large as in 1900, when the total was 2360. June was the healthiest month with a total of 1608 deaths; March showed the heaviest death-roll with 2525 deaths. Scarlet fever claimed 209; measles, 120; diphtheria, 512; whooping-cough, 112; and typhoid fever, 345. The mortality from typhoid fever in 1900 was 550.

### *Small-pox in Ontario.*

It begins to look as if Ontario was in for a big epidemic of small-pox. Although the disease is pretty well under control in the unorganised districts amongst lumber camps, mining and construction camps, &c., where some 60 physicians have recently been appointed by the managers, the older and better settled sections of the province are now being attacked; and the last statement issued from the Board of Health shows that there were 629 cases in the province in the month of January. These patients are scattered over 28 counties with 87 centres for infection. Ontario is pretty bad, but many of the States of the American Union are much worse.

Toronto, Feb. 4th.

## NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

### *Leprosy Bill for America.*

SENATOR PLATT of New York has introduced into the National Legislature a Bill to Prevent the Spread of Leprosy, some of the provisions of which are as follows:—The appointment of a leprosy commissioner to reside at New York or San Francisco. with a yearly salary of $5000 (£1000); the setting aside of a mile square for a national leper home, the site to be chosen by a leprosy board; the appropriation of $50,000 (£10,000) to erect suitable buildings for the habitation of lepers in the United States, not including Hawaii, Porto Rico, Cuba, or the Philippines; the transportation of lepers who are unable to care for themselves to the national leper home; the injunction of steamship companies or individual vessels or railroads from bringing to the United States any leper or from accepting any immigrant from any of the countries known to be leprous without a special certificate; the strict supervision for seven years of immigrants of leprous families, though they themselves be free from the disease; the deportation of any leper who, despite all precautions, manages to enter the United States; no discrimination to be made on behalf of Americans who contract the disease in a foreign country; the Marine Hospital Service of the Treasury Department to have full charge of the National Leper Home. There are probably more cases of leprosy in the United States than is generally believed, and the enactment of such measures as the foregoing would not only prevent the spread of the disease (that is taking the view of the majority as to its contagiousness) but would impart a feeling of confidence among the general public.

### *Reforms in the New York City Hospitals.*

Some months ago the revised charter of the city of New York provided that the charity hospitals, Bellevue, Harlem, Gouveneur, and Fordham should pass from the control of the Charities Department—under which management they have been for many years—to a board of trustees consisting of seven members. With the change of the city administration the new board appointed by Mayor Low has entered upon its duties The city institutions will be subjected to thorough reforms and the existing methods of management will be very considerably altered. Bellevue Hospital, by far the largest and most important of these institutions, will naturally receive the lion's share of the new board's attention. The insane pavilion of Bellevue will be first taken in hand and it will be converted into what will practically be a temporary insane asylum. The alcoholic ward, so far as management is concerned, will be swept and garnished, and the nurses and attendants throughout the establishment will be paid fair wages. The statement is also made that a large appropriation of money will shortly be asked for, and that if the request be granted Bellevue will be rebuilt. It seems that the time is really now approaching when New York will have charity hospitals worthy of her position as the most important and the richest city of the United States.

### *Osteopathy in New York State.*

This method of treating disease has become vastly popular in many parts of the United States, thus once more showing the gullibility of the human race. In some States the practice of osteopathy has been placed on a par with medical practice and to its professors have been granted all privileges and powers accorded to the men who hold a degree in medicine. Aided by the backing of influential persons in New York State, the osteopathic fraternity have for some considerable time been making determined and strenuous efforts to be placed upon an equal footing with graduates in medicine and surgery. A Bill to this effect was introduced into the New York State Legislature in the present session The osteopaths set forth their qualifications to be given the right to treat disease of all kinds and to sign death certificates. They stated that everything is taught in osteopathic colleges that all medical colleges teach except materia medica. Naturally the medical profession opposed the passage of such a Bill with all its might and showed up many of the fallacies of osteopathy. For instance, it was pointed out that while the osteopathic colleges pretended to teach all branches of medical science except materia medica, the time devoted to this teaching made of the whole affair a complete farce. The whole osteopathic course in its prominent colleges is only two years, and the time given to the teaching of such important subjects as anatomy and physiology is so short as to be utterly absurd. It is therefore gratifying to be able to announce that the Bill to place osteopathy upon the same plane as regular medicine has again failed to pass in New York State.

Feb 18th.

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VACCINATION STATISTICS.—At the meeting of the Axbridge Board of Guardians held on Feb. 18th it was reported that during the half-year ended June, 1901, the births of 502 children were registered, 272 successful vaccinations were performed 85 certificates of conscientious objection to vaccination were granted, and 43 children died unvaccinated. In Weston-super-Mare, the figures for which are included in the above returns, 232 births were registered, and only 89 children were successfully vaccinated.

TORBAY HOSPITAL, TORQUAY.—The annual meeting of the governors of this hospital was held on Feb 20th. The medical report stated that 401 in-patients had been admitted during 1901, compared with 339 in the preceding year. 706 out-patients had been treated, exclusive of 628 ophthalmic cases In the provident dispensary department 125 new cases had been admitted. The financial statement showed that the total expenditure amounted to £2325, and that there was an unfavourable balance of £57. The report added that at the closing of the Syracusa Convalescent Home the committee had presented the hospital with the Roentgen ray apparatus.

referred to were under the control of medical practitioners and therefore he submitted that there was no parallel to be drawn with the provisions of this Bill. Under this Bill the midwives were independent of medical practitioners.

Sir John Williams explained that the cases were only visited by medical practitioners when difficulty arose.

Dr. Norman Moore said that his view was that if it were thought that this Bill would improve the present state of things and not make it worse they should endeavour to amend the Bill.

Dr. Atthill said that he had always been an advocate for the education of midwives, but he regarded this Bill as a positive evil.

Dr. Heron Watson said that it was a bad Bill root and branch and ought to be opposed.

Sir William Gairdner said that the conferences with the promoters of this legislation which had taken place had left him with the impression that their desire was to be in accord with the wishes of this Council.

The President intimated that he had received a letter from one of the most active promoters of the Bill. In this letter the writer said that he believed the Government would agree to the Bill being read a second time on the understanding that all necessary amendments would be made in committee and he could have no doubt that they would seek to obtain the views of the General Medical Council at that stage. The writer continued: "I sincerely hope they will and that those views may receive full and ample consideration at their hands."

Mr. Horsley thought that the President of the Privy Council had gone back on his statement to the deputation of supporters of the Bill when he told them that they must agree with this Council.

Sir Christopher Nixon submitted that the Council should not take up a completely *non-possumus* attitude in this matter, but should discuss the merits of the Bill and try to have the provisions altered according to its wishes.

Dr. McVail thought that they should either pass the matter over altogether or indicate how the Bill should be altered.

It was agreed to insert at the end of the third clause of the motion the words "in its present form."

Thus amended the motion was put to the Council and carried *nemine contradicente.*

It was further agreed that in the event of the Bill being read a second time and referred to the Grand Committee on Law Sir John Batty Tuke be requested to communicate the resolutions of the Council on the subject to that committee.

### *The Medical Curriculum—The Dispute between the Council and the English Royal Colleges.*

The Council proceeded to the consideration of a report on the curriculum by the special committee appointed last December "to prepare a report on the differences that exist between certain licensing bodies on the one hand and the General Medical Council on the other, regarding the courses and conditions of study and the recognition of the institutions and schools in which the required courses may be taken; and that the report be considered by the Medical Council at a special meeting, when the Council will decide what action, if any, shall be taken, and in particular whether the circumstances are such as to require action to be taken under Section XX. of the Act of 1858." This special committee consisted of Dr. McVail (chairman), the President (*ex-officio*), Dr. Norman Moore, Mr. Bryant, Mr. Young, Sir Hector Cameron, Sir William Thomson, and Mr. Ball.

Dr. McVail moved that the report should be received and entered on the minutes.

Exception was taken to several parts of the document, and especially to a "minority" report at the end of it. It was claimed that the latter ought to be signed by the minority who asked it to be presented to the Council. Dr. Norman Moore admitted that he and Mr. Bryant, the representatives respectively of the Royal College of Physicians of London and the Royal College of Surgeons of England, were the minority in question, and said that there was no objection whatever on their part to put their names to the report. Among other corrections agreed to were the deletion of words relating to the University of Durham and the insertion of words to secure accuracy and to give prominence to the fact that the Royal College of Physicians of London is the only individual medical corporation able to grant a complete qualification in medicine and surgery. The report as amended was then put on the minutes. The following (which excludes matter contained in no fewer than 42 printed octavo pages) formed the most interesting portion of it, and as far as the end of "conclusions by the committee" (pages 43 to 53) it was read by Dr. McVail:—

#### *Summary of Narrative.*

The principal events in the foregoing narrative may be briefly summarised as follows:—

In June, 1890.—Adoption of five years' course after registration; physics, chemistry, and biology to constitute the first year. These to be studied in universities, medical schools, or in teaching institutions that are recognised by the licensing bodies.

In May, 1893.—The Medical Council codified its resolutions into requirements and recommendations, the former to be enforced, if necessary, by action taken under Clause XX. of the Medical Act, 1858.

December, 1894.—The Council by resolution authorised chemistry, physics, and biology to be taken before registration at teaching institutions recognised by the licensing bodies, but a full five years of curriculum after registration was still to be enforced. The licensing bodies were requested to send annually lists of the institutions so recognised—after inspection. (So far the Medical Council did not assert a right of approval.)

December, 1898.—A letter read from the Royal College of Surgeons of Ireland calling attention to the large number of teaching institutions recognised by the English Conjoint Board—many of them grammar schools.

June, 1899.—The Medical Council decides that the scientific institutions (the term "teaching institution" disappears) at which study in chemistry, physics, and biology shall quality for registration in the Students' Register must not only have been recognised by one or more of the licensing bodies, but must also have been approved by the Council.

December, 1899.—Refusal of English Royal Colleges to recognise the right of approval as belonging to the Council, or that the Medical Acts gave the Council any authority to impose conditions regarding the registration of medical students.

December, 1900.—Memoranda, counsel's opinions, &c., considered, and Council decides to adhere to requirements, and in effect precludes the registrars from registering students of unapproved institutions, but invests the Students' Registration Committee with powers to deal for the present with such cases.

June, 1901.—The English Royal Colleges intimate to the Council that they no longer require candidates for their diplomas to be registered in the Students' Register.

December, 1901.—The English Royal Colleges in their latest regulations require their candidates to have passed a preliminary examination that is recognised by the Colleges—not, as heretofore, a preliminary examination recognised by the Medical Council. Up to the present the list of preliminary examinations of the Colleges is identical with that of the Medical Council.

The Council appointed the Committee engaged in the present report, and decided to hold a special meeting to consider it.

#### *Observations by Committee.*

From the foregoing narrative of events it will be seen that from 1890 to 1894 one matter was in dispute between the Conjoint Board of England and the Medical Council, and that since the end of 1898 the variance has been on quite another question. In the former period the Colleges desired that recognition should be given to the study of the three science subjects prior to registration, and after a four years' struggle the Medical Council yielded. In the latter period the dispute has been about the institutions to be recognised at which the three preliminary science subjects might be studied. The Colleges, between 1894 and 1898, had been according recognition to a large number of institutions, some of which had been inspected by the Colleges whilst others had been inspected by the Science and Art Department only, and when quite suddenly the attention of the Medical Council was called to this circumstance it began to remonstrate with the Colleges, at first mildly, but these bodies remaining obdurate, the Council passed resolutions gradually more and more stringent, until finally it in effect refused to register students entering at institutions which it itself had not approved. As to the merits of the institutions as places of study for the first year of the curriculum, the Colleges hold that in all of them the teaching is adequate, but in this opinion the Council has not concurred. Quite clearly it was the intention of the Council, when it decreed the five years' professional course in 1890, that physics and biology should be taught as to scope and standard just as chemistry had been taught prior to 1890. Chemistry had a place in the old curriculum beside anatomy and physiology and other branches of medical science. A course during a full session of systematic chemistry had been imposed, just as a systematic course of a full session in anatomy was required, and instruction in practical chemistry of a duration of at least two months and a half was demanded. In every respect chemistry had been an integral subject of the medical curriculum to be taught in a university, a recognised medical school, or in a college of science. When physics and biology were introduced into the curriculum and the period of the curriculum was extended to five years the Medical Council intended that these subjects should receive, in relation to the time to be given to them respectively, place and consideration not inferior to those accorded to chemistry or any other subject of medical study. The Council did not contemplate these two new subjects as being taught together with ordinary school subjects in day-schools, and still less that the teaching of chemistry should be reduced with them to an ordinary school level. The Council had permitted the introduction of the words other "teaching institutions" without perhaps apprehending the direction and the length to which this concession would lead. When the Council at the end of 1898 had awakened to some appreciation of the results of its concession in 1890, it began to take steps to arrest and correct the evil. But all such efforts the London Colleges have opposed most strenuously, until the rupture is complete, and the Colleges will confer their diplomas without regard to the Medical Council's directions and resolutions. In 1899 and in 1900 the Council has, by large majorities, repeatedly in its resolutions expressed its opinion that under the widespread recognition of institutions by the London Colleges the study of the three science subjects is not sufficiently safeguarded as to its scope and standard, and

Council the two following questions: 1. Shall the Council consider the Midwives Bill at this special meeting? 2. Shall the Council consider the Midwives Bill before proceeding to the special business for which it is summoned?

These questions were put from the chair and in each case the answer of the Council was in the affirmative.

### *The Midwives Bill.*

Mr. HORSLEY moved that the Council should proceed to consider the letter of the Lord President of the Privy Council transmitting to the Council for the information of members a copy of the Midwives Bill as introduced in the House of Commons during the present session.

Dr. ATTHILL seconded this motion, saying that it would strengthen the hands of the members of the House of Commons who opposed the Bill if this Council gave its opinion about the measure.

The motion was agreed to.

Dr. ATTHILL moved :—

(1) That the Council adheres to the resolutions in regard to legislation for midwives which it adopted at a special meeting held in April, 1898, and communicated at his request to the Lord President of the Privy Council; (2) that the Council is of opinion that in important respects the provisions of the Midwives Bill, 1902, are at variance with the principles thus adopted by the Council, and do not embody the safeguards for the protection of the poor which it regards as essential; (3) that accordingly the Council is of opinion that the Midwives Bill, 1902, now before Parliament, ought not to pass into law; (4) that the foregoing resolutions be communicated forthwith to the Lord President of the Privy Council.

The terms of the resolutions of April, 1898, are as follows, viz. :—

1. That the Council adheres to its previous resolutions affirming that it is desirable that measures should be taken to protect lying-in women of the poorer classes from the grave risk which they now incur from the unregulated practice of midwives, many of whom are ignorant and unskilful, and most of whom pursue their calling without due medical supervision.

2. That to this end it is desirable that every woman who, not being a registered medical practitioner, engages for gain in practice as a midwife should be subjected to legal regulation and control.

3. That any measure which proposes merely to protect the title of "midwife," however defined, and does not make illegal and penal the unlicensed practice of midwifery for gain, cannot be regarded as offering a sufficient safeguard in the interest of the public health.

4. That some central body should be established by Parliament whose functions should include the framing of the conditions under which midwives may be licensed and of the regulations under which alone they shall be allowed to practise.

5. That the conditions and regulations so framed should be subject to the approval of the General Medical Council, and if and when so approved should be issued to the local sanitary authorities by the State department which is concerned with the public health.

6. That provision should be made by Parliament for reimbursing the Council for any expenditure which it may have to incur in performing the duty hereinbefore referred to.

7. That every woman, before beginning to practise as a midwife in any district, should be required to take out a licence, to be granted by the local sanitary authority of the district under the prescribed conditions and regulations. That such licence should be subject to annual renewal, and should be revocable at any time in case the holder is proved to have infringed any of the prescribed regulations.

8. That any unlicensed woman, whether calling herself a midwife or not, who, not being registered under the Medical Acts practises as a midwife for gain in any district, should be made liable to a substantial penalty.

9. That the conditions under which licences are granted should include the production of satisfactory evidence of character and of training and experience in the conduct of natural labour and in the after-care of lying-in women and new-born infants.

10. That the regulations under which licensed midwives are required to practise should include provisions securing that the midwife shall immediately seek qualified medical assistance in every case which presents symptoms of difficulty, abnormality, danger, or disease on the part of the mother or of the new born infant.

11. That in so far as the Bill submitted to the Council is not in accordance with the general principles above laid down, the Council do not regard it as offering a solution of the question under consideration and would earnestly deprecate its passing into law in its present form.

Dr. ATTHILL said that he considered it essential that the Council should adhere strictly to the opinions it had clearly announced in these resolutions. It was inadvisable that they should discuss the provisions of the Bill now before Parliament. For himself he considered it the most objectionable Bill on the subject that had come before the House of Commons. In 1898 the Privy Council sent the Bill of that year to this Council and asked the opinion of the Council upon it. On the present occasion the opinion of the Council was not asked; the Bill was merely sent for the information of the Council. There were two points in particular on which the Council had always insisted: that no Bill should pass in which there was not a provision that in cases of difficulty the midwife should be compelled to call in the aid of a registered medical practitioner, and that there should be an annual fee for re-registration in order that midwives might be kept under supervision. These were the two chief details and if they were omitted from any Bill he believed that incalculable damage would be done.

Dr. P. HERON WATSON seconded the motion.

Mr. GEORGE BROWN said that he entirely approved of the proposed action. He thought it highly desirable that the Lord President of the Council should understand that this Bill was a departure from the measure of which the Council approved to a certain extent. All the safeguards which the Council had wished to see introduced had been dropped, and, indeed, the Bill was one which the Government should not aid in any way. The Bill professed to be framed in order to protect the poor against the practice of ignorant and inefficient midwives, but as a matter of fact it did nothing of the kind; it simply protected the title of "midwife." Should the Bill become law the old Sairey Gamp, the discredited village midwife, would be allowed to practise without let or hindrance. That fact of itself ought to be enough to make the Legislature reject the measure. Moreover, there was no penalty for those who, registered under the Act, failed to call in medical aid in dangerous cases. If the Bill were to meet its avowed purpose it must provide for efficient nursing during the lying-in period. Indeed, the Bill was totally inadequate and was condemned by the medical profession.

Dr. MACALISTER said that it was desirable to point out that the present Bill was at variance with each of the articles of faith set forth in the resolutions of April, 1898. It did not propose to regulate the practice of all women who practised as midwives. It only proposed to make regulations for those who took out certificates and called themselves midwives—a very small proportion of the total number. This comment also met the second resolution. As for the third resolution the Bill proposed merely to protect the title of midwife and did not contain the safeguard which the Council considered essential. It was quite true that the Bill proposed to establish a midwives' board, and that board would deal only with the *élite* of the profession who held certificates. It did not draw up regulations under which alone midwives should be allowed to practise. For the first time in a measure of this kind the approval of this Council was not required. All that was required was that the Privy Council should approve the rules after consultation with this Council. The consultation might be merely formal and any recommendations made by this Council might be entirely disregarded. With regard to the sixth resolution there was no proposal for reimbursing this Council for any expenditure it might incur in this connexion. Under the Bill a woman could notify if she pleased, not to the sanitary authority, but to the county or district council, and she need not apply annually for her licence. Therefore an important safeguard was lost. As to resolution No. 8 a penalty appeared in an incomplete form in a previous Bill, but it had been entirely left out of this measure. As to the ninth resolution the only persons who had to produce any evidence of character were those who applied to be licensed on the ground of their having been in practice for two years prior to the passing of the Act. All other applicants for certificates had no character conditions to satisfy. As to the tenth resolution there was no such provision in the Bill and none was likely to be introduced in rules framed by a midwives' board constituted in the manner proposed. For these reasons he desired to support the motion.

On the suggestion of Sir HECTOR CAMERON it was agreed to delete from the motion the qualifying words "in important respects"

Sir JOHN WILLIAMS said that as this was a Bill for the improvement of midwives it was well to consider what was the effect of the present system of educating and registering them. He had made some inquiries with regard to midwives connected with the out-patient departments of hospitals in London and he found that whereas the mortality in childbirth throughout the country was one in 200, in this particular practice it was only one in 1000. Any measure which would help to bring about such a result as that was surely deserving of consideration. He based this statement on the report of the Registrar-General.

Dr. MCVAIL asked whether the Registrar-General's report stated how much of this mortality occurred in cases attended by qualified medical practitioners and how much in cases attended only by midwives.

Sir JOHN WILLIAMS said that he could not answer that question.

Mr. HORSLEY said that he understood that the midwives subjects at institutions which have been approved by the Medical Council; nevertheless, this Conjoint Board admits candidates to its second and subsequent professional examinations when such candidates produce evidence that they have passed the first professional examination of the Conjoint Board of England, and that the regulations of the Scottish Conjoint Board do not require in such cases evidence that the courses of study in chemistry, physics, and biology undergone by such candidates have been so undergone at scientific institutions which have been approved by the Medical Council.

IV. The Society of Apothecaries of London, although requiring evidence that candidates who present themselves at its first professional examination, which includes the subjects of chemistry, physics, and biology, shall have been registered in the Students' Register, and thus must have taken the courses of study in these subjects at institutions which have been approved by the Medical Council; nevertheless this Board admits candidates to Part II. of its primary professional examination when such candidates produce evidence that they have passed the first professional examination of the Conjoint Board of England, and that the regulations of the Society of Apothecaries do not require in such cases evidence that the courses of study in chemistry, physics, and biology undergone by such candidates have been so undergone at scientific institutions which have been approved by the Medical Council.

V. The University of Oxford prescribes practically no curriculum of study to be undergone by candidates previous to their admission to the professional examinations conducted by that university for its degrees in medicine, nor does it require candidates to have been engaged in medical study for any definite minimum terms of years, and it does not require evidence of registration in the Students' Register. It asks only that candidates for its second and final examinations for the M.B. degree "must present certificates of instruction in infectious diseases and mental diseases, and of attendance in labours and of proficiency in the practice of vaccination."

VI. The University of London admits candidates to its preliminary scientific examination, which is one of the examinations for the medical degree, altogether irrespective of evidence of study in these subjects at any scientific or teaching institutions. As regards the remaining subjects of the medical curriculum the University of London requires evidence only that five of 11 subjects which it enumerates shall have been taken in universities, schools of medicine, and hospitals approved by it. The university does not require evidence of registration in the Students' Register, but it does require that candidates for its medical degrees shall have been engaged for five years in medical study subsequently to their having passed their matriculation examination, and four years subsequently to having passed the preliminary scientific examination.

### *Recommendations by the Committee.*

The committee recommends the Medical Council to adopt the following resolutions:—

I. That many courses of study in the subjects of physics, chemistry, and biology are accepted by the Conjoint Board (constituted in terms of Section III., Sub-section (i.), paragraph (*b*), of the Medical Act of 1886) of the Royal College of Physicians of London and the Royal College of Surgeons of England as parts of the curriculum to be gone through in order to obtain the respective qualifications of these bodies, which qualifications are mentioned in Schedule (A) of the Medical Act, 1858, and admit to the Medical Register; and that these courses of study of chemistry, physics, and biology, pursued at institutions which are not universities or recognised medical schools or scientific institutions approved by the Medical Council, do therefore not secure that the persons who pursue such courses of study, and who afterwards obtain the qualifications of the Royal College of Physicians of London and the Royal College of Surgeons of England, possess the requisite knowledge and skill for the efficient practice of their profession.

II. That many courses of study in the subjects of physics, chemistry, and biology are accepted by the Conjoint Board (constituted in terms of Section III., Sub-section (i.), paragraph (*b*) of the Medical Act of 1886) of the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow, under No. 10 of the regulations of that board as parts of the curriculum to be gone through in order to obtain the respective qualifications of these bodies, which qualifications are mentioned in Schedule A of the Medical Act of 1858 and admit to the Medical Register, and that these courses of study of chemistry, physics, and biology pursued at institutions which are not universities or recognised medical schools or scientific institutions approved by the Medical Council do not secure that the persons who pursue such courses of study and who afterwards obtain the qualifications of the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow possess the requisite knowledge and skill for the efficient practice of their profession.

III. That many courses of study in the subjects of physics, chemistry, and biology are accepted by the Society of Apothecaries of London (which under Section V., Sub-section (i.), of the Medical Act, 1886, grants qualifications admitting to the Medical Register), in terms of the fourth paragraph on page 3 of the regulations of the Society of Apothecaries, as parts of the curriculum to be gone through in order to obtain the qualification of this body, which qualification admits to the Medical Register; and that these courses of study of physics, chemistry, and biology pursued at institutions which are not universities or recognised medical schools or scientific institutions approved by the Medical Council, do not secure that the persons who pursue such courses of study and who afterwards obtain the qualification of the Society of Apothecaries of London possess the requisite knowledge and skill for the efficient practice of their profession.

IV. That as the University of Oxford grants its medical degrees after examination only, and without evidence that any courses of study in the subjects of the curriculum laid down by the Medical Council have been undergone by candidates for these degrees; the possession of such degrees, which are qualifications admitting to the Medical Register, does not in terms of Section XVIII. of the Medical Act of 1858 secure that the persons holding the degrees possess the requisite knowledge and skill for the efficient practice of their profession.

V. That the attention of the governing body of the University of London, which is at present engaged in framing regulations under the new constitution of the University, be directed to the requirements of the Medical Council regarding the medical curriculum, and to Clauses XVIII. and XX. of the Medical Act of 1858, which impose on the Medical Council the duty of insuring that the courses of medical study pursued by candidates for a registrable qualification shall be sufficient to insure along with an adequate standard of examination that the persons who obtain the qualification shall possess the requisite knowledge and skill for the efficient practice of their profession.

VI. That the University of Durham, by recognising all the courses of study which are recognised by all the licensing bodies in Schedule A of the Medical Act, 1858, accepts many courses of study in the subjects of physics, chemistry, and biology which have been recognised by the Conjoint Board of England, but have not been approved by the Medical Council, as parts of the curriculum to be gone through in order to obtain the medical degrees of the University, which are qualifications mentioned in Schedule A of the Medical Act of 1858, and admit to the Medical Register; and that these courses of study of chemistry, physics, and biology pursued at institutions which are not universities or recognised medical schools or scientific institutions approved by the Medical Council do not secure that the persons who pursue such courses of study, and who afterwards obtain the medical degrees of the University of Durham, possess the requisite knowledge and skill for the efficient practice of their profession.

VII. That the President be requested to communicate the foregoing resolutions of the Council to the licensing authorities to whom they respectively refer, and that the President be further requested to call the earnest attention of these bodies to the obligations under which the Council will be placed in November next to represent to His Majesty and His Most Honourable Privy Council in terms of Section XX. of the Medical Act of 1858 the insufficiency of the courses of study required by these bodies from candidates who seek their registrable qualifications and to express the hope that when the Council meets in November it shall receive assurances from these bodies that they will give effect to the Council's requirements as to courses of study and curriculum and thus relieve the Medical Council from the necessity of making any such representation.

VIII. That the University Courts of the Scottish Universities be requested to frame new ordinances by which the provisions of Clause X. of the present ordinances which permit that in certain cases the full period of the medical curriculum may be four years only shall be abrogated and that the new ordinances shall provide for a five years' medical curriculum being in all cases required.

IX. That the Education Committee shall in future be designated the Education and Curriculum Committee, and that in addition to its present duties the committee shall report annually to the Medical Council regarding the curricula of the licensing bodies.

(*Signed by* DR. MC VAIL.)

### *Minority Report.*

I. We, having considered the numerous differences in detail as to the courses of professional study required by the several qualifying bodies, are of opinion that, even if it were desirable, it is impossible to obtain absolute uniformity, and recommend the Council to withdraw its late resolution requiring the approval by the General Medical Council of the scientific institutions recognised as places of study by the qualifying bodies.

II. We are of opinion that the powers claimed by the Council in this particular do not exist.

(*Signed by* MR. BRYANT *and* DR. NORMAN MOORE.)

The PRESIDENT informed the Council that two opinions relating to the subject before them had been obtained from Mr. Muir Mackenzie, their counsel. One related to the curriculum, and the other had a very important bearing on the report and the discussion which might take place on it. They had been put in print, but had been marked "strictly private and confidential." He thought, however, that they should form a part of the papers in the case, and he moved accordingly.

Mr. BROWN: Should these be made public?

The PRESIDENT: This is a public question, and I have no doubt that the opinions will be referred to repeatedly during the course of the discussion.

The motion was agreed to, and the two opinions, as follows, were entered on the minutes:—

### I.

### *Question submitted by the Curriculum Committee.*

Should the Medical Council be of opinion that a licensing body, whose qualification or qualifications admit to the Medical Register, accepts courses of study pursued by candidates for its qualification or qualifications, which courses of study do not, in the opinion of the Medical Council, secure that the candidates who have undergone them and who, after passing the qualifying examination of the licensing body, receive its registrable qualification or qualifications, shall possess the requisite knowledge and skill for the efficient practice of their profession, is the Medical Council empowered to represent to His Majesty and His Most Honourable Privy Council that the qualifications granted by the licensing body are not such as to secure that the persons who receive them possess the requisite knowledge and skill for the efficient practice of their profession?

### *Opinion.*

My opinion is that the General Council can, if necessary, dissociate courses of study from examinations, and in the case above described can represent to the Privy Council that the courses of study to be gone through by candidates for the qualification of the licensing body are not such as to secure that the persons who receive the qualification possess the requisite knowledge and skill for the efficient practice of their profession. M. MUIR MACKENZIE.

February 22nd, 1902.

### II.

### *Representation to the Privy Council; Opinion.*

The first question in which, as I understand, my opinion is desired is whether, in the case of one or more of the licensing authorities, if the General Council takes no exception to the qualifying examination prescribed by the Medical Act, 1886, and the standard of proficiency required from candidates at those examinations, the General Council has stated its determination to recognise only scientific institutions that have specially been approved by the Council itself The Colleges hold that the Council has no power under the Acts to impose such requirements on them, and generally that the Council, may, on such points, only tender advice which a licensing body may accept or decline

. What then, actually are the powers of the Council in regard to the matter in consideration? The General Medical Council derives all its authority from the Medical Acts, particularly the Acts of 1858 and 1886 and the Council is bound to administer these Acts The preparation of a Register containing the names of all practitioners duly qualified in terms of the Act was the first important work to be undertaken by the Medical Council, and the supervision of the Register remains its chief duty The Act requires the Council to enter in the Register the names of persons who have received medical degrees and diplomas from bodies that are mentioned in Schedule (A) of the Act of 1858, and, since 1886, persons who have received diplomas from conjoint boards of medical and surgical corporations as defined in the Act of 1886 or of single corporations under conditions as to additional examiners appointed by the Council as provided for in that Act At present there are 12 universities in the United Kingdom, and one corporation, each of which grants qualifications that entitle to registration, there are three conjoint boards, each of which gives qualifications that must be registered on application by the recipients, and there are two single corporations, which having been provided with the necessary additional examiners, also confer registrable qualifications In all then, there are 17 bodies in the United Kingdom whose graduates and diplomates are entitled to be put on the Register

The question then is, has the Council acted without legal power or do the Acts of Parliament confer upon it the power which it claims?

It was open to Parliament in framing the Act of 1858 to require the Medical Council to register every graduate and diplomate of every one of the bodies, or combinations of bodies, without any question and without any voice as to the conditions of study and examination, each body being a law to itself Or the Act might have given to the Council absolute powers as to receiving or declining any of the various degrees and diplomas The Council might have had power to strike off and to readmit any qualification according to its dissatisfaction or satisfaction with the conditions under which the qualification is granted Neither of these courses was adopted, but the Act did not leave the bodies free to confer qualifications entirely as each might think fit and on any terms it might individually decree The Act (Section XXI) confers on His Majesty and the Privy Council the power if they see fit to order that any qualification granted by any of the bodies may cease to confer any right to be registered under the Act and His Majesty and the Privy Council have also the power of revoking any such order of deprivation But the Privy Council cannot act thus on its own initiative it can act only as regards an order for deprivation on a representation by the Medical Council No provision exists by which such representation can be made by any authority other than the Medical Council and this representation must be that the course of study and examinations to be gone through, required by the college or body regarding which the representation is made, are not such as to secure the requisite knowledge and skill for the efficient practice of the profession The manner in which the Medical Council is to acquaint itself with the courses of study and examinations is laid down in Section XVIII. of the Act which gives the Council the power to ask from the several Colleges and bodies in Schedule (A) from time to time such information as the Council may require as to the courses of study and examinations to be gone through in order to obtain the respective qualifications and generally as to the requisites for obtaining such qualifications, and any member or members of the Council, or any person or persons deputed by the Council, may attend such examinations Section XX of the Act is —

"In case it appear to the General Council that the course of study and examinations to be gone through in order to obtain any such qualification from any such College or body are not such as to secure the possession by persons obtaining such qualification of the requisite knowledge and skill for the efficient practice of their profession it shall be lawful for such General Council to represent the same to Her [His] Majesty's most Honourable Privy Council"

The Council thus has laid upon it the obligation of deciding this point as to the standards of study and examinations Under the Act of 1858 the voice of the Council alone can be heard by the Privy Council as to this point in regard to the sufficiency or insufficiency of study and examinations There appears to be no provision in Section XXI whereby the Privy Council can receive evidence or opinions relating to study and examinations otherwise than through the Medical Council

But in the Act of 1886 Section 4 modifies Section XXI of 1858, and is as follows —

"4—(1) If at any time it appears to the General Council that the standard of proficiency in medicine surgery, and midwifery, or in any of those subjects or any branch thereof required from candidates at the qualifying examinations held by any of the bodies for the time being holding such examinations is insufficient the General Council shall make a representation to that effect to the Privy Council and the Privy Council if they think fit, after considering such representation and also any objections thereto made by any body or bodies to which such representation relates may by order declare that the examinations of any such body or bodies shall not be deemed to be qualifying examinations for the purpose of registration under the Medical Acts, and Her Majesty with the advice of Her Privy Council, if, upon further representation from the General Council or from any body or bodies to which such order relates it seems to her expedient so to do, shall have power at any time to revoke any such order

"(2) During the continuance of any such order the examinations held by the body or bodies to which it relates shall not be deemed qualifying examinations under this Act and any diploma granted to persons on passing such examinations shall not entitle such persons to be registered under the Medical Acts, and any such body shall not choose either separately or collectively with any other body a member of the General Council and the Member (if any) for the time being representing such body in the General Council shall, unless he was chosen by such body collectively with any other body not subject to an order under this section, be suspended from taking part in the proceedings of the General Council

Thus the Privy Council must hear and consider "any objections thereto made by any body or bodies to which such representation relates Does this apply to the sufficiency or insufficiency of the courses of study of Sections XVIII and XX of the Act of 1858, and the first section of the Act of 1886 is that the Act is to 'be construed as one with the Medical Acts'? Apparently, regarding courses of study, the Medical Council only can be heard by the Privy Council

How, then should the Medical Council proceed in this relationship which it bears to the Privy Council and the bodies enumerated in Schedule (A)? Obviously its primary duty with regard to the bodies is to inform them as to its opinions regarding the courses and standards of study, and the scope and standard of examinations which each body should as a minimum require To refrain from doing this would be unfair and vexatious, were it to deny information as to the standards it approves the bodies in ignorance of its requirements would necessarily act each according to its own judgment; insufficiency here and there might occur, and the Council might be repeatedly reporting to the Privy Council or otherwise would be neglecting its duty To formulate therefore, a minimum course of study was obligatory on the Council as one of its earliest duties when it was first constituted, and that duty it performed, and has continued to perform during the 43 years of its existence It has always set forth a curriculum, which it has amended and extended from time to time with the progress of education and the advancement of medical science Had the Council refrained from formulating a minimum curriculum and had it in the absence of such a curriculum made a representation to the Privy Council of insufficiency of study on the part of any body in Schedule (A), it appears probable that the Privy Council would have ordered the Medical Council to lay down forthwith a minimum curriculum of study for the guidance of the bodies The present action of the Royal Colleges of Physicians and Surgeons of England in refusing to regard the Medical Council's resolutions as other than mere recommendations which they may adopt or ignore, is contrary to the view above expressed as to their duty under the Medical Acts It seems inconsistent with the conduct of their own representatives on the Council who always before the present differences arose, took a large important, and enlightened share in the formulation of a curriculum

Clause XVIII of the Medical Act of 1858 reads as follows —

"The several Colleges and bodies in the United Kingdom mentioned in Schedule (A) to this Act shall from time to time, when required by the General Council furnish such Council with such information as they may require as to the courses of study and examinations to be gone through in order to obtain the respective qualifications mentioned in Schedule (A) to this Act and the ages at which such courses of study and examination are required to be gone through, and such qualifications are conferred, and generally as to the requisites for obtaining such qualifications, and any member or members of the General Council or any person or persons deputed for this purpose by such Council, or by any Branch Council may attend and be present at any such examinations

The Medical Council is to obtain information regarding the courses of study required by, and the standard of the examination conducted by, the various licensing bodies It is clear that any registrable qualification is not to be granted after study alone or after examination alone Were examination ever to become the only safeguard to the Medical Register, it would require to be as to scope and character, entirely different from any examination that has ever been conducted by any medical licensing authority in the United Kingdom All the present examinations would be altogether inadequate as they can only test here and there the knowledge of a candidate They do no more than merely sample his attainments A curriculum of study is assumed in the case of every student He produces certificates that he has spent a prescribed time in the study of a large number of subjects, and in addition that he has given a prolonged attendance at clinical and other practical work It is on this basis that the examiners investigate his proficiency in any subject Examination can never adequately guard the portals of the profession where the courses of study have been insufficient Therefore it is that the obligation is imposed on the Medical Council to regard both study and examination to the extent of securing the possession of the requisite knowledge and skill in the case of every person presenting a qualification which they are to register If the courses of study of the three science subjects recognised by the English colleges are unsatisfactory in this respect then the mere standard of examination cannot supply the deficiency

The institution of the Medical Register was for the protection of the public only persons of sufficient skill were to be admitted to it 43 years have passed since the first Medical Act became law and in the interval medical science has advanced at a rate never equalled in the former history of the world The first curriculum required by the Medical Council differs greatly from that required to-day The Council has consequently from time to time increased its requirements An adequate knowledge of physics and biology is essential in the study of modern physiology pathology, and bacteriology as these in turn are essential to medicine and surgery The new subjects should be studied under conditions not less stringent and exacting than those that apply to the other subjects of the curriculum

### *Conclusions by the Committee.*

I The Medical Council has decided that the scientific institutions other than universities or recognised medical schools, at which the courses of study in chemistry, physics and biology may be taken by students as part of their medical curriculum are to be approved by the Medical Council prior to registration in the Students' Register of students commencing their studies at those institutions

II The Conjoint Board of the Royal College of Physicians of London and the Royal College of Surgeons of England, notwithstanding repeated remonstrances made to these Colleges by the Medical Council, continues to recognise courses of study in a large number of teaching institutions that have not been approved by the Medical Council and does not now require evidence of registration in the Students' Register, nor that the students shall have passed a preliminary examination recognised by the Medical Council but a preliminary examination the recognition of which is determined by itself

III The Conjoint Board of the Royal Colleges of Physicians of Edinburgh the Royal College of Surgeons of Edinburgh and the Faculty of Physicians and Surgeons of Glasgow, although requiring evidence that candidates who present themselves at their first professional examination which includes the subjects of physics chemistry, and biology, shall have been registered in the Students' Register, and thus must have taken the courses of study in these the letter that came from Ireland during last session—the letter in which the authorities of Trinity College, Dublin, intimated that they would in future consider only the interests of medical students in Ireland without any reference to what the General Medical Council might determine. The views of Trinity College would be the view of the licensing bodies generally. Was it, then, any great wonder that the Council should have taken steps such as it did last session to settle this dispute between it and the English Royal Colleges? The report of the special committee just presented stated fairly and accurately the position of the Medical Council with regard to the licensing of practitioners. It showed what might cause a good deal of astonishment to many members of the Council—namely, widespread non-conformity with the Council's requirements. The English Conjoint Board, the University of Oxford, the University of London, the Scottish Conjoint Board, the Apothecaries' Society of London—all these deviated from the Council's requirements in their own special regulations. For this state of affairs the Council, he maintained, must take some blame upon itself. It ought to have taken action long ago. The striking diversity on the part of Oxford should not have been allowed to continue. No doubt Oxford had stood in a peculiar position, for it was only a few years since that it began to show development into a medical school. But matters were different now, because Oxford was rapidly becoming an important medical centre. As regards the University of London, that institution was at present being reconstituted. If the English Conjoint Board were at one with the Council the difference that the Scottish Conjoint Board's regulations showed would disappear; and he had no doubt that whether the English Conjoint Board conformed or not to the Council's requirements that difference would disappear. He wished to emphasise the fact that not one of the licensing bodies in the three kingdoms except the English Conjoint Board had declared that it would not in any way be bound by the requirements of the Council; not one of these bodies except the English Conjoint Board had stated that the Council had no power to make regulations. The English Conjoint Board stood alone; it alone of all the licensing bodies had defied the General Council. Now what was to be done? That question involved the other question of what the powers of the Council were Had the Council authority over these licensing bodies or not? If it had no authority what an immense amount of time and money had the General Medical Council wasted. But had the Council no authority? It appeared to him that there was not the slightest doubt that it had power—that it was the supreme body so far as indicating what was the minimum amount of knowledge and skill which a person must possess before being allowed to practise They were not to dictate uniformity, but they were to say what was the least amount of study and examination necessary for a uniform qualification. Then if these courses of study were not "sufficient" the Council had the power to make a representation to that effect to the Privy Council It was part of their duty to do so. They should not be influenced by any fear that the Privy Council might humiliate them; they were not to be afraid to do their duty because the Privy Council might snub them. They were to do their duty; the Privy Council could do theirs. Now the General Council were satisfied that the course of study sanctioned by the English Royal Colleges for the first year's subjects was "insufficient" Although they had not yet said so in actual words, they had said so by implication, for they had directed their Registrar not to register in the Students' Register persons coming from the English Royal Colleges' preliminary examination. It was quite true that the Council had left the matter in the hands of their Students' Registration Committee. That committee, however, was one which dealt with suspicious, with doubtful, cases. It had been given to that committee to keep the door open to candidates coming from the Royal Colleges' examination, but the General Council had publicly decided, and by a large majority too, that the Colleges' course of study was "insufficient." Having recorded their opinion that there was insufficiency, what were they to do? They did not require to associate study with examinations before they could make a representation of insufficiency. The opinion of Mr. Muir Mackenzie showed clearly that, if necessary, the Council could dissociate courses of study from examinations. The Council had no power to inspect the schools recognised by the English Conjoint Board, and he asked if there was need for such inspection. He did not think so. As regards the course of study in connexion with the various licensing bodies they could go to the official papers issued by these bodies to find out what their regulations were. And so in connexion with the English Royal Colleges. From the syllabus of the Royal Colleges which he held in his hand he saw that these Colleges were recognising a vast number of schools, not universities or medical schools, and that there was considerable difference in the subjects of the first and second examinations. He found, moreover, that the candidate need only give evidence that he had "received" instruction, but there was no information afforded as to how the student was to study or what he was to do during the year, and there was no word to indicate that the four subjects of chemistry, biology, physics, and pharmacy might not be taught by one man.

Dr. Norman Moore: There is not the slightest doubt that these subjects would be taught by different teachers.

Dr. McVail protested that there was no indication as to how these subjects were to be taken and how much of them were to be taken. They knew, then, that they did not know the condition of these Colleges as regards the subjects of study. It was that information they wanted. They ought to obtain information as regards the course of study. He found that the Conjoint Board's programme showed, for instance, that physics was not mentioned except as chemical physics. Two questions were set in chemical physics and the student did not require to answer more than one of them. But the Colleges' physics were chemical physics—not the physics of the General Medical Council. As regards biology there were no written questions prescribed, yet everyone knew that oral examination in biology was not sufficient. What he had just mentioned convinced him that the Council had quite sufficient information as regards the courses of study prescribed and that the Medical Council was within its rights to order its Registrar to cease to register students from the Royal Colleges. But the Council could not stop here. They must go further or they must recede. The minority recommended that they should rescind their resolution. Would they go back on their work of the past 12 years? If they did not they could do nothing else than fulfil their duty under Section 20 of the Medical Act A great deal had been said during the discussions on this subject about ancient charters, but what he maintained was that all the rights anybody could have under any charter when these conflicted with the provisions of the Acts of 1858 and 1886 had disappeared or could be exercised only in conformity with these Medical Acts. No doubt some of these charters were venerable, but that should not prevent the Council from doing their duty, which was to care for the Medical Register and see that no one unfit was to be admitted to it, or if admitted to it was not retained on it. Should this General Medical Council perform its duty to the public or not? Were these English Royal Colleges to frighten the Council by telling them that they had no power to lay down rules that the medical licensing bodies were bound to observe? It was time to say otherwise, for if the present condition of affairs was passed over without the necessary action on the Council's part, within the next twelvemonth the control of medical education by the General Council would be practically defunct. The Privy Council alone, he believed, could now provide a solution of the difficulty.

Dr. Young formally seconded the motion.

No one rose at once to continue the discussion, and the President asked whether any member wished to speak.

Dr. Norman Moore, after being specially named and after a pause, rose and said that any remarks which he might make at that stage of the debate would be brief. Dr. McVail had given a full account of what the Special Committee had done, and he had to thank him for the great consideration which he, as chairman, had shown to the minority in the committee Every courtesy had been shown to that minority, and no attempt whatever had been made to slur over their objections. Both Mr. Bryant and he had sat on the committee not as representatives of the English Royal Colleges but as members of the General Medical Council, and he considered that the report as now presented was much better than it was in its first draft because of the heed which had been given to the minority's views on certain portions which had been submitted for the committee's approval. He wished the Council to know this. Dr. McVail in his very able speech had put the case with all the force with which it was capable of being put. But there were some chance phrases in that speech which should not be passed can nevertheless if dissatisfied with the course of study prescribed and accepted by such licensing authorities represent to the Privy Council that the course of study is defective (I propose to use the single expression "defective to avoid repetition of the longer words in the Act—"not such as to secure the possession by persons obtaining such qualification of the requisite knowledge &c) within the meaning of Section XX of the Medical Act 1858

On this question my opinion is as follows —

The enactments in the Medical Act 1886, do not supersede the enactments in the Act of 1858 Both sets of enactments are to be read and applied as if they were contained in one Act The Legislature has not made examination the test, and the only test of the possession by a candidate for admission to the medical profession of the necessary knowledge and skill

Although in Sections XVIII and XX of the Act of 1858 the words used are courses of study and examinations,' it will be observed that in Section XXI of the Act the words are "course of study or examinations, or the mode of conducting such examinations' Again, in Section XVIII of the Act the Colleges and bodies mentioned in it are required to furnish information as to the ages at which courses of study are to be pursued, and generally as to the requisites for obtaining the qualifications

In my opinion the Legislature has recognised and had regard to the principle that mere examination cannot be a sufficient test of professional knowledge and skill if the courses of study have been insufficient and if in the opinion of the General Council the courses of study required by one or more of the licensing authorities are defective, the General Council can so represent to the Privy Council, notwithstanding that the General Council makes no representation on the subject of the examinations

2 The second question is this If one of the licensing bodies accepts as part of the course of study required from a candidate a course of study pursued in particular subjects at another institution then if the General Council does not approve of the institution as a teaching body, can the General Council represent to the Privy Council that the course of study of the licensing body is defective?

On this question my opinion is that if the General Council is of opinion that the teaching and course of study in the particular subjects at the institutions whose courses of study are accepted by the licensing body are inadequate and defective, then the General Council would be within its powers in representing to the Privy Council that the course of study required by the licensing body is defective So if one of the licensing bodies fails to exact from its candidates a sufficient or adequate course of study and teaching in particular subjects such as chemistry and physics, the Council would be within its powers in representing to the Privy Council that the course of study required by the licensing body is defective

But in a case in which the ground of objection by the General Council to the course of study required by a licensing body is that the teaching and course of study in special subjects at a particular school is accepted as part of the licensing body's curriculum the Council could not properly make a representation to the Privy Council unless satisfied that the teaching and course of study at the school is in fact defective

3 The third question is as to the powers and procedure of the Privy Council as to which my opinion is as follows —

The Act of 1858 empowers the Privy Council, upon the representation of the General Council, if it see fit, to order that the qualification granted by a licensing body shall cease to confer a right to be registered

For the purpose of exercising this power the Privy Council would not be confined to considering the facts and views presented by the General Council The Privy Council would have power, and in accordance with the procedure which it generally adopts would hear the licensing body or bodies of whose courses of study complaint is made and would not make an order depriving or suspending the qualification of the body from admission to the Register without being satisfied that the complaint that its course of study was defective was substantially justified

4 The fourth question is substantially as to the extent of the duty and power of the General Council as to prescribing a curriculum or course of study which each licensing authority is to observe

On this it will be observed that the enactments in the Medical Act of 1858 do not direct the General Council to prescribe courses of study, or (still less) to prescribe that every licensing body is to require as a minimum a specially defined course of study The provisions of the Act leave each licensing body to prescribe its own course of study the duty and power of the General Council being to exact information as to the courses of study and examinations, and to depute members of the Council and other persons to attend the examinations It follows that the General Council's statutory duty is, strictly speaking, limited to requiring defects in the courses of study to be made good to the Council's satisfaction and improvements which the Council can specify, to be made in the courses of study and examinations

A licensing body which declined to adopt in all respects a curriculum prescribed by the General Council would not, in my opinion, be deprived by the Privy Council of the right to have its qualifications admitted to the Register if it could establish to the satisfaction of the Privy Council that its prescribed curriculum was nevertheless not defective

5 The fifth question has regard to the particular licensing bodies mentioned in the committee's report, on which my opinion is as follows —

The cases of the University of Oxford and the University of London are simple In effect these universities do not require any special course of study of the nature which in the General Council's opinion a candidate for a qualification ought to be required to pursue Clearly, the General Council can make a representation to the Privy Council in relation to these universities unless effectual provision is made by those universities to the satisfaction of the General Council for the improvement of the courses of study required by the universities

As regards the other licensing bodies, the question relates in principle to the acceptance by each licensing body as part of its prescribed curriculum of a course of teaching or study at an institution of which the General Council does not approve As I have already stated my opinion is that if one or more of these bodies directly or *indirectly accepts as part of the course of study required by a candidate* for its qualifications a certificate that the candidate has pursued a course of study at another teaching institution then if the General Council is of opinion on sufficient grounds, that the teaching and course of study at the teaching institution is inadequate and defective the Council can represent to the Privy Council that the course of study of the licensing body is defective, but it would be for the Privy *Council in the exercise of its uncontrolled discretion to decide if, and if* so to what extent, effect should be given to the representation

4 Temple Gardens, E C, Feb 22nd, 1902 M MUIR MACKENZIE

Dr MCVAIL, in then moving that the portion of the report which he had read be adopted, said that he would state the views of the majority of the committee, leaving it to the minority to present their own case The first point he wished to direct the attention of the Council to was that nearly 12 years ago they decided to have the five years' curriculum of study, and decided, moreover, that physics and biology should be added to the curriculum That had been passed by general consent So far as he knew there was no evidence that there was any minority or any opposition whatever, at any rate, there was *no adverse* statement from any of the licensing bodies or from any representative of these bodies that there was disapproval of the action of the Council Three years later the Council had seen fit to stiffen its regulations The Education Committee of the day recommended that they should codify their resolutions regarding medical studies, dividing them into requirements and recommendations The Council had adopted that suggestion, and it had codified its resolutions as regards study into requirements These requirements were entirely requirements as to study and the Council therefore had assumed that it could make a representation to the Privy Council in the matter of study alone, without any reference to examinations, that was to say, if the study was "insufficient" the examination, whatever it might be, could not make up for deficiency in the study That was in 1893 In that year there was a matter in dispute as to the time at which students should be registered—whether the registration should take place before or after the preliminary examination, but as the Colleges gave way to the views of the Council he need not go into that matter on the present occasion After the lapse of five years—that was to say, in 1898—the Council were made aware that the Conjoint Board of England had recognised a very great number of teaching institutions, many of them no more than grammar schools, as places in which chemistry, biology, and physics might be taken by intending medical candidates This information, he reminded the Council, came to them in a letter sent by the Royal College of Surgeons in Ireland, and had been reckoned so important that a remit was made to the Education Committee who subsequently reported that many of the schools recognised by the Colleges were not recognised by the Council and were not inspected for the purposes of medical education The Council had consequently requested the Royal Colleges to reconsider their position, but they were met with a refusal On this the matter again came under consideration and the Council decided that the institutions in which the first year's subjects were taken must not only be recognised by the licensing bodies but be approved by the Council The English Royal Colleges refused to recognise any such right of approval to exist in the Medical Council, and not only that, but they stated that the Council had no power whatever to make requirements or resolutions that were binding on the licensing bodies, and if they did make such the bodies might give effect to them only if they saw fit That was a new feature in the case No longer was it a mere refusal to submit to approval, but a decided expression of opinion that the General Medical Council had no power whatever over the medical curriculum that any body under Schedule A might choose to adopt The Council then passed one of the most important resolutions ever placed upon the minutes, as in effect it refused to admit to registration on the Students' Register persons who took their course of the first year's subjects at institutions of which the Council had not approved The next step was that the Royal Colleges absolved all candidates for their diplomas from the necessity of being registered in the Students' Register—and the preliminary examination passed by students of the Royal Colleges was thus no longer the preliminary examination recognised by the Council These Colleges had thrown away every shred of dependence on the General Medical Council, and acted as if that Council did not exist at all Small wonder, therefore, was it that other bodies had begun to move in the same lines and to say that they were not to be bound by the requirements of the Council if the English Conjoint Board were to be allowed to act independently of the General Council Let them remember when the first Medical Act was brought forward there was not the smallest intention of taking away any of the rights and privileges of any of the licensing bodies, whether universities or colleges. It was true that a few years after the Council was formed there was a very severe struggle and a heated debate, principally emanating from the Scottish Members, in favour of having full authority so as to enforce the edicts of the Council. The Council, however, did not gain that point; it was defeated and he had always thought that since that time it had been fully recognised that the Council had no official power to compel the bodies to carry out its behests, that it could go no further than make recommendations. The Council had not the power, and he did not believe that the Government would give it the power, to bring down all the bodies to a level. At present there was competition amongst the bodies to raise the standard of medical education and he did not think that the English Royal Colleges had borne themselves ill in this competition. He believed that it would be a great mistake if the Council determined to go to the Privy Council to find fault with the Colleges. The Colleges themselves had no reason to fear such an appeal. They welcomed inquiry into the work they were doing and felt that the more it was inquired into the more would it be valued. His regret would be for the Council, for he felt that it had a weak case and would be sure to get a snub from the Privy Council.

Dr. P. HERON WATSON read to the Council a memorandum prepared by the Registrars of the Scottish Conjoint Board. It appeared, said the memorandum, that the regulations of the board did not conform to the requirements of the Council in three particulars, viz.—(1) that they recognised four teaching institutions in Scotland not recognised by the Council, two for physics, chemistry, and biology, one for physics and chemistry only, and one for chemistry only; (2) that they recognised those teaching institutions in England for physics, chemistry, and elementary biology which were recognised by the English Board; and (3) that they exempted from the first professional examination candidates who had passed the corresponding examination of the English Board and might, therefore, indirectly recognise the teaching of the institutions recognised by that board which were not approved by the General Medical Council. The registrars wished to remark that the Committee of Management had no desire to depart from the time-honoured usage of recognising for teaching purposes any institutions other than the ordinary medical schools, university and extramural. In making the departure they simply followed the lead of the English Board. At the same time they had to say that all the four institutions referred to were carefully inspected by the committee and the accommodation and appliances for teaching were found to be satisfactory. At the time these institutions were recognised the policy of the General Medical Council with regard to such recognition was, or appeared to be, much less pronounced and decisive than the form which it had recently assumed and the registrars believed that in according recognition the committee were quite unaware that they were running counter to the desire of the Council. The board had, however, insisted that the course of study should be five years from registration and that this should precede recognised study. As to the second point, if the English Board reduced their list of recognised teaching institutions to meet the views of the Council the Scottish list would *ipso facto* be reduced to the same extent. As a matter of fact, the registrars affirmed that no certificates from the schools in question had, so far as they knew, been submitted to them for inspection, and that the recognition of these schools was therefore, as far as they were concerned, only in theory. As regards the exemption of candidates from the first examination in virtue of their passing it at the English Board, it might also be said that such cases now rarely presented themselves, and the registrars could find no case in which the applicant so exempted had studied at one of the institutions in question.

Sir HUGH BEEVOR wished to say that while he felt perfectly sure that nothing was in the mind of the Apothecaries' Society of London which in any way would alter the relations of that society to the General Medical Council, he strongly deprecated proceeding on the lines of the recommendations submitted by the Special Committee.

Sir HECTOR CAMERON said that the non-conformity of the Scottish Conjoint Board in respect to the requirements of the Council was really more apparent than real. It was alleged that the board's regulations on two points differed from the regulations of the General Council. The first allegation was that the board recognised certain courses of chemistry, physics, and biology, before registration, but to the regulation permitting that there was attached this important proviso—"Provided always that the period of professional study after registration shall not be less than five years." That being the regulation of the Scottish Conjoint Board, they were certainly no sinners against the requirements of the Council. The second allegation against the Scottish Conjoint Board was that they recognised the early examination of the Conjoint Board of England. That allegation had truth in it, but the regulation was an old one. It had been on the by-laws from the formation of the Scottish Conjoint Board, and had not been added to or taken from. So their position was what it had always been.

Mr. YOUNG, replying to the President, said that as no substantial objection had been taken to that portion of the report now before the Council he would not take up time by commenting on anything that had been said.

Sir WILLIAM GAIRDNER intimated that he had no objection to the committee's report to the extent that it was before the Council, but he wished it to be known that he had the strongest objection to all the recommendations of the committee so far as they proposed appeal to the Privy Council, and that if these recommendations were brought forward he would oppose them to the utmost.

Dr. MCVAIL, in closing the debate, thought that nothing need be said by him in reply, because the report so far as the Council were asked to adopt it was merely a statement of facts. This, however, he might say in regard to Dr. Payne's remarks: the committee could not leave out Oxford University from their consideration, because Oxford University was a licensing body under the Medical Act of 1858, and no objection had been taken in the committee to the inclusion of Oxford.

Dr. PAYNE explained that his contention was that the report applied to the Royal Colleges. He had made no objection to the inclusion of Oxford. What he had said was that the Royal Colleges stood in one category, and all the other licensing bodies in another.

The Council then voted on the motion, when it was found that 17 were for it and only four against it.

Accordingly, Dr. McVail's motion that the committee's report as far as page 53 (the end of "Conclusions of the Committee") be adopted, became the finding of the Council.

After a quarter of an hour's adjournment for tea,

Dr. MCVAIL said that during the two days the Council had been in session he had heard a good deal from colleagues as to their views on the subject before them. The proposal to go to the Privy Council with a representation of the "insufficiency" of the curriculum of the Royal Colleges was undoubtedly an extreme step to take. It was, however, equally a difficult matter for the Council to stand still. He had been thinking over the situation, and had been led to question whether any third course was open to them. He had found that some members of the Special Committee who in committee had approved of the recommendations submitted in the report were now in doubt as to whether the time had come formally to ask the Council to adopt these recommendations. As a matter of fact, he found that some of the five members who formed the majority of the committee were not now prepared to support these recommendations, or even to ask the Council to pass them during the current session. In these circumstances, and considering the gravity of the step involved in passing a resolution to make a representation to the Privy Council, he was prepared to suggest that the Council might take the third way open to them. What he meant was that they might delay consideration of the committee's recommendations and at the same time decide that the Council should order an inspection of all the examinations of all the licensing bodies who included chemistry, physics, and biology as the early subjects in their course of study, and also ask from every licensing body full and definite information as to all the teaching institutions which they recognised, the nature of the teaching conducted thereat, the ages of the students, the qualification of the teachers, &c. They were entitled to ask for such information under Section XVIII. of the Act of 1858. If the Council were of opinion that consideration of the recommendations should be delayed, he was over without notice. Dr. McVail had spoken of the English Royal Colleges defying the General Council. "Defying" was a word that should not be used. The Royal Colleges would never be in the frame of mind to defy the General Council, and they in no way offered defiance. The question between them and the Council was a question of the discussion of matters of public importance, and they might differ in opinion as regards it, but they did not defy the Council. They differed for the reasons given. They accepted the Council's reasons with respect, and they expected that the Council would receive their reasons with equal respect. Dr. McVail had said that the course of study prescribed by the Royal Colleges was "insufficient." How was that to be known? Surely the knowledge must be derived from observation, study, and inquiry. All the schools recognised as teaching institutions by the Royal Colleges were good, and before the Council said that the College's course of study was insufficient or that the schools were improper there ought to be inquiry. Unless the Council investigated the whole subject, he maintained that it was not right to assert that the secondary school was not a suitable place in which to give preliminary medical education, and that its course of study was insufficient. The Royal Colleges did not think that the course of study they asked for was insufficient. They had examined the schools that were on their list, and until the Council did so too they would not be on an equal footing with the Colleges. There was no practical difference between the curriculum which the Colleges recognised and that which the Council recognised. The Colleges did not propose to introduce a class of "juniors," and all talk about "boys" should cease. He believed that the course which the Colleges had followed was the best course, and therefore he implored the Council to get rid of the idea about the introduction of little boys and such like. Dr. McVail was puzzled as to the amount of work that was to be done in the preliminary subjects. He must remind him that the curriculum of study and examinations could not be separated. The two had to be considered together, and if the student had to pass a definite examination that was security enough to obtain sufficient attention being given to study. Therefore the objection as to possible inadequacy of study fell to the ground. He felt reluctant to say anything about the proposed appeal to the Privy Council, and he felt reluctant to deprecate such an appeal because it would mean inquiry. The Colleges had their duty to do. Their conduct would bear investigation. Their reasons for adopting the course they had taken were perfectly sound They would like to agree with the Council, for the object of both—the making of medical education thorough and efficient—was the same, but as regards the course which the Colleges had taken in respect to the early subjects the Colleges thought that the Council was wrong and that they themselves were right. The only difference which there was between the Colleges and the Council was that the Colleges allowed studies to be pursued at institutions which, after investigation, they thought to be sound places of study. The whole question rested on that point, and if the Council wished to take the course suggested it should go thoroughly into the matter and ascertain if their views were sound. Let it inspect the institutions complained of, but let it do so before going to the Privy Council.

A motion by Dr. Payne for the adjournment of the debate was agreed to, and

The Council adjourned

### Wednesday, Feb. 26th.

The Council resumed, Sir William Turner being in the chair.

In the course of the adjustment of the minutes of the previous sitting the President announced that the writer of the letter with reference to the Midwives Bill which he had quoted was Mr. Heywood Johnstone, M.P., one of the promoters of the Bill.

### *The Debate on the Curriculum.*

The Council resumed the debate on the motion of Dr. McVail for the adoption of the first part of the report of the special committee on the curriculum

Dr. Payne called attention to the references in the report to the University of Oxford In the first place, he took exception to the University being referred to at all by the committee which he held was appointed to inquire only into the differences existing between the Council and the two English Royal Colleges. The relations of the University of Oxford with the Council had always been of the most harmonious character. It was not the case that the university did not recognise the Students' Register of the Council. It recognised the Register and had done more to encourage the Council's action in connexion with it than perhaps any other qualifying body. Every medical student at Oxford was told or advised that he ought to be registered, and it would be found that every medical student there or preparing for the medical profession there was registered. As the university preliminary examination responsions did not altogether meet the views of the Council the university had taken a step which he did not think any other university had taken—namely, that of making a special examination. It was perfectly true that the university did not require the registration of students by the Council as a necessary condition of obtaining a degree. It was not certain that the university had the power to make such a condition, but in any case it would involve a change of a fundamental character. What the university did was to tell the students that they ought to be registered.

Sir Christopher Nixon said that in his opinion the Council would be very unwise if it exercised its powers of intervention in cases where it was satisfied that a high standard of education was maintained—a standard very much higher than any level laid down in the ordinary requirements and regulations of the Council. The duty of the Council was to see that only persons duly educated were allowed to enter the profession, and if the Council was satisfied that a body like the University of Oxford had a higher standard than these regulations and requirements he thought that it would be unwise for the Council to interfere with vexatious restrictions. He thought that it was an extraordinary thing that this special committee should recommend that the President should write an official communication to, amongst other bodies, the University of Oxford and the University of London, instead of politely and courteously telling them that the Council had certain regulations and requirements and asking them in the interests of medical education and in order to secure uniformity to comply with them. If such a communication as was proposed were sent to the Senate of the Royal University of Ireland it would be thrown into the waste-paper basket. As to the general question, there had been some change in the situation. The question now was not merely the question of the scientific institutions recognised by the two English Royal Colleges but the efficiency of the courses of study. After calmly reviewing the situation it seemed to him that in this matter there had been faults upon both sides. The Council had been in error For one thing it had had no information about the institutions to which exception was taken, and in the absence of definite information he did not think that it would be wise to take the matter before the Privy Council. On the other hand, he did not consider that the two Colleges had treated the Council with the amount of consideration to which it was entitled. He believed that the Council had power to put the matter before the Privy Council. He believed the Council had power to deal with medical education in the broadest sense, but it ought to exercise its power with moderation. Was the Council prepared to go before the Privy Council and say that the courses of study in the institutions which the Council did not recognise were defective? Where was the Council to get its information to support such a statement? The Council had not inspected the institutions, and if it attempted to do so its inspectors might be refused admission. There must in this case be mutual concessions. It seemed to him that the Royal Colleges had gone a certain length in the way of concession. Let the Council realise its position. Its position was a strong one. There could be no doubt that the Council had this power to supervise medical education from start to finish, but it should be careful how it exercised it.

Mr. Bryant denied that the Royal Colleges had made any concession in the matter of the visiting of the institutions It had been the custom of the Royal Colleges to visit the institutions and satisfy themselves as to the character of the teaching and the equipment. It was true that a few of the institutions had not been visited, but these were Government institutions under South Kensington guidance which had been inspected by Government inspectors. But behind this question there was the question of the power of the Council to enforce all its edicts. It was perfectly clear to him that name has become well known to the medical profession in Great Britain in consequence of his having founded the Lane lectureship, an annual office the holder of which is required to deliver 10 lectures in the Cooper College, receiving the liberal salary of 2000 dollars. The first incumbent of the post in 1896 was Professor W. Macewen of Glasgow, and he was followed by Mr. Christopher Heath, Dr. Clifford Allbutt, Dr. Senn of Chicago, Sir Michael Foster, and Mr. Malcolm Morris Professor Ball of Dublin is, we understand, to lecture this year. Dr. Lane contributed various papers to the American periodicals and took an active part in the discussions at the San Francisco Medical Society. He published in 1896 an elaborate work on the Surgery of the Head and Neck, a copy of which is in the library of the Royal College of Surgeons of England. Amiable and learned, and absolutely free from professional jealousy, Dr. Cooper Lane was highly respected and well beloved by both the public and the profession in California, and he exercised upon the latter an influence which was always for good. His death will be a great blow to the two institutions which he founded, but we have little doubt that they will rapidly recuperate under the distinguished staff of colleagues whom Dr. Lane had collected around him.

## SEYMOUR GRAVES TOLLER, M.D., M.R.C.P. LOND.

WE regret to report the death of Dr. Seymour Graves Toller of Cairo on Feb. 19th, after an illness of about 10 days' duration, the details of which have not yet arrived. Dr. Toller was 35 years of age. He was educated at Malvern College where he obtained an exhibition. He entered the medical school at St. Thomas's Hospital as a first year's student in 1885, obtaining the entrance science scholarship. From that time his career showed an uninterrupted list of distinctions obtained not only in his own medical school but in the wider sphere of the London University. At St. Thomas's Hospital, amongst his other prizes he gained the Mead medal for practical medicine. In 1886 he was awarded the gold medal in materia medica at the Apothecaries' Hall. In the M.B. examination of London University he secured the University scholarship and gold medal in medicine and in obstetric medicine. In the M.D. examination also he won the gold medal. In 1896 he took the M.R C.P. In the meantime—that is, from the year 1889—he had been actively engaged in various hospital appointments, culminating in that of resident assistant physician to St. Thomas's Hospital for the years 1894 to 1897. At the termination of his three years' office his dearest hopes were gratified by his election as assistant physician to the hospital staff. But the clouds were already lowering over his head. Almost immediately after his appointment he was compelled to resign it on account of the breakdown of his health. He had a severe attack of what at first appeared to be influenza, but in the course of his illness the sputum was found to be teeming with tubercle bacilli. In a few months' time his health was outwardly fully re-established, but it was clearly too dangerous for him to attempt to remain in this country; he accordingly applied for, and obtained, the posts of physician to the Kasr-el-Aini Hospital, Cairo, and professor of clinical medicine in the medical school. There, with the exception of summer visits to this country, the remaining years of his life were passed. He threw himself with all his energy into both the hospital and teaching work, and, in addition, had to satisfy the demands of a rapidly increasing practice. His health refused to bear the strain and a few months ago he resigned his hospital appointments.

Dr. Toller was known to many outside his profession as a brilliant musician. For many years he played the violin in the orchestra of the Royal Amateur Orchestral Society and also had the honour of a seat on the Council. At St. Thomas's Hospital for 10 years or more no function was complete without one of his violin solos Dr. Toller was possessed of a very remarkable personal charm, the outcome of his affectionate, impulsive nature. Everything he did was done with an enthusiasm which seemed the keynote of his character. He was perhaps inclined to be oversensitive and at times took offence where no offence was meant, but the artistic temperament will exact its toll and none of Dr. Toller's friends loved him the less for these little ebullitions. He had contributed little to medical literature, but the exactions of hospital appointments rendered this impossible, and his untimely death has robbed the future of its fruit. The wonder is, not that he did so little, but that in his short span of life he achieved so much. Few professional careers can have started with greater promise than his and it is an additional pang to his friends to feel that for long before the final blow his energies were so hampered by ill-health as to make it impossible for him to justify fully the hopes raised by his youth.

## THOMAS SMALLHORN, M.R.C.S. ENG., L.R.C.P., L.M. EDIN.

THE inhabitants of Eynsham, Oxford, have sustained a great loss by the death of Mr. Smallhorn who practised for 37 years at that place. Mr. Smallhorn was medical officer of health and public vaccinator for the Eynsham district of the Witney Union and was certifying surgeon under the Factories and Workshops Act. As a practitioner of medicine he was held in great esteem by members of his own profession and was much respected by his patients of all classes. The poor especially will not soon forget his many acts of kindness and benevolence. Mr. Smallhorn, who was in his sixty-fifth year, had never fully recovered from the after-effects of an attack of influenza of which he was a victim two years ago, and he died after a fortnight's illness on Feb. 9th. A widow, one son, and three daughters mourn their loss.

# Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—In February the following candidates passed in the subjects indicated :—

*Surgery*—W. V. Braddon (Section I.), Cambridge and Manchester; T. S. Davies, St. George's Hospital; E. N. de V. Dawson (Section II.), St. Thomas's Hospital; J. C. S. Dunn, St. Bartholomew's Hospital; R Gauld (Section II.), London Hospital; S. F. Hickman (Sections I and II.), Royal Free Hospital; H. Jacques (Sections I. and II.), London Hospital; C. C. Morgan (Section II.), St. Bartholomew's Hospital; E. Osborne (Section I.), Birmingham; P. G. Sheppard (Sections I. and II.), Cambridge and Liverpool; and J. H. Williams, London Hospital.

*Medicine.*—J. E Bolton (Section II.), Leeds; R. Gillett (Sections I. and II.), Royal Free Hospital; C. E. A. Huddart (Sections I. and II.), London Hospital; M E. S. Scharlieb (Sections I. and II.), Royal Free Hospital; and C. Watson (Sections I. and II.), Dublin and Westminster Hospital.

*Forensic Medicine.*—D. Fletcher, St. Bartholomew's Hospital; M. E. S. Scharlieb, Royal Free Hospital; and C. Watson, Dublin and Westminster Hospital.

*Midwifery*—W. C. P. Bremner, University of Toronto; I. Griffith, London Hospital; M. E. S. Scharlieb, Royal Free Hospital; and R. H. Terry, Guy's Hospital.

The qualifying diploma of the Society in Medicine, Surgery, and Midwifery was granted to the following candidates:—J. E. Bolton, E N. de V. Dawson, D Fletcher, R. Gillett, C. E. A. Huddart, P. G. Sheppard, and C. Watson.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—FELLOWSHIP EXAMINATION.—The following candidates have passed the examination for the Fellowship :—

F. J. C. Heffernan, Miss M. R. Kapadia, H. Pringle, and M. J. Russell.

The following have passed the primary part of the examination :—

F. J. S. Heaney, Miss C. McCrea, and R. S. Ryce.

FOREIGN UNIVERSITY INTELLIGENCE.—*Amsterdam:* Dr. Otto Lanz, Assistant to Professor Kocher of Berne, has been appointed Professor of Surgery.—*Brussels:* Dr. P. Van der Velde has been appointed Director of the Medical Clinic in the Hospital of St. Jean in succession to the late Dr. Destrée.—*Budapest:* Dr. Tiberius von Györy has been recognised as *privat-docent* of the History of Medicine. Dr. Ernst Emil Moravesik has been promoted to the Ordinary Professorship of Mental Diseases.—*Freiburg:* Dr. Hugo Sellheim, *privat-docent* of Midwifery and Gynæcology, has been promoted to an Extraordinary Professorship—*Greifswald:* Dr. Otto Busse, *privat-docent* of Pathological Anatomy, and Dr. Rudolf Rosemann, *privat-docent* of Physiology, have been promoted to Professorships.—*Leipsic:* Dr. Döllken has been recognised as *privat-docent* of Medicine.—*Lemberg:* Dr. Julius Marischler has been recognised as *privat-docent* of Internal Medicine, and Dr. Adam Szulislawski as *privat-docent* of Ophthalmology.—*Vienna:* Dr. Karl Biehl has been recognised as *privat-docent* of Otology.

prepared to accept that view on the understanding that there should be the inquiry which he had suggested.

The **PRESIDENT**: A resolution has been drafted on these lines

Dr. **McVAIL**: I was not aware of that.

The **PRESIDENT**: No; but Dr. MacAlister has a resolution in his hands. You will see it and see how far it meets your views.

Dr. **MACALISTER** said that certain resolutions which he had drafted he had intended to propose as an amendment to any motion for the adoption of the committee's recommendations. His idea was that they should, instead of taking the committee's recommendations, pass a general resolution in regard to the desirability of inspecting all the examinations of all the licensing bodies in chemistry, physics, and biology; but he now thought that they should concentrate any inquiry by them to and on schools The only new bit of information which they had before them was that in respect to institutions recognised by the Royal Colleges and not on the Council's list. For his part, he believed that even if the Colleges further investigated the matter they would find that the curriculum in all the schools they considered satisfactory was such as would satisfy neither them nor the Council. At any rate, the Council were entitled to ask the Royal Colleges to furnish full and particular information as to the curriculum of the various schools which they recognised. No doubt the inquiry would be a troublesome one to them, but after all that had had taken place he did not hesitate to ask the Colleges to take any trouble that might be involved. In asking them to do it the Council would be acting distinctly within their powers, and after they had obtained the information sought for they would be in a vastly superior position to determine as to whether they should come to a decision on the sufficiency or insufficiency of the first year's study in institutions on the Royal Colleges' list. He read the draft of the resolutions which he was prepared to submit.

Dr. **McVAIL** said that he would have no hesitation in seconding such resolutions

Some conversation ensued as to what should be done with the committee's recommendations, and eventually it was decided that they should not be proceeded with during the current session. The report containing them had, however, been put upon the minutes, and because of that the recommendations would remain "to a certain extent, alive," and capable of revival at any future time.

Dr. **PYE-SMITH** said that he and members round about him appreciated the skill with which the report of the Special Committee had been drawn up, and the moderate tone in which Dr. McVail had asked for its adoption by the Council. He ventured, however, to think that the attitude which had now been assumed towards this subject by Dr. McVail was a statesmanlike one which would not diminish his influence. He could not help sympathising with Mr. Horsley in the prospect of "no fight," and he thought that there should be a clear understanding on this—that the majority of the Council did not really wish to quarrel if a quarrel could be avoided

The following motions proposed by Dr. **MACALISTER** and seconded by Dr. **McVAIL** were then unanimously agreed to:—

I.

That the Council, under the powers granted by Section XVIII of the Medical Act, 1858, require the Conjoint Examining Board in England to furnish the Council with the following information regarding the course of study in chemistry, physics, and biology to be gone through by candidates for the qualifications L R.C P. London and M R C S. England—namely, in respect of each of the teaching institutions recognised by the Royal Colleges, but not approved by the Council.

(a) What are the methods of instruction, theoretical and practical, adopted in the subjects of chemistry, physics, and biology?

(b) What time is devoted by students to the recognised course of study in each of these subjects?

(c) What subjects, other than chemistry, physics, and biology, are students permitted to study simultaneously with these subjects?

(d) What were the ages at the commencement of the recognised courses in these subjects of the students on whose behalf certificates of study were accepted by the Examining Board in the year 1901?

(e) What are the names and qualifications of the teachers of chemistry, physics, and biology who give the recognised courses in these subjects.

II

That it is desirable that under the powers given by Section XVIII. of the Medical Act of 1858 the examination in chemistry, physics, and biology held by the several licensing bodies should from time to time be visited and reported upon

III

That in the first instance the examinations in chemistry, physics, and biology held by the Examining Board in England during the present year be visited by two persons appointed by the President on behalf of the Council, and that they be instructed to report on the scope, standard and sufficiency of these examinations.

It was also agreed, on the motion of Dr. **MACALISTER**, seconded by Dr. **BRUCE**, that—

The President and treasurers be requested to arrange for a suitable remuneration for the visitors, on the basis of the remuneration at present paid to the inspector of the examinations of the Apothecaries' Hall, Dublin.

Dr. **NORMAN MOORE** gave an undertaking that the Royal Colleges would furnish the utmost possible information to the Council in their inquiry.

Dr. **LITTLE** said that by the series of resolutions just adopted the Council had rather altered their bearing towards the English Royal Colleges, and he wished to ask Mr. Bryant and Dr. Norman Moore if they would endeavour to secure the authority of their respective Colleges to the cancellation of the intimation that the Royal Colleges would not require registration by the Medical Council in the Students' Register of candidates for their diplomas.

Dr. **NORMAN MOORE** could give no definite promise while the subject was still under discussion.

The **PRESIDENT** asked if the representatives of the two Royal Colleges would bring the matter before the authorities they respectively represented.

Mr. **BRYANT** and Dr. **NORMAN MOORE** replied in the affirmative.

### *The Executive Committee.*

On a vote by ballot Dr. Payne was elected a member of the Executive Committee in the room of Dr. Glover, who retired from membership of the Council at the close of last year.

### *The Midwives Bill.*

In answer to Mr. **BROWN**,

Sir **JOHN BATTY TUKE**, who had just arrived from the House of Commons, stated that the Midwives Bill had passed the second reading and had been referred to the Standing Committee on Law, which would probably take it into consideration within the next three weeks.

On the suggestion of the **PRESIDENT** it was resolved that the existing Committee on the Midwives Bill should be continued in order to watch proceedings on the Bill now before Parliament Sir John Williams and Mr. Brown were added to the committee, which is now composed of the President, Sir Christopher Nixon, Mr. Horsley, Dr. MacAlister, Sir John Williams, and Mr. Brown.

### *Vote of Thanks and Congratulations.*

Dr. **NORMAN MOORE** at the conclusion of business said: This is a special session and a most trying one, and we ought as a Council to pass a very hearty vote of thanks to the President for his extremely judicial and admirable conduct in the chair throughout it.

This proposal was received by the members with applause.

The **PRESIDENT**: I thank you, and let me say that the whole spirit and temper that has been displayed in this most important debate—one of the most important that has ever taken place in this Council and conducted in a thoroughly business-like way—has been most admirable, and I wish to congratulate the Council, because it is clear that we can do things in a thoroughly business-like way when we make up our minds to do so.

The Council then rose till the fourth Tuesday in May next.

## Obituary.

### LEVI COOPER LANE, LL D., M.R.C.S.,

OF SAN FRANCISCO.

WE regret to learn by telegram that Dr. Cooper Lane died on Feb. 18th at San Francisco, of which city he was a leading citizen. Born and educated in America, Dr. Lane visited this country in 1875 and became a Member of the Royal College of Surgeons of England in that year. A nephew of Cooper, the well-known surgeon of San Francisco, Dr. Lane joined him in his practice, to which he succeeded on Cooper's death Having wealth and no children he devoted himself to the foundation of the Cooper Medical College, in which he was professor of surgery, and later the Lane Hospital, both of which institutions he lived to see thronged with students, male and female

Mr. CORRIE GRANT asked whether it would be possible to make some provision for the loss of wages incurred by people who submitted to isolation.—Mr. LONG said that if the hon. Member meant provision out of the rates he did not think it would be possible. He did not think it would be at all desirable that district authorities, whether boards of guardians or municipal councils, should pay wages out of the rates. The detention need only be for a very short time. At present the local authorities could provide for the maintenance of people isolated but to go further and pay their wages would be a very serious step.—Mr. CORRIE GRANT pointed out that whilst maintenance had been undertaken by some local authorities, others had refused to undertake it under the impression that they had no power to assume such a liability.—Mr. LONG said he thought that in cases where local authorities had hesitated to act it had been from a misapprehension which he believed had now been removed

Mr. BARTLEY asked whether there was any power to prevent persons visiting small-pox patients.—Mr. LONG replied that the managers of the Metropolitan Asylums Board had absolute powers. He was informed that they only sanctioned visits to patients when it was believed that the patients were dying and it was found to be extremely difficult to refuse admission in such circumstances.

Mr. CORRIE GRANT asked the Secretary of State for War whether his attention had been called to a notice issued at the Brennan Torpedo Factory, Chatham, stating that employés would be required to notify to the office whether and within what dates they and their families had been vaccinated, and that it might be necessary to take steps to prevent the possibility of the disease being introduced into the factory through persons who had not taken the precaution of vaccination or revaccination. Would he explain under what authority revaccination was required; how recent a revaccination was required; and whether those who refused to notify to the office would be dismissed.—Mr. BRODRICK replied: The notice was issued in order to obtain information for guidance in the event of the epidemic becoming so serious in the neighbourhood of the factory as to require special consideration. It referred to the desirability of revaccination but does not enforce it. Non-compliance with the notice will not involve dismissal, but I must reserve complete freedom to the War Office to use any regulation which may be thought necessary to prevent small-pox being introduced into the factories.

### TUESDAY, FEB. 25TH.

### *The Legal Position of the Vaccination Officer.*

Sir JOHN ROLLESTON asked the President of the Local Government Board whether he had decided to apply to the Court of King's Bench for leave to intervene in the case of Moore *v.* Keyte in that court which raised the question of the control of boards of guardians over their servant the vaccination officer, and should leave be granted to instruct the law officers of the Crown to argue for the justices in support of the opinion of the Local Government Board; whether the assent of the Treasury was necessary and had been obtained for this expenditure; and whether, in order to secure the complete argument of the case in the interests of all boards of guardians, he was willing to recommend to the Treasury that pecuniary assistance for retaining the necessary counsel be afforded to the appellant Moore, a working man, or whether the Local Government Board would sanction the outlay necessary for that purpose by the board or boards of guardians interested in the question.—Mr. GRANT LAWSON, in the absence of Mr. Long, replied: The answer to the first point is in the affirmative and to the second in the negative. With regard to the last point I understand that the appellant in the case referred to is supported by the local anti-vaccination society. I could not undertake to adopt the course suggested by my hon. friend.

### *The Royal Army Medical Corps.*

Dr. E. C. THOMPSON asked the Secretary of State for India if he was aware that the Government of India refused to allow officers of the Royal Army Medical Corps the same pay and allowances as were granted to the officers of other branches of the army of the same rank; whether this refusal was delaying the issue of the new Royal Warrant for reform of the Royal Army Medical Department; and whether he would use his influence with the Indian Government to remedy the grievance which in the past had injured the interests of the Royal Army Medical Corps.—Lord GEORGE HAMILTON replied: No proposal has been refused by the Government of India, or made to them, to assimilate the pay and allowances of the Royal Army Medical Corps to those of any other branch of the army. The pay of officers of the corps serving in India was increased somewhat in 1897 and compares favourably with that of most other branches of the service. Various questions relating to the organisation of the corps are engaging the attention of the Government of India and I hope shortly to receive and consider their recommendations on the subject.

### WEDNESDAY, FEB. 26TH.

### *Midwives Bill: Second Reading Passed.*

The House devoted five hours of this sitting to a second reading debate on the Midwives Bill. Many of the speeches were extremely interesting, and next week we propose to publish a special report of the entire debate. In the meantime it may be said that Lord CECIL MANNERS moved the second reading of the Bill and Mr. TATTON EGERTON seconded the motion. Thereupon Sir JOHN BATTY TUKE moved as an amendment the rejection of the Bill, laying special emphasis on the omission of any provision for a penalty for women who practise without being certified. In the subsequent proceedings it came out very clearly that the sense of the House was favourable to the Bill in its main features. The HOME SECRETARY (Mr. Ritchie) spoke warmly in its support, while, of course, reserving the right to himself to scrutinise carefully its details on another occasion. Bowing to the sense of the House Sir JOHN BATTY TUKE did not claim a division on his amendment, and the second reading was carried without a division and the Bill was referred to the Grand Committee on Law. This reference to a standing committee obviates the stage of committee of the whole House. If the Bill comes back from the committee without amendment it proceeds to third reading, but if amendments are made then it has to pass through a report stage. As the Grand Committee on Law has little if any other work in hand, it will probably take up the consideration of the Bill on a comparatively early day.

## Appointments.

*Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to* THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

BALDWIN, G. R., F.R.C.S. Eng., has been appointed Honorary Surgeon to Outpatients, St. Vincent's Hospital, Melbourne, Victoria.

BARRACLOUGH, A. M., M.B., B.S. Camb., has been appointed Certifying Surgeon under the Factory Acts for the Chapeltown District of the West Riding of York.

BEVERS, EDMUND C., M.A., M.B., B.Ch. Oxon., M.R.C.S., L.R.C.P., has been appointed House Physician to the Radcliffe Infirmary, Oxford.

CAREY, C. DE L., B.A., B.C. Cantab, has been appointed Second House Surgeon to the East Suffolk Hospital, Ipswich.

COLLINS, J. C., M.B., B.Ch., B.A.O. T.C.D., has been appointed Medical Superintendent of the Provincial Hospital, Auckland, New Zealand.

COLLUM, R. W., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Anæsthetist to the Charing Cross Hospital.

COOPER, EMOR R., M.B., Ch.B. Vict., has been appointed House Surgeon to the Devonshire Hospital, Buxton.

DAVENPORT, HAROLD DEVEREUX, L.R.C.S. Irel., has been appointed a Public Vaccinator for the District of Christchurch, New Zealand.

DOYLE, ANDREW ALOYSIUS, F.R.C.S. Irel., has been appointed Medical Officer at Roma, Queensland, and Visiting Surgeon to the Prison at that place.

EVERED, A. C., L.R.C.P. & S. Edin., has been appointed Quarantine Officer at Albany, West Australia.

HARVEY, WILLIAM, L.R.C.P. & S. Edin., has been appointed District Medical Officer for West Kimberley, Quarantine Officer for the Port of Derby, and Public Vaccinator for the Urban and Suburban Districts of Derby and Rural District of West Kimberley, West Australia.

JEFFERISS, FREDERICK B., M.R.C.S., L.R.C.P., has been appointed Assistant Physician to St. Bartholomew's Hospital, Rochester.

O'CONNOR, ARTHUR CHARLES, M.B., M.Ch. Syd., has been appointed Government Medical Officer and Vaccinator at Bulli and Coalcliff, New South Wales.

PARDEY, JAMES M., M.B., Ch.B. Melb., has been appointed Honorary Medical Officer to the Launceston General Hospital, Tasmania.

RAYNER, DAVID CHARLES, F.R.C.S. Eng., L.R.C.P. Lond., has been appointed Lecturer on Practical Midwifery at University College, Bristol, vice Dr. W. C. Swayne, resigned.

SEABROOK, THOMAS E. FRASER, M.D. St. And., has been appointed Acting Medical Officer at Palmerston, Acting District Registrar of Births, Deaths, and Marriages for the District of Palmerston, Acting Health Officer at Port Darwin, and Acting Protector of Aborigines for the Northern Territory, South Australia, during the absence on leave of Dr. Frederick Goldsmith.

SHARP, ELLEN M., M.B. Lond., has been appointed Senior House Surgeon to the Victoria Children's Hospital, Hull.

SHORTT, W., L.R.C.P. and R.C.S. Edin., L.F.P.S. Glasg., has been appointed Coroner for the police district of Corowa, New South Wales.

SWAYNE, WALTER CARLESS, M.D. Lond., L.R.C.P. Lond., M.R.C.S., has been appointed Professor of Midwifery at University College, Bristol, vice Dr. Aust Lawrence, deceased.

TOD, HUNTER F., M.A., M.B., B.C. Cantab, F.R.C.S., has been appointed Surgeon to the Throat and Ear Department of the Paddington Green Children's Hospital.

VAN PRAAGH, HAROLD, M.D. Lond., has been appointed Casualty Physician at St. Mary's Hospital.

WHITE, E. A., M.D. R.U.I., has been appointed Medical Officer to the Isle of Thanet Joint Hospital Board.

WILLMOTT, ROBERT, F.R.C.S. Eng., M.R.C.S. Edin., has been appointed Official Visitor of the Hospital for the Insane, New Norfolk, Tasmania, for the year 1902.

ZIMPEL, ADOLPH, M.B., M.S. Aberd., has been appointed Junior Medical Officer, Department of Lunacy, New South Wales.

## Vacancies.

*For further information regarding each vacancy reference should be made to the advertisement (see Index).*

BELGRAVE HOSPITAL FOR CHILDREN, 77 and 79, Gloucester-street, S.W.—House Surgeon for six months. Board and lodging provided and a gratuity of £5.

BIRKENHEAD BOROUGH HOSPITAL.—Junior Male House Surgeon. Salary £80 per annum, with board and washing.

BIRMINGHAM TAME AND REA DISTRICT DRAINAGE BOARD.—Bacteriologist. Salary £160 per annum.

BLACKBURN COUNTY BOROUGH.—Medical Officer of Health. Salary £550 per annum.

BRADFORD POOR-LAW UNION.—First Resident Assistant Medical Officer, unmarried. Salary £125, with rations, apartments, and washing.

BRIDGWATER INFIRMARY.—House Surgeon. Salary £80 a year, with board and residence.

BRIGHTON, HOVE, AND SUSSEX THROAT AND EAR HOSPITAL, Church-street, Brighton.—House Surgeon for six months, renewable. Salary at rate of £75 per annum.

BRISTOL GENERAL HOSPITAL.—Assistant House Physician. Salary £70 per annum, with board and residence. Also Assistant House Surgeon.

CENTRAL LONDON SICK ASYLUM DISTRICT.—Assistant Medical Officer. Asylum at Cleveland-street or Hendon as may be required. Salary £120 per annum, with board and residence.

**UNIVERSITY OF WALES**—It has been decided that the installation of the Prince of Wales as Chancellor of the University of Wales shall take place at Bangor on May 9th

**NOTIFICATION OF CHICKEN-POX.**—Chicken-pox is now a notifiable disease at Paignton (Devon) The Northam (Devon) District Council and the Bath City Council have decided to add chicken-pox to the list of notifiable diseases

**SUPPLY OF VACCINE LYMPH**—At the meeting of the Plymouth Board of Guardians held on Feb 19th the public vaccinator asked the board to supply him with some vaccine lymph for revaccination purposes Some of the guardians opposed the application, but it was eventually agreed to by a majority of four votes

**NEW HOSPITAL FOR MONMOUTH.**—Lord Llangattock presided on Feb 15th at a special meeting of the subscribers to the new hospital at Monmouth It is stated that the building will cost £5000, and the subscriptions received, including £2000 from the chairman, are still short of the required sum It was decided 'to commence the building of the institution immediately

**PRESENTATION.**—At the distribution of medallions and certificates in connexion with the Padstow (Cornwall) branch of the St John Ambulance Association held on Feb 15th, the members of the class presented Mr R. Palk Griffin, L R C P. Lond , M R C S Eng , L S A , with an easy chair with inscribed brass-plate, as a mark of appreciation of his services to them as honorary lecturer

**THE LATE DR T. PEARSE**—Dr. Thomas Pearse died at his residence in Queen Anne-terrace, Plymouth, on Feb 20th, after a short illness, fróm heart failure following bronchitis Dr Pearse was born at Launceston, Cornwall, in 1828, and graduated as M D in Edinburgh and M B in Aberdeen in 1849, taking the diploma of L R C S Edin in the same year Shortly afterwards he joined his father, the late Dr W Pearse, in Plymouth, During the outbreak of cholera at Plymouth in 1849 he had medical charge of the cases at Cawsand and at a later period he rendered valuable service during a small-pox epidemic Dr Pearse was the senior member of the Plymouth Medical Society. He was much esteemed in "the Three Towns," especially by the poor, to whom he was always kind and considerate The deceased leaves three sons, the eldest of whom is in the dental profession while the other two are in the medical profession

**THE ROYAL INSTITUTION**—Musical and talking electric arcs formed the subject of the Friday evening discourse delivered at the Royal Institution on Feb 21st by Mr W Duddell. He said that the vapour column of an electric arc varied in size with variations produced in the current which gave rise to the arc and was sensitive to very small and very frequent variations From this it resulted that when the current from an ordinary telephone transmitter was added to the current producing an arc the vapour column of the latter underwent rapid changes in size and created aerial waves which reproduced the sounds spoken into the transmitter The effects obtained when the light of an arc was thrown on a selenium cell were also shown Any direct-current arc passing between solid hard carbon points could be made to give out a musical note merely by connecting a self-inductive circuit containing a condenser as a shunt round the arc The self-inductive circuit was simply a coil of wire, and the condenser consisted of alternate sheets of paper and tinfoil For the production of a musical arc it was necessary that the resistance should be low, which was probably the reason why the discovery was not made some years ago The pitch of the note emitted was regulated by the frequency of the alternating current in the shunt circuit This frequency could be altered in several ways, the best of which was either (1) to increase or diminish the number of turns in the coil of wire, or (2) to vary the capacity of the condenser The lowest note which he had been able to produce in this way was D below middle C on the piano Mr Duddell showed a small keyboard connected with arcs giving two complete octaves, and his sister then played on it the melody of a verse of "Comin' thro' the Rye" The tone was nasal in character, like that of a musette and the music as played was interspersed with the loud crackling and sputtering of electric discharges.

# Parliamentary Intelligence.

## HOUSE OF COMMONS

### THURSDAY, FEB 20TH

### *War Medal for Nurses.*

Mr CLAUDE LOWTHER asked the Secretary of State for War whether women who were employed in the Army Nursing service in South Africa by military authorities and whose work had been commended by the principal medical officer on the spot, were allowed to receive the medal if they did not hold a three years' hospital certificate —Mr BRODRICK replied The South African War medal is given to all nurses and nursing sisters who served in South Africa from Oct 11th 1899 but the term nurses and nursing sisters" is held to apply only to those specially appointed as such, and to the staff of any local charitable institutions in South Africa duly recognised by the military authorities there and utilised by them for the reception and care of the sick and wounded

### *The Inquiry into Workhouse Nursing*

Mr KENDAL O BRIEN asked the President of the Local Government Board whether the committee appointed by the Local Government Board to inquire into the reasons of the difficulty in obtaining nurses for infirmaries or sick wards of workhouses under the control of the master and matron had commenced its inquiry, and if so what evidence did it intend to take, where was the inquiry being, or to be, held, and what opportunities would be given to medical officers, superintendent nurses and others interested to give evidence —Mr LONG, in reply, said The committee have commenced their inquiry and are sitting twice a week at the offices of the Local Government Board It rests with the committee to determine what evidence they will take, but arrangements have already been made for hearing the evidence of certain Poor law officers and guardians or representatives of various Poor law and nursing associations and of other persons interested It is open to any person desirous of being heard by the committee to communicate with the secretary on the subject Such person should state his qualifications and the nature of the evidence he would be prepared to give

### FRIDAY, FEB 21ST

### *Public Health Appointments in Ireland*

Dr L C THOMPSON asked the Chief Secretary to the Lord Lieutenant of Ireland if he would give effect to his promise, made last session of Parliament on behalf of the Irish Local Government Board, that when vacancies occurred amongst consulting sanitary officers superintendent officers of health would be appointed —Mr WYNDHAM said in reply The statement made by me last session was that the provision in the Board's Sanitary Order of May, 1900 with respect to the appointment of a medical superintendent officer of health had not been acted upon in any case and that the opportunity to act upon it would only arise as vacancies occur in the office of consulting sanitary officer The Board is prepared in all cases when such vacancies may arise to sanction the appointment of medical superintendent officers of health

### *The Small pox Epidemic*

Mr CORRIE GRANT asked the President of the Local Government Board whether he was aware that a resident of Rugby while ill with small pox in one of the hospital ships under the control of the Metropolitan Asylums Board was visited on Feb 1st by his mother and sister, that he died the next day, and that the mother had since been attacked with small pox at Rugby and was now in the small pox hospital at Rugby, and whether any, and, if so, what precautions were taken by the Metropolitan Asylums Board to prevent the spread of infection by visitors to patients —Mr LONG replied: I am aware of the facts referred to by the hon Member As regards the concluding part of the question, I am informed that the following are the chief precautions taken by direction of the managers of the Metropolitan Asylums District to minimise the risk of infection being spread by persons visiting patients at their small pox hospitals The visitors on their arrival are invited to partake of a light meal in order that they may be physically better able to resist infection they are then seen by a medical officer who inquires into their condition as to vaccination and if necessary, urges upon them the advisability of immediate revaccination Before entering the wards the visitors are dressed in overalls and caps and whilst in the wards they are on no account allowed to touch, or in any way to handle their relatives or the beds on which patients are lying After a brief stay in the wards (some minutes only) the visitors are taken to a dressing room where the overalls and caps are removed and they themselves undergo a thorough washing of the hands and face before leaving the hospital premises The fact of every visit is communicated by letter to the medical officer of health in whose district the visitor resides whether that visitor has been recently revaccinated or otherwise In the case referred to in the question the two visitors refused to be revaccinated at the time of their visit to the ships

Mr CORRIE GRANT asked whether in this session the Government would bring in a measure enabling the local authority to enforce isolation upon persons known to have been in contact with others suffering from small pox and to provide reasonable compensation to such persons —Mr LONG said: The answer to this question must be in the negative I may state however, that I propose to issue a circular in the course of a day or two as regards the isolation of persons brought into contact with small pox, based on the views held by the medical officers of the department another before the altar of the orchid, and it may be interesting to recall the fact that even before the days of Gerard the red lily of Constantinople, as this author calls *Lilium Chalcedonicum*, was grown in our gardens. Within the past 15 years the interest taken in these plants has enormously increased, and we believe that we are not far wrong in stating that from Bermuda alone some 2,000,000 bulbs are annually exported, while from Japan 5,000,000 is not an exaggerated estimate. All who admire the lily must be grateful to Mr. Henry for having discovered the lily which bears his name.

### A NEW VACCINATOR.

*To the Editors of* The Lancet.

Sirs,—Will you kindly favour me with sufficient of your valuable space to mention that about three years ago Messrs. Down Brothers made for me an aseptic vaccinator which, acting on the same principle as the Cooper Rose, can be easily and effectually sterilised by holding in the flame of a spirit lamp, and which appears to me to be the only satisfactory way of doing so? Mr. Palmer's invention still retains the disadvantage of an interior of a cylinder to keep clean, and this is not easily done. I am, Sirs, yours faithfully,

G. G. Gidley.

Cullompton, Devon, Feb. 24th, 1902.

### WANTED—AN ANNUITY OFFICE.

*To the Editors of* The Lancet.

Sirs,—My attention has been drawn to the letter appearing in The Lancet of Feb. 15th, p. 487, under the heading "Wanted—an Annuity Office," and in answer to your correspondent's inquiry I have pleasure in saying that several insurance companies—this association among the number—are prepared to give weight to medical evidence of health in quoting terms to persons desiring to purchase annuities.

I am, Sirs, yours faithfully,

Albert G. Scott,
General Manager of the English and Scottish
Law Life Assurance Association.

12, Waterloo-place, London, Feb. 17th, 1902.

### HIS MAJESTY'S ILLNESS IN 1871.

Under the title of "The Nation's Wave of Suspense in 1871," Messrs. Houlston and Sons have published, at the price of 6*d*., a chart showing the course of the critical illness of H.R.H. Albert Edward Prince of Wales at Sandringham in November and December, 1871. The graphic curve, illustrating the decline of the Royal patient's health through various stages to a condition when hope was almost abandoned and its gradual rise to a state of convalescence, is placed between two parallel columns of letter-press giving the bulletins issued by Sir William Jenner, Sir William Gull, Dr. Lowe, and the other physicians in attendance. The "memento," which is published on thick paper, gives some contemporary and connected events, and has scriptural texts in the borders and quaint corner-pieces.

### THE SAVING OF LIFE AND LIMB BY THE ADOPTION OF AUTOMATIC COUPLERS.

Statistics to hand from America afford a powerful reason why automatic couplers should be adopted on all the railways of the world. The saving of life thereby has been enormous. In 1898 it was reported by an American commission that "in 1897 there were 219 less men killed and 4994 less men injured in coupling and uncoupling cars than in 1893 (the year the Act was passed) the number of men killed being reduced by one half and the number injured by one half." During 1899–1900, when the Act was rigidly enforced, the report issued in June, 1901, showed the number of men killed in coupling accidents to be less by 35 per cent. than in the preceding year, and the number injured less by about 52 per cent., and these results were in spite of more powerful locomotives and heavier loads. Surely in the light of such eloquent facts as these it is nothing short of a scandal that life should be sacrificed any longer because many railways refuse to adopt automatic couplers.

### TRACTATUS DE LAPIDIBUS.

*To the Editors of* The Lancet.

Sirs,—There has lately come into my possession a fragment of an old Latin book on medicine. The fragment consists of chapters 25–140 and it is headed on each page "Tractatus de Lapidibus." So far as I can make out each chapter describes a certain stone with the aid of a primitive illustration and then follow several paragraphs headed "Operationes" describing the action and uses of the various stones. Any information which your readers can supply me with, as regards date of publication, author's name, or value; I should esteem a favour.

I am, Sirs, yours faithfully,

Oscar B. Trumper, M.B. Vict.,

Searle Lodge, Market Rasen, Feb. 23rd, 1902.

*Scalpel.*—The Pharmaceutical Society of Great Britain and the Society of Apothecaries of London hold examinations qualifying candidates to dispense medicines. Our correspondent must state the exact circumstances under which he requires to dispense medicines before his questions can be answered fully.

*Sufferer* can obtain full information from his medical attendant. He may also be relieved to hear that the complaint from which he suffers is probably of no consequence.

Communications not noticed in our present issue will receive attention in our next.

## Medical Diary for the ensuing Week.

### OPERATIONS.

#### METROPOLITAN HOSPITALS.

**MONDAY** (3rd).—London (2 p.m.), St. Bartholomew's (1.30 p.m.) St. Thomas's (3.30 p.m.), St. George's (2 p.m.), St. Mary's (2.30 p.m.), Middlesex (1.30 p.m.), Westminster (2 p.m.), Chelsea (2 p.m.), Samaritan (Gynæcological, by Physicians, 2 p.m.), Soho-square (2 p.m.), Royal Orthopædic (2 p.m.), City Orthopædic (4 p.m.), Gt. Northern Central (2.30 p.m.) West London (2.30 p.m.), London Throat (2 p.m.).

**TUESDAY** (4th).—London (2 p.m.), St. Bartholomew's (1.30 p.m.), St. Thomas's (3.30 p.m.), Guy's (1.30 p.m.), Middlesex (1.30 p.m.), Westminster (2 p.m.), West London (2.30 p.m.), University College (2 p.m.), St. George's (1 p.m.), St. Mary's (1 p.m.), St. Mark's (2.30 p.m.), Cancer (2 p.m.), Metropolitan (2.30 p.m.), London Throat (2 p.m. and 6 p.m.), Royal Ear (3 p.m.), Samaritan (9.30 a.m. and 2.30 p.m.), Throat, Golden-square (9.30 a.m.).

**WEDNESDAY** (5th).—St. Bartholomew's (1.30 p.m.), University College (2 p.m.), Royal Free (2 p.m.), Middlesex (1.30 p.m.), Charing-cross (3 p.m.), St. Thomas's (2 p.m.), London (2 p.m.), King's College (2 p.m.), St. George's (Ophthalmic, 1 p.m.), St. Mary's (2 p.m.), National Orthopædic (10 a.m.), St. Peter's (2 p.m.), Samaritan (9.30 a.m. and 2.30 p.m.), Gt. Ormond-street (9.30 a.m.), Gt. Northern Central (2.30 p.m.), Westminster (2 p.m.), Metropolitan (2.30 p.m.), London Throat (2 p.m.), Cancer (2 p.m.), Throat, Golden-square (9.30 a.m.).

**THURSDAY** (6th).—St. Bartholomew's (1.30 p.m.), St. Thomas's (3.30 p.m.), University College (2 p.m.), Charing-cross (3 p.m.), St. George's (1 p.m.), London (2 p.m.), King's College (2 p.m.), Middlesex (1.30 p.m.), St. Mary's (2.30 p.m.), Soho-square (2 p.m.), North-West London (2 p.m.), Chelsea (2 p.m.), Gt. Northern Central (Gynæcological, 2.30 p.m.), Metropolitan (2.30 p.m.), London Throat (2 p.m.), St. Mark's (2 p.m.), Samaritan (9.30 a.m. and 2.30 p.m.), Throat, Golden-square (9.30 a.m.).

**FRIDAY** (7th).—London (2 p.m.), St. Bartholomew's (1.30 p.m.), St. Thomas's (3.30 p.m.), Guy's (1.30 p.m.), Middlesex (1.30 p.m.), Charing-cross (3 p.m.), St. George's (1 p.m.), King's College (2 p.m.), St. Mary's (2 p.m.), Ophthalmic (10 a.m.), Cancer (2 p.m.), Chelsea (2 p.m.), Gt. Northern Central (2.30 p.m.). West London (2.30 p.m.), London Throat (2 p.m. and 6 p.m.), Samaritan (9.30 a.m. and 2.30 p.m.), Throat, Golden-square, (9.30 a.m.), City Orthopædic (2.30 p.m.).

**SATURDAY** (8th).—Royal Free (9 a.m. and 2 p.m.), London (2 p.m.) Middlesex (1.30 p.m.), St. Thomas's (2 p.m.), University College (9.15 a.m.), Charing-cross (2 p.m.), St. George's (1 p.m.), St. Mary's (10 p.m.), London Throat (2 p.m.), Throat, Golden-square (9.30 a.m.)

At the Royal Eye Hospital (2 p.m.), the Royal London Ophthalmic (10 a.m.), the Royal Westminster Ophthalmic (1.30 p.m.), and the Central London Ophthalmic Hospitals operations are performed daily.

### SOCIETIES.

**MONDAY** (3rd).—Medical Society of London (11, Chandos-street, Cavendish square, W.).—9 p.m. Mr. A. Pearce Gould: Lettsomian Lectures on Certain Diseases of the Blood-vessels. Lecture II. Obliterative Arteritis:—Nature of the Disease, Symptoms, Treatment, Liability to Recurrence.

Otological Society of the United Kingdom (11, Chandos-street, Cavendish-square, W.).—4.30 p.m. Cases and Specimens will be shown by Mr. H. Jones, Dr. A. Bronner, Mr. C. Baber, Dr. H. Tilley, Mr. A. Cheatle, and Dr. J. Horne.

**TUESDAY** (4th).—Pathological Society of London.—Prof. V. Harley: A Case of Low Nitrogenous Metabolism.—Dr. Hédin: Splenic Enzymes.—Dr. R. Hutchison: Chyliform Ascites.—Dr. Scholberg: An Unknown Pigment of Urine.—Dr. Thiele: A Brown Pigment in Urine.

**WEDNESDAY** (5th).—Obstetrical Society of London (20, Hanover-square, W.).—8 p.m. Specimens will be shown by Dr. C. Berkeley, Dr. V. Bonney, The President (Dr. Horrocks), and Dr. Boxall. Paper:—Dr. R. G. McKerron. Suppression of Urine after Labour.

**THURSDAY** (6th).—Harveian Society of London (Stafford Rooms, Titchborne-street, Edgware-road, W.).—8.30 p.m. Clinical Cases will be shown by Dr. Cautley and others. Paper:—Mr. P. L. Daniel: Some Rare Cases of Sarcoma of the Thyroid.

Rontgen Society (20, Hanover-square, W.).—8.30 p.m. Exhibition Evening. Paper:—Dr. B. Blacker: Localisation, with demonstration of a Simple Direct Reading Apparatus.

North-East London Clinical Society (Tottenham Hospital).—4 p.m. Demonstration of Clinical Cases.

**FRIDAY** (7th).—West Kent Medico-Chirurgical Society (Royal Kent Dispensary, Greenwich-road, S.E.).—8.45 p.m. Clinical Cases and Pathological Specimens will be shown or Notes read by Dr. Toogood, Mr. C. Williams, the President, Dr. L. Williams, Dr. J. Donelan, Dr. Herschell, Mr. R. V. Donnellan, Dr. Peacock, Dr. Henry, and Mr. Cæsar. Living Cases will be taken first.

Society of Anæsthetists (20, Hanover-square, W.).—8.30 p.m. Clinical Evening. Followed by a General Meeting to consider the Addition to Rules.

**SATURDAY** (8th).—Medical Society of London (Whitehall Rooms, Hotel Metropole).—7.30 p.m. 129th Anniversary Dinner. Dr. W. H. Allchin (President) in the chair.

**CUMBERLAND INFIRMARY**, Carlisle —Resident Medical Officer as House Physician for first six months and as House Surgeon for next six months Salary at rate of £80 and £100 per annum respectively with board lodging and washing

**DEVONSHIRE HOSPITAL** Buxton Derbyshire —Assistant House Surgeon Salary £70 per annum with apartments, board lodging and laundry

**DORSET COUNTY HOSPITAL** Dorchester —House Surgeon Salary £100 with board and residence

**DURHAM COUNTY ASYLUM** —Junior Assistant Medical Officer Salary £150 rising to £180 with board apartments laundry, and attendance

**EAST SUSSEX COUNTY ASYLUM** Haywards Heath —Second Assistant Medical Officer and Pathologist unmarried Salary £175 per annum with board lodging washing and attendance

**FARRINGDON GENERAL DISPENSARY AND LYING IN CHARITY** 17 Bartlett s Buildings Holborn circus E C —Honorary Physician

**HOSPITAL OF ST FRANCIS** New Kent road S E —Physician

**JESSOP HOSPITAL FOR WOMEN** Sheffield —House Surgeon (unmarried) Salary £75 per annum with board lodging &c

**KING S COLLEGE** London —Sambrook Medical Registrarship (open to King s College Students)

**KING S NORTON AND NORTHFIELD URBAN DISTRICT COUNCIL INFECTIOUS DISEASES HOSPITAL** West Heath —Assistant Medical Officer Salary £120 per annum with rations and rooms together with coal gas &c

**LONDON COUNTY ASYLUM** Banstead Sutton Surrey —Junior Assistant Medical Officer Salary £150 per annum with board, apartments, and washing

**LONDON LOCK HOSPITAL** Harrow road W —Anæsthetist to the Female Hospital

**MANCHESTER COUNTY ASYLUM** Prestwich —Junior Assistant Medical Officer, unmarried *Salary £150 increasing to £250* with board apartments and washing

**MANCHESTER CHILDREN S HOSPITAL** —Junior Resident Medical Officer unmarried for six months eligible for election as Senior Salary at rate of £80 a year when Junior and £100 a year as Senior with board and lodging

**MANCHESTER CLINICAL HOSPITAL FOR WOMEN AND CHILDREN** Park place Cheetham Hill road —House Surgeon Salary £80 per annum with apartments and board

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**METROPOLITAN ASYLUMS BOARD ASYLUM** Darenth Dartford Kent —Male Assistant Medical Officer unmarried Salary £150 per annum rising to £170 with rations, lodging attendance and washing

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**NATIONAL ORTHOPÆDIC HOSPITAL** 234 Great Portland street W —Honorary Assistant Anæsthetist

**NOTTINGHAM CHILDREN S HOSPITAL** Forest House —House Surgeon unmarried Salary £100 with board and residence

**PETERBOROUGH INFIRMARY AND DISPENSARY** —House Surgeon Salary £80 rising to £100 per annum with board residence and washing

**QUEEN CHARLOTTE S LYING IN HOSPITAL**.—Pathologist Salary at rate of £100 per annum

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**ROYAL SEA BATHING HOSPITAL**.—Resident Surgeon as Junior for six months and as Senior for a like period Salary at rate of £80 and £120 respectively with board and residence

**SALFORD ROYAL HOSPITAL** —House Surgeon Salary £100 per annum House Physician Salary £80 per annum And Junior House Surgeon Salary £70 per annum with board and residence in each case

**SHEFFIELD ROYAL HOSPITAL**.—Junior Assistant House Surgeon, unmarried Salary £50 per annum with board and lodging

**ST MARK S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM** City road London E C —House Surgeon Salary £80 per annum with board and lodging

**TOTTENHAM HOSPITAL** N —Honorary Dermatologist Also two Honorary Anæsthetists

**WANTAGE UNION** —Medical Officer and Public Vaccinator Salary as Medical Officer £75 per annum Vaccination and extra medical fees average about £30 per annum

**WEST LONDON HOSPITAL** Hammersmith road W —House Physician and House Surgeon for six months Board and lodging provided

## Births, Marriages, and Deaths.

### BIRTHS

**CREE** —On Feb 22nd at Park Villa Cheltenham, the wife of Major Gerald Cree R A M C of a son

**FRY** —On Feb 17th at Wateringbury, Kent, the wife of Walter Ernest Fry, M.R C S L R C P Lond , of a son

### DEATHS

**COOKE** —On Feb 20th at Aldridge, Staffordshire, aged 67 William Harry Cooke M D Aberd J P

**STRAHAN** —On Feb 21st suddenly S A K Strahan M D Q U I of the Middle Temple Barrister at law aged 48 years

**TOLLER** —On Feb 19th at his residence Cairo Egypt Seymour Graves Toller, M D Lond aged 35 years

*N B —A fee of 5s is charged for the insertion of Notices of Births, Marriages, and Deaths*

## Notes, Short Comments, and Answers to Correspondents.

### PUBLIC VACCINATORS AND GUARDIANS OF THE POOR

THE public vaccinators of the Holbeach Lincolnshire District are at present paid the following fees for vaccination and revaccination cases at the surgery *2s 6d* , cases within two miles of the surgery *5s* , and cases over two miles from the surgery *7s 6d* It will be noticed that *5s* and *2s 6d* are the minima allowed by the Local Government Board Like Mrs John Gilpin the guardians of the poor at Holbeach have a frugal mind at least as regards payments to other people and at a meeting held on Feb 20th the matter came up for discussion From the report of the meeting in the *Spalding Guardian* of Feb 22nd we learn that Mr Cragg expressed the opinion that ' it would not be very hard on the doctors if we brought it down to the minimum fee in all cases Mr Brothwell thereupon said ' I think the same myself A letter was read from Mr A. B Vise one of the public vaccinators in which he stated that during the three years 1899 1900 and 1901 he had been paid by the guardians for 20 successful vaccinations Of this number only 24 were distant under two miles from the town Of the others 121 were distant *between two and three miles,* 22 between *three and four miles* 21 between four and five miles 11 between five and six miles 12 between six and seven miles and four between seven and eight miles Besides these cases he had had to make 121 unpaid journeys in only 12 of which had he to go less than two miles The clerk asked Mr Brothwell if he would be prepared to undertake the work at the minimum fee Mr Brothwell however, did not give a definite answer but remarked that he had to do a good deal more work for a good deal less money We presume that Mr Brothwell is a medical man, although we cannot find his name in the Medical Register for 1901 or in the Medical Directory for 1902 under the section headed Provincial After some remarks from Mr R Merry, J P who charged the public vaccinators with arranging matters so that they got the higher fee Mr Cragg proposed and Mr Eastland seconded a motion that the existing contracts should be rescinded at 28 days notice and that in future no higher fee than 5s should be paid This was carried by a large majority, but finally the chairman ruled that a fortnight s notice of such a motion was necessary We refrain from comment until it shall be apparent what course the board of guardians is going to take

### THE R B ANDERSON FUND

DR ALFRED COX incloses a final list of contributions to the above fund and adds If there are any of your readers who even at the eleventh hour would like to do something to help to redeem the credit of the profession in this matter I would refer them to the treasurer of the fund the Manager Union Bank of London Chancery lane London, where subscriptions could be received up to Monday

| | £ | s | d |
|---|---|---|---|
| Dr Prosser James | 2 | 2 | 0 |
| Dr J Brassey Brierley | 1 | 1 | 0 |
| Mr F A Humphry | 1 | 1 | 0 |
| Mr J Rand | 1 | 1 | 0 |
| Dr J B Siddall | 1 | 0 | 0 |
| Dr J A Stewart | 0 | 10 | 6 |
| Mr Thomas Wilson | 0 | 10 | 0 |
| Mr J Whyte | 0 | 10 | 0 |
| H C M (second donation) | 0 | 5 | 0 |
| K | 0 | 5 | 0 |
| Mr F C Wood | 0 | 3 | 6 |

| | £ | s | d |
|---|---|---|---|
| Per the Editor of the *General Practitioner* — | | | |
| Dr G Danford Thomas | 2 | 2 | 0 |
| Dr R B M | 0 | 10 | 6 |
| [illegible] | 0 | 5 | 0 |
| Collected by Dr C Abbott at a meeting of the Birmingham and District General Practitioners Union | 5 | 0 | 0 |
| Collected by Dr J Thomarson . | 11 | 0 | 0 |

### UNSEEMLY NOTICES

IN the *Peterhead Sentinel* of Feb 22nd appears a paragraph headed ' Dr Anderson s Successor It gives a variety of statements about the successor who we observe amongst other matters ' has travelled extensively in Egypt Turkey, and Russia We can scarcely imagine that the successor whose name for the present we withhold has sanctioned the insertion of this paragraph but he owes it to his profession to publish a disclaimer

### THE DISCOVERER OF *LILIUM HENRYI*

IN the March number of the *Girl's Own Paper* Eleonore d'Esterre Keeling writes a brief note accompanied with a vignette portrait of Mr Augustin Henry the discoverer of *Lilium Henryi* Though a Licentiate of the Royal College of Physicians of Edinburgh he is better known among botanists than he is among medical men He was at one time a medical officer in the Chinese Maritime Customs and he is still connected with that service though not in a medical capacity Even had Mr Henry not collected and sorted some 160 000 Chinese plants as the writer of the note states, he will always be famous as the discoverer of that handsome lily *Lilium Henryi*. By the way, is this ' the tallest lily that grows " as the note states? For instance is not *Lilium giganteum* taller? The genus lilium has always found admirers in spite of fashion which at one time kneels at the shrine of the tulip and at

## Communications, Letters, &c., have been received from—

**A.**—Monsieur J. Astier, Asnières; Dr. David W. Aitken, Lond.; Dr. F. P. Atkinson, Bexhill-on-Sea; Mr. Amsler, Dresselli, Birrenlauf; Dr. M. D. Adame, Sevilla, Spain; Messrs. Allen and Hanburys, Lond.; Rev. W. H. Addison; Mr. F. G. Aflalo, Lond.; Messrs. Ayrton and Saunders, Liverpool.

**B.**—Dr. J. Burnet, Edinburgh; Mr. P. J. R. Bucknill, Blackburn; Dr. H. Poole Berry, Grantham; *British Medical Journal*, Editor of; British Medical Benevolent Fund, Hon. Secretary of; Messrs. Baillière, Tindall and Cox, Lond.; Mr. T. A. Brocklebank, Lond.; Mr. A. A. Bradburne, Aldershot; Dr. J. P. zum Busch, Lond.; Mr. T. H. Brocklehurst, Weymouth; Dr. F. E. Batten, Lond.; Mr. E. Baker, Birmingham; Dr. L. H. Bryson, Derby; Messrs. Battle and Co., Neuilly-sur-Seine, France; Dr. Fletcher Beach, Kingston Hill; Birmingham, &c., Drainage Board. Engineer of; Mr, J. Paul Bush, C.M.G., Clifton. Bristol; Bridgwater Infirmary, Hon. Secretary of; Mr. C. L. Bedford, Birmingham; Charles Birchall, Ltd., Liverpool; Messrs. C. Barker and Sons, Lond.; Messrs. W. J. Bambridge and Co., Lond.

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**E.**—Messrs. Evans, Lescher, and Webb. Lond.: Electrical Ozone and Light Treatment, Lond., Secretary of; Mr. W. McAdam Eccles, Lond.; Messrs. Eason and Son, Dublin; East Suffolk and Ipswich Hospital.

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**G.**—Mr. A. Gray, Pontlottyn; Sir William Gowers, Lond.; General Apothecaries' Co., Lond.; Messrs. Gowlland and Co., Selsey; Mr. J. H. Glenny, Lossiemouth; Messrs. W. Green and Sons, Edinburgh; Messrs. Guest, Keen, and Co., Dowlais; Glasgow Southern Medical Society, Editorial Secretary of; Dr. A. E. Garrod, Lond.; Mr. Henry Goodale, Parkstone; Dr. Gillespie.

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**J.**—Dr. Lewis Jones, Mentone; Messrs. Jetter and Scheerer Co., Lond.; J. H. P.; Jessop Hospital for Women, Sheffield, Secretary of;

**K.**—Dr. G. S. Keith, Currie, Edinburgh; Mr. H. D. Kelf, Lond.; King's Norton and Northfield Urban District Council, Clerk of; Messrs. R. A. Knight and Co., Lond.

**L.**—Dr. T. R. Lombe, Torquay; *Leicester Advertiser*; L. M.; *The Leisure Hour*, Lond.; Mr. Vincent Laurens, Manchester; Mr. J. Le Couteur, Lond.

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**Q.**—Queen Charlotte's Hospital, Lond.

**R.**—Dr. J. B. Rankin, Edinburgh; Dr. C. E Rogers, Settle, U.S.A.; Messrs. Rowntree and Co., York; Dr. H. D. Rolleston, Lond.; Mr. E. J. Reid, Lond.· Mr. E. W. Roughton, Lond.; Royal College of Surgeons in Ireland, Registrar of; Ratepayer, Lond.

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**T.**—Dr. J. C. Thresh, Chelmsford; Dr. F. W. Tunnicliffe, Lond.; Mrs. W. A. Turner, Newtown; Dr. A. G. Turney, Lond.; *Truth*, Lond., Editor of.

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**Y.**—Major M. T. Yarr, R.A.M.C., Aldershot.

## Letters, each with enclosure, are also acknowledged from—

**A.**—Dr. Abramowski, Mildura, Australia; A. H. M.; A. D. L. T.; Mr. W. A. Austin, Wantage; A. H. B.; A. L.; Mr. T. Armstrong, Lond.

**B.**—Dr. D. Barry, Rock Ferry; Mr. T. H. Brocklehurst, Templecombe; Mr. P. Bhedwar, Lond.; Messrs. Burroughs, Wellcome, and Co., Lond.; B., Birmingham; Mr. T. W. Brimacombe, Southsea; Mr. J. F. E. Bridger, Antigua.

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**E.**—Dr. C. C. Easterbrook, Edinburgh; E. S. W.; E. R.; Messrs. Eaton and Bulfield, Lancaster; E. J. R.; Dr. C. W. Evans, Kington; E. M.: Dr. W. B. Edwards, Seven Sisters.

**F.**—Dr. Freuburg, St. Petersburg; Mr. D. B. Foley, Wombwell-by-Barnsley.

**G.**—Messrs. Gilyard Bros., Bradford; Dr. S. A. Gill, Formby-by-the-Sea

**H.**—Mr. E. Harris, Kilmacthomas; Mr. J. Heywood, Manchester; Dr. A. W. Hawthorne, Carcoar, New South Wales; H. W. P. Y.; Dr. W. N. Heard, Lond.; H. D. C.; Mr. T. Homer, Whitchurch; Dr. D. M. Hutton, Southport.

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**L.**—Dr. J. L. Lock, Cambridge; Mr. W. M. Lock, Newport, Mon.; Monsieur H. Le Soudier, Paris; Lancashire County Asylum, Winwick, Sec. of; Mr. H. K. Lewis, Lond.; Leicester Medical Union, Hon. Secretary of; L. F. S.

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**N.**—Northern Medical Association, Glasgow; North Devon Infirmary, Barnstaple, Hon. Secretary of; Mr. W. H. Nattle, Tavistock; North of England Medical Agency, Sunderland.

**O.**—Mr. J. F. O'Keefe, Delvin

**P.**—Dr. R. Hay Pulipaka, Serampore, India; P. W. W.; P. G. N.; Mrs. Phelan, Little Ilford; Mr. F. E. Potter, Lond.; Dr. J. Pirie, Harbury.

**R.**—Royal Devon and Exeter Hospital, Secretary of; Royal Hants County Hospital, Winchester; Royal South Hants, &c., Hospital, Southampton, Secretary of; R. A. R.; R., Lond.; Messrs. Roberts and Co., Lond.

**S.**—Mrs. Skinner, Winchelsea; Mr. D. Sen, Purnea Lines, India; Messrs. H. C. Scales and Co., Lond.; Salford Union, Clerk of; Messrs. Scobell and Lake, Lond.; Messrs T. and H. Smith, Edinburgh; Mrs. S.

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**W.**—Mr. C. Williams, Pontypridd; Dr. J. Wallace, Stonehaven; Dr. J. H. Waterhouse, Maltby Grange; W. E. A.; W. F. D.; Dr. J. Wilkinson, Droitwich; W. A. J.; W. H. L.

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## LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

**MONDAY (3rd).**—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. F. G. Parsons: The Blood-vessels of Mammals in Relation to those of Man.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. R. Crocker: Clinique (Skin.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Saunders: Therapeutics.

ROYAL INSTITUTION OF GREAT BRITAIN.—5 P.M. General Monthly Meeting.

**TUESDAY (4th).**—ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Dr. G. F. Still: Some Abnormal Psychical Conditions in Children. (Goulstonian Lecture.)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. J. E. Squire: Clinique. (Medical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Dunn: Some Common Diseases of the Eye.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Dr. Batten: Myopathies.

ROYAL INSTITUTION OF GREAT BRITAIN.—3 P.M. Mr. W. N. Shaw: The Temperature of the Atmosphere, its Changes and their Causes

**WEDNESDAY (5th).**—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. F. G. Parsons: The Blood-vessels of Mammals in Relation to those of Man.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. H. Marsh: Clinique. (Surgical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Saunders: Therapeutics.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL (Gray's Inn-road, W.C.).—8 P.M. Dr. Abercrombie: Ear Diseases without Discharge.

**THURSDAY (6th).**—ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Dr. G. F. Still: Some Abnormal Psychical Conditions in Children. (Goulstonian Lecture.)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. J. Hutchinson, jun.: Clinique. (Surgical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Davis: Medical Anatomy and Physical Diagnosis.

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. F. E. Batten: Lesions of the Cerebellum.

CHARING-CROSS HOSPITAL.—4 P.M. Dr. Galloway: Dermatological Demonstration. (Post-Graduate Course.)

**FRIDAY (7th).**—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. F. G. Parsons: The Blood-vessels of Mammals in Relation to those of Man.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. J. Horne: Clinique. (Throat.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Ball: Diseases of the Tonsils.

ROYAL INSTITUTION OF GREAT BRITAIN.—9 P.M. Prof. H. Becquerel: Radio-Active Bodies (in French).

## EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

*It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.*

*Lectures, original articles, and reports should be written on one side of the paper only,* AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

*Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.*

*We cannot prescribe or recommend practitioners.*

*Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."*

*Letters relating to the publication, sale, and advertising departments of* THE LANCET *should be addressed "To the Manager."*

*We cannot undertake to return MSS. not used.*

## MANAGER'S NOTICES.

### THE INDEX TO THE LANCET.

THE Index to Vol. II. of 1901, which was completed with the issue of Dec. 28th, and the Title-page to the Volume, were given in THE LANCET of Jan 4th.

### VOLUMES AND CASES.

VOLUMES for the second half of the year 1901 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

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## METEOROLOGICAL READINGS.

*(Taken daily at 8.30 a.m. by Steward's Instruments).*

THE LANCET Office, Feb. 27th, 1902.

| Date | Barometer reduced to Sea Level and 32° F. | Direction of Wind | Rain fall. | Solar Radia in Vacuo | Maximum Temp Shade | Min Temp | Wet Bulb | Dry Bulb | Remarks at 8.30 A.M. |
|---|---|---|---|---|---|---|---|---|---|
| Feb. 21 | 30·06 | S.E. | ... | 60 | 49 | 35 | 35 | 36 | Foggy |
| " 22 | 29·96 | S | ... | 71 | 50 | 36 | 39 | 40 | Overcast |
| " 23 | 29·77 | S.W. | 0·19 | 57 | 50 | 40 | 45 | 45 | Raining |
| " 24 | 29·62 | S.E | 0·03 | 47 | 47 | 44 | 45 | 46 | Raining |
| " 25 | 29·61 | S.E. | 0·23 | 65 | 48 | 44 | 45 | 45 | Raining |
| " 26 | 29·58 | S.E. | 0·10 | 70 | 47 | 38 | 39 | 40 | Overcast |
| " 27 | 29·25 | S.W. | 0·15 | 76 | 52 | 40 | 45 | 45 | Cloudy |

**During the week marked copies of the following newspapers have been received:**—*Glasgow Evening News, Glasgow Herald, Southport Guardian, East London Observer, Bulawayo Journal, St. James's Gazette, Lancaster Post, Suffolk Chronicle, Standard, Manchester Courier, Newcastle Chronicle, Echo, Manchester Despatch, Yorkshire Post, Belfast News-letter, Nottingham Express, Cardiff Echo, Newcastle Leader, Darlington Echo, Hartlepool Mail, Star, Ipswich Times, Yorks Observer, Aberdeen Journal, Aberdeen Free Press (Weekly), Surrey Advertiser, Times of India, Morley Observer, City Press, South Wales Post, South Wales Daily News, Plymouth News, Westminster Gazette, Irish Times, Banbury Guardian, Freeman's Journal (Dublin), Essex County Chronicle, &c.*

the diminution of vascular supply to the mammary regions would certainly markedly arrest the development of mammary cancer. Accordingly I would never perform this operation myself unless the patients and friends distinctly understood its experimental nature and the absolute uncertainty which surrounded its results for good.

A certain number of my cases having had return of the disease after three years I can only adhere to a former statement, which I now publicly and strongly reiterate, that this time is far too short to allow of the term "cure" to be used in this disease. In one of my private cases the husband of the patient, a highly educated man, had read what I regard as the mistaken surgical opinions published on this point. His wife remained well for three years and he joyfully regarded her as "cured." When return took place his disappointment and disgust knew no bounds. I quote his exact words, they are of significance: "I would as soon my wife were under the veriest quack for the future as any member of your profession. Even in your profession published statements cannot be depended upon." I relate this to illustrate how dangerous it is to dogmatise concerning the results of a malady so protean and ill-understood as cancer, and how such methods weaken our position with regard to the educated portion of the public in a manner almost incalculable. I have repeatedly in my book and elsewhere dwelt upon the importance of every medical man understanding and realising the extraordinary differences which exist in pain, in rate of growth, and in virulency, in cancer of the breast in different individuals. It is want of knowledge which leads to belief in vaunted cures, the special drug which has been last taken receiving the credit through ignorance of the pathological changes in the disease. Let me briefly relate a remarkable case to illustrate the peculiarities which occur in the growth of cancer.

Over five years ago I operated upon a woman between 40 and 50 years of age for advanced hard carcinoma occupying a very bad part of the mamma, the sternal margin. As usual the growth had extended deeply into the intercostal space, and I followed it until the internal intercostal muscle had been removed and there seemed to be a serious risk of opening the thoracic cavity. I did not feel at all sure that I had extirpated the disease with that freedom which is so essential in operations for carcinoma. Rather to my surprise this patient remained well for close on five years, when pain and swelling occurred near the sternum and an obvious recurrence showed itself. For this condition I operated early in 1901. I found the sternum infiltrated with growth and was obliged to relinquish the operation. A livid tumour of the size of a large hazel-nut was present at the edge of the sternum. The patient did not see me again for nearly nine months and I wrote to inquire as to her case. She replied that she was so much better she had no cause to see me. On examination of her case I could hardly believe my eyes. The whole disease had disappeared and a deep depressed cicatrix alone remained, similar to that which obtains after removal of necrosed bone. This patient had not been taking violet leaves, cinnamon, or arsenic and quinine; neither had she had the benefit of the aerial therapeutics disseminated by Christian Science. Had one or other of these methods been in vogue what would have been said? If her ovaries had been removed what a triumph for oöphorectomy. What a lesson in humility should such a case teach us, how much we have to learn about the phenomena of cancerous disease.

These remarks would not be complete without reference to the efficacy or otherwise of the x rays upon cancer of the breast. I advised the treatment in one private case, but was not permitted to superintend the method or to watch the results. I can only speak from hearsay that the nodules withered away and great benefit was obtained. It is of the utmost importance that a series of these cases should be observed and that the true results should be published, and that not a few months after supposed "cure." A similar remark may apply to lupus and rodent ulcer treated by the same method. The results of scraping and applying caustic to rodent ulcer are often striking. The whole surface "heals over" and may remain well for months or for years, yet the disease too often returns locally. Can the "light treatment" show permanency of cure? These and many other such considerations point most strongly to the necessity for a laboratory where such questions can be studied, and for a research fund to reward impartial and disinterested observers for giving to the profession the true value of novel methods of treating these maladies.

During the six years ending in August, 1901, I have operated upon 59 cases of mammary carcinoma and one of mammary sarcoma. This list does not take into account many operations performed for recurrent disease, such as nodules in the skin of the chest and extirpation of diseased glands from the axilla. Some of these patients had been operated upon previously by myself and some by other surgeons. I have notes of 12 cases in this period of six years in which operation was refused. In nine of these extensive implication of the skin of the thorax and implication of the glands above the clavicle were the causes assigned for my refusal to operate. I may here mention that most of these were private patients and that the craze termed "Christian Science" was directly responsible for the hopeless and shocking state of a significant number of these deluded women. In one case signs of carcinoma of the spine were evident. In two cases large tumours of the liver coexisted, showing all the clinical symptoms of carcinoma. Two cases out of the 60 among the hospital class were lost sight of. I know that these patients were well two years after operation and they might be admitted into the "two years class" with justice. This leaves 58 cases for relation and discussion. Of the 58 cases particulars are tabulated of 40. The remaining 18 cases have been treated too recently to estimate their ultimate results. Some of them have been operated upon in the last six months, but among these 18 cases there have been two deaths. One was distinctly due to iodoform poisoning the other to bad sepsis. The latter case will receive due notice. In the 40 cases there was only one instance of slight suppuration about the centre of the wound, so that out of 60 cases all ran an aseptic course but two. The operations have been generally of the most extensive character, but healing has been both rapid and sound. In the 18 non-tabulated cases were two of speedy recurrence which will need special mention.

### METHOD OF OPERATING.

In all the 60 cases with the exception of two, where the diagnosis was deceptive and which receive special mention, the most thorough operation was practised. The axillary lymphatic tissues especially were carefully removed, and every scrap of fascia, both anteriorly and posteriorly. In cases where the axillary glands were infected, the lower part of the pectoral was removed and in several cases the pectoralis minor was cut across thoroughly to reach and to extirpate a chain of diseased glands extending towards the clavicle. The skin has always been very freely removed, so that in some cases I have been unable to bring it together after operation. I have paid great attention to such points as the warm clothing of the patient, the temperature of the rooms, and especially rapidity in operating. I believe the latter consideration to be of great importance, especially in elderly and bronchitic women. The anæsthetic has generally been gas and ether, followed by chloroform in the later stages of the operation. Drainage has been universally employed, sometimes in more than one part of the wound. It is curious how opinions differ upon the necessity of drainage in these cases. I am a strong advocate for the practice.

I will now mention particulars of two examples of rapid recurrence of disease which occurred in my 18 cases recently operated upon and not tabulated. In the first of these two cases the patient was an unmarried lady, aged about 40 years, of very dark and swarthy complexion, who had a swelling of the right breast which was painful, hot, and throbbing, and which had only been noticed for about two months. The affected organ "stood out" from the thorax and was of the size of a small turnip. It was red and hot and there was a distinct local feeling of elasticity or fluctuation. The temperature was raised at night and the resemblance to abscess was exact. Indeed, the diagnosis of suppuration had been arrived at. But the "peau d'orange" was marked and some enlarged glands were to be found in the axilla. The swelling was incised and was found to be a gelatinous hæmorrhagic growth, breaking down in the centre. Seeing the extensive implication of the skin the whole tumour and integument were removed by a circular incision, leaving a great gap on the thoracic wall of the size of a soup-plate. The pectoral was removed and the axilla was freely cleared. The huge wound was covered with flaps of skin "laid in" from the margin and sewn down with catgut. In about six weeks cicatrisation, extending from many centres, was complete. But about two months after operation very ominous signs showed themselves. These consisted in severe pains shooting down the back of the neck

# An Address

ON

# THE RESULTS OF OPERATION IN 60 CASES OF MALIGNANT DISEASE OF THE BREAST.

*Delivered before the Medical Society of Cardiff on March 6th, 1902,*

By A. MARMADUKE SHEILD, M.B. Cantab., F.R.C.S. Eng.,

SURGEON TO ST. GEORGE'S HOSPITAL; CONSULTING SURGEON TO THE HOSPITAL FOR WOMEN AND CHILDREN, WATERLOO BRIDGE-ROAD, AND TO THE HOSPITAL OF ST. JOHN AND ST. ELIZABETH, ETC.

Mr. President and Gentlemen,—The subject which I have the honour of bringing before the Medical Society of Cardiff to-night is one of surpassing interest to every medical man. I am especially glad of having the opportunity of speaking on the important matter of mammary cancer in this great town, the centre of a large population. I know that carcinoma of the breast is a prevalent disease in South Wales, and now that some hopes exist of the establishment of an institution where the phenomena of cancerous affections can be studied by experts the more facts we obtain from all parts of the country the better. Moreover, it is very true that some of the most curious and important clinical facts regarding cancer are found in the experience of elderly practitioners, who possess the confidence and secrets of private families, who have watched these cases to their terminations, and who have noticed the extraordinary vagaries and peculiarities which they exhibit.

Before proceeding to the hard-and-fast portion of my paper I would take a summary of the present position with regard to the subject of cancer of the breast and briefly advance my own opinions founded on a now tolerably large experience. You are aware that a controversy has for some time been going on as to who is to claim the credit for the method of extensive operating now in vogue. There can be no doubt that many of our former surgeons, and notably Mr. Moore of the Middlesex Hospital in 1867, advocated strongly very wide and free operating. His views were strongly supported in America by the elder Gross in 1880, and personally I am inclined to attribute to Moore the principal credit for originating very thorough operation in mammary cancer, and I have supported that statement in my book.[1] Sir Mitchell Banks of Liverpool, Mr. Heath, and many other senior London surgeons of the day followed the same practice. Yet it is curious to observe that there were some prominent London surgeons of that period who performed and actually publicly advocated the most imperfect operations, even advising that the axillary glands should be left untouched unless they were obviously infected. The comparative ease and safety with which the breast alone can be removed, leaving cancerous tissues in the axilla, became dangerously fascinating from its very simplicity of performance and speedy healing. Disciples of the imperfect operators became numerous all over the country and incomplete operations were prevalent not only in this country but in others. Under these circumstances the extreme and sweeping operation recently advocated by Halstead acted as a sort of "surgical revival," and, as has happened in religious matters, the backsliders from the true faith often embrace the new manifestations of truth with such astounding vigour that they excel their teachers, and certainly are apt to forget the similar doctrines promulgated by their own countrymen many years before. To Halstead, therefore, may be ascribed the credit of again forcing upon the attention of the profession the importance of very free operating, but I believe that this doctrine, like many others of the best methods of practice in surgery, originated in our own country and we are responsible to no one else for it. I may here express my own opinion that operations demanding division of the clavicle, dissecting out of glands in the neck, and removal of the upper limb and scapula can seldom come within the pale of legitimate surgery.

Regarding the parasitic origin of cancer of the mamma, as year after year passes I become more and more uncertain in what direction to inquire. Indeed, the matter is still an open one. Of one thing I am certain, that progress in this direction can only be made by proceeding with the utmost caution, collating all facts, clinical and otherwise, with truth and sincerity, and especially observing the results of experimental processes with the most rigid scepticism. Error is so easy, truth is so difficult, to ascertain. And in this, as in many of the difficult problems which beset the profession of medicine, some of the greatest obstacles to real progress are the hurry and inaccuracy of some of the most earnest workers.

In the last six years I have had numerous instances of the difficulties which hinder the early diagnosis of cancer of the breast, and these have been generally instances of small indurations and deep lumps, such as a patient finds quite accidentally. The lesson has been strongly borne home to me that the profession generally cannot be too much aware that the commencement of mammary cancer is insidious, quiet, and often quite painless Any slight "hardness" or "thickening" perceptible to the fingers laid flat on the mamma of a woman of the age of 40 years or upwards is a sign of the greatest import and demands immediate explanation. The diagnosis of a nodule of cancer from deeply seated cysts has time after time in my practice been shown to be impossible except by exploration Indeed, dubious tumours in the breast need exploratory operations as much as dubious tumours in the abdomen. It may seem heretical to state that the naked-eye appearances as exposed on exploratory incision are, in my own opinion, more likely to lead the surgeon right than are the results of microscopical examination. I have always found that when I have been in doubt between inflammatory tissue and early cancer the same doubt occurs to the microscopist if only he possesses the somewhat rare attributes of a sceptical mind associated with accuracy of observation. On the other hand, I have known serious prognostical difficulties to arise from relying too certainly upon dubious microscopical appearances. I canno recommend these observations too strongly to your serious consideration.

I feel sure that the general run of medical men do not fully appreciate the significance to be attached to infection of the axillary glands in mammary cancer. Only since I have been in the habit of removing the pectoral and clearing the axilla in every case has it dawned upon me that the glands are almost universally infected even in the early stages of mammary cancer. Time after time, when competent observers have made the written note "there are no enlarged glands" I have at the operation removed from under the pectoralis minor glands of the size of a hazel nut or almond, distinctly cancerous, which it was impossible to feel, even with the axilla opened, until the pectoralis major was removed. These glands usually adhere closely to the sheath of the axillary vein and the troublesome œdema of the arm so often seen as a sequel of operation for cancer of the breast is too often due to the fact that these important diseased structures have quite escaped observation at the primary operation. I have spoken at some length on this subject, for its vital significance can hardly be over-estimated, and I would conclude by stating my express belief that the being unable to feel enlarged glands in the axilla goes for little or nothing in the diagnosis of early cancer of the breast.

As regards the true value of the operation of removal of the ovaries for recurrent mammary cancer I fear I must say that I regard this proceeding as quite experimental. That a certain number of cases have been benefited I have no doubt; that a number have received no benefit whatever I am equally certain. My own personal experience is limited to two cases. They were both bad types of recurrent cancer in young vascular women. In neither of these did the slightest benefit occur. I also know of three private cases where the operation was performed by other surgeons and no benefit was obtained. I believe that the true reason why improvement—the withering of cancerous nodules, the relief from pain, and so on—has followed removal of the ovaries in certain cases is due to diminished vascularity of the mammary region sometimes caused by the operation. In certain cases of removal of the ovaries the breasts atrophy, hair grows on the lip, the patient generally emaciates, and the mental conditions of the woman become altered and curious. This change, it is well known, is by no means universal or even common, but, should it occur,

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[1] Diseases of the Breast, p. 323.

## TABLE SHOWING RESULTS OF OPERATION IN CASES OF MALIGNANT DISEASE OF THE BREAST.

| Case. | Years of age. | Married or single. | History and particulars of case. | Date and nature of operation. | Result. | Period of freedom from return. |
|---|---|---|---|---|---|---|
| 1 | 54 | Widow. | Noticed tumour in the left mamma for six months. Hard carcinoma. The patient spare and thin. Several axillary glands enlarged. | Sept. 15th, 1895. Mamma and pectoral removed. All fasciæ and glands as high as clavicle. | Was seen early in 1899, quite well. Present address not known. | 3 years. |
| 2 | 59 | Married. | A small tumour of the size of a chestnut at the upper border of the mamma. | Sept. 9th, 1895. Extensive operation. Pectoral fasciæ and glands removed, but not muscle. | In March, 1899 (three years and six months after operation), two small cancerous nodules were excised from the scar. In March, 1900, she was quite well. | 3 years and 6 months. |
| 3 | 53 | Married. | Extensive infiltrating carcinoma of the left mamma. Axillary glands implicated. | June, 1894. Extensive operation done. Pectorals and glands freely removed. | Quite well until June, 1898, when rapid ascites set in. The patient died in October. A partial necropsy revealed carcinoma of both ovaries and peritoneum. | 4 years. |
| 4 | 67 | — | Atrophic lump of carcinoma in the centre of the left mamma of three years' standing. | May, 1895. Whole mamma and fasciæ removed. Axilla thoroughly cleared. No deposits of cancer found in the glands by the microscope. | Died in 1899 from influenza and bronchitis. There was no return of disease. | 4 years. |
| 5 | 45 | Married. | Central carcinoma of 12 months' standing. Glands in axilla involved. | August, 1895. Extensive operation. Pectoral removed. Glands extirpated. | In September, 1896, a small nodule of carcinoma found in centre of axilla scar. This was again removed. Remained well until September, 1899, when the glands in the neck rapidly enlarged and she died with symptoms of cerebral tumours. No necropsy allowed. | 1 year. |
| 6 | 50 | Widow. | A small nodule of carcinoma at the lower part of the left mamma, of about the size of a hazel-nut. | March, 1896. Very free extirpation. Fasciæ and axillary glands removed, but not pectoral. Carcinoma found in the glands by the microscope. | Seen February, 1901, well. | Nearly 5 years. |
| 7 | 48 | Married. | Extensive carcinoma of the right mamma, the skin, and the glands, of at least nine months' duration. | June 20th, 1896. Extensive operation. Skin, glands, and pectorals removed. Skin-grafting employed. | Remained well for 10 months. Then signs of spinal mischief came on. The patient died paraplegic, with incontinence of urine and fæces, in two years. There was no local recurrence. | 10 months. |
| 8 | 58 | Single. | A large elastic tumour in the centre of the left mamma, noticed for 12 months. Once some bloody discharge escaped from the nipple. Much difference of opinion regarding the case. | August, 1896. A cyst found on exploratory incision which contained bloody fluid. On one part of its wall was a nodule of carcinoma of the size of a hazel-nut. The fasciæ and axillary glands were freely removed. | The patient has remained quite well. | 5 years. |
| 9 | 47 | Married. | A red itching patch round the site of a scar close to the right nipple for at least four years. When the patient was seen the disease had spread until the whole skin over the mamma was red, glazed, and shining. | September, 1897. The whole patch excised and the axilla cleared. Pectorals removed. The wound measured 14 inches by 12 inches. Extensive skin-grafting employed. | In January, 1899, extensive disease appeared in the cervical glands. There was no local return. | 1 year and 3 months. |
| 10 | 51 | Single. | Hard but extensive carcinoma of the centre of the right mamma under the nipple which was deeply retracted. A history of 12 months' duration. | "Complete operation," October, 1896. Pectoral removed and the infected axillary glands. | Remained well and able to work as a servant. In June, 1901, nearly five years after operation, the patient came with a small hard gland in the neck on the right side. This proved to be carcinomatous. There was no local recurrence, the scar and the axilla being quite healthy. | Nearly 5 years. |
| 11 | 52 | Married. | An elastic swelling in the centre of the left mamma of the size of an egg. It had been punctured twice and fluid had been drawn off. A history of about eight months' duration. | January, 1898. Exploratory incision revealed a curious tumour with cysts and solid growth. I opined it to be a cystic sarcoma, but microscopically it was a typical "duct-cancer." One of the axillary glands contained a nodule of growth of columnar epithelium. | Seen in 1901, quite well. | 3 years. |
| 12 | 60 | Single. | Extensive infiltrating carcinoma of the right mamma. The skin and axillary glands involved. Probable history extending over two years. Woman of great stature and physique. | February, 1897. The whole mamma with the skin removed. Pectorals also and axillary glands. An enormous wound left. Healed by skin-grafting. Convalescence retarded by mania. | Remained well for over a year. There was no local return. One year and three months after operation signs of cancer of spine were evident, from which she sank. | 1 year. |
| 13 | 63 | Widow. | A hard carcinoma of the size of an orange in the right mamma. Skin dimpled, nipple retracted. History of duration dubious. | June, 1897. Very free removal. The whole pectoral removed, and pectoralis minor divided. Many infected glands taken away. | On January, 1901, the patient wrote to say that she remained perfectly well. | Nearly 4 years. |

and round the occiput. The pains became agonising, so as to demand morphia, and soon a swelling was detected behind the pharynx which pushed forward the palate and was obviously a spinal growth. One morning this poor patient was found dead, and her medical attendant who has given me these details had little doubt from the condition of the neck that dislocation had taken place in the upper spinal vertebra, the ligaments being destroyed by the growth. But this, in the absence of post-mortem examination, must remain unconfirmed. The growth was ordinary soft carcinoma of a luxuriant type, the cells being abundant and very large This case was a typical example of inflamed infiltrating acute carcinoma. Such have been mistaken for abscess on different occasions with disastrous results. We see the best, or worst, examples of this formidable malady in young and especially pregnant women. So bad are the results of operations on these patients that I doubt if it is of much use operating upon them at all. I especially draw attention to this case for another reason. Any surgeon meeting with, operating upon, and publishing results of, this kind of mammary carcinoma will inevitably damage his statistical statements, if these be complete and accurate, as to freedom of his patients from return of disease. And the reverse is true that if the cases be selected and unfavourable ones of this kind be rejected the corresponding results will appear the more excellent.

The second case is an example of what sometimes occurs —namely, that an operation is done when, unhappily, dissemination has already occurred.

On Nov. 12th, 1900, I saw a strong, florid looking, married lady, aged about 45 years. In the axillary margin of the right mamma was an evident carcinoma with all the clinical signs of the disease well marked. The duration was quite uncertain. At the operation on Nov. 28th a soft mass of carcinoma was found and a very extensive operation was done The pectoral was removed as well as much diseased axillary lymphoid tissue Previously to the operation she had complained of "pains in the back" and rheumatic pains in the limbs, and a suspicion was aroused that all was not well. By the spring of 1901 these suspicions were confirmed She was beginning to lose control over the functions of the bowel and numerous areas of pain and numbness were evident over the lower extremities. She walked with difficulty and had constant pain in the back. She had emaciated greatly and bore the appearances of one dying from an incurable malady. There was no local recurrence, the scar and axilla being quite healthy. I have thought it right to relate this case shortly because I have seen others like it, and no operation, however extensive, can prevent the occurrence of such conditions. Are such cases to be termed "recurrence"? Are they not rather instances of multiple manifestations of disease?

I always make a practice of examining the visceral condition of a patient prior to an operation for mammary cancer and in this way the tumours of the liver before alluded to were discovered. But early carcinoma of the spine is so vague and difficult a disease to diagnose in its early stages that errors are very excusable and difficult to avoid.

I have said that one of the cases where suppuration occurred is only mentioned for completeness. The mischief was slight, limited to one part of the wound, and it speedily subsided. I have only referred to it to make the relation of my cases absolutely accurate. The other, however, which occurred among the 18 recent cases, was of a most disastrous nature, and shows us that even with all modern precautions absolute and certain safety is not obtainable.

The case I now refer to was that of a lady, aged about 50 years, who had a large mammary carcinoma. The operation was very extensive She had no renal mischief but had a feeble heart and a slight mitral bruit. The operation was performed with perhaps more than usually elaborate precautions I did not see the case afterwards, but it was left in the hands of a gentleman whose office was especially to manage the after-treatment of operations and who may therefore, with justice be looked upon as especially skilful in this department. All went well for three days when a blaze of sepsis occurred, and after lingering for about three weeks the patient died. The wound opened and became "dry" in appearance and it was obvious that some very potent factor of mischief had somehow been introduced Streptococci were found, and the case was treated with anti-streptococcic serum, but with only temporary benefit. Indeed, I have not seen so bad a case of sepsis for many years and it is the only one of the kind that has ever occurred to me in either private or hospital practice. I felt much ashamed of the case and should have been glad not to have been under the necessity of mentioning it, but its importance is undeniable, as showing the possibility of disaster when all precautions are used.

In 38 out of the 40 tabulated cases the operations have been of the most extensive nature, particularly as regards the removal of skin and fascia and axillary lymphatics. The sternal part of the pectoralis major has, in most instances, been removed. The pectoralis minor has been cut across and the fascia cleared from it. If the axillary glands are infected I feel sure that removal of the sternal part of the pectoral muscles is almost a necessity to remove high glandular infection. I have several times discovered by this means small cancerous nodules of the size of a pea lying close under the clavicle. I feel sure that these potent factors of future mischief would have remained undetected had the muscle not been removed. In this matter of removal of the pectoral I venture with all courtesy to differ from Sir Mitchell Banks who holds that the glands can generally be effectually extirpated by forcible retraction of the muscle.[2] I have generally been able to bring the skin together and this, where great tension exists, has been aided much by the making of lateral incisions and extensive dissecting up of the skin above and below. When much skin has had to be sacrificed and a large gap has been left I have filled this in by the process of implantation flaps rather than by Thiersch grafting, which I have found private patients particularly object to.[3] I have mentioned that drainage has been universally employed. In cases of very obese women, when an enormous chasm has been left, I always place a tube in the centre of the wound as well as posteriorly through the lower flap. An accumulation of fluid is very apt to form in such wounds towards the centre or sternal aspect This is a potent source of danger, for nothing is more apt to become infected by septic organisms that a collection of bloody serum, which is really an attractive and warm culture medium.

Next, as regards the result of these operations. One of the striking general features is the freedom from local recurrences; and, if local recurrences have taken place, they have been of a small or nodulous nature, again easily removed. Such phenomena as œdematous arm, agonising pain, and fungating masses of disease have been conspicuous by their absence I attribute this largely to the thoroughness with which the axilla has been cleared. That distressing sequel, gigantic œdematous arm, is generally due to infected glands implicating and pressing upon the axillary vein, which were not detected, or only partly removed, at the primary operation. When returns have taken place they have been generally again removeable, and very considerable periods of freedom from further trouble may be confidently expected.

Of the 40 cases, eight patients are found to be well for the highly satisfactory period of five years, going on to six years, four for four years and upwards, seven for three years and upwards, and 11 for two years and upwards The cases which showed local return within two years need special mention; they have been very strictly classified, and it is only right to point out that a second and slight operation has given to these patients a fresh period of freedom from return Prominent in this class is Case 2. Here after removal of a small nodule in the scar the patient remained well for over five years. In Case 5 the patient remained well for over three years after removal of a recurrence. In Case 17 the patient has every chance of prolonged good health. In Case 22 after removal of a small nodule the patient remained well for four years and died from a cause unconnected with cancer. In Case 30 the patient succumbed to cardiac disease nearly two years after removal of the nodule mentioned, and in the last case recorded the prospects of the patient are equally good. Thus, it may be said that out of the 40 cases over 30 received untold benefits from the development of modern operative surgery. What a contrast this affords to the long and extensive experience of the late Sir James Paget when he said: "Survivals of three years such as are now often termed 'cures' were not very rare, but I can remember very few who survived without recurrence more than five years."[4]

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[2] Transactions of the Medical Society of London, vol. xxiii., p. 221

[3] Diseases of the Breast, p. 411, plate xvi., fig. D

[4] A letter to the author in March, 1883.

TABLE SHOWING RESULTS OF OPERATION IN CASES OF MALIGNANT DISEASE OF THE BREAST—(*Continued*).

| Case. | Years of age. | Married or single. | History and particulars of case. | Date and nature of operation. | Result. | Period of freedom from return. |
|---|---|---|---|---|---|---|
| 26 | 38 | Married. | For many months there had been a bloody discharge from the left nipple, and a swelling of the size of an almond existed there. The late Sir James Paget gave his opinion that this was a cyst and should be dissected out. | June 17th, 1896. Finding the mammary tissue round the cyst indurated I removed a liberal portion of it. There were several small cysts, and one contained blood, and there was a small growth on its wall. After a careful microscopical examination definite deposits of carcinoma were found in the indurated tissue. The evidences found were stopping of the ducts with large proliferating cells, and in some spots alveolar structures with large epithelial cells of a typical nature were found. | July, 1901. Remains perfectly well. Compare with Case 20. | 5 years. |
| 27 | 63 | Married. | A tumour in the lower part of the left mamma had been noticed for two years. Diagnosis was difficult. The tumour was principally submammary. | Oct. 9th, 1897. At the operation a carcinoma was found which had developed in a deep lobule of the mammary gland and had infiltrated the parietes below the pectoral muscle. There was much difficulty in removing it and free and wide excision could not be effected. The pectoral was removed and the axilla was cleared out. | In September, 1898, a recurrence took place in the scar. A tumour of the size of a cherry was removed, the thorax being nearly opened. The patient died in 1900 with signs of mediastinal tumours. | 1 year |
| 28 | 50 | Married. | Pain, swelling, and retraction of the nipple on the right side had been noticed for 12 months. There was a hard, fixed tumour at the inner aspect of the right mamma close to the sternum. | June 21st, 1897. Very free and sweeping operation. Pectoral removed and some diseased glands from the axilla. The growth was close to the sternum and here had infiltrated the internal intercostal muscle. | Remained well until May, 1901, then a nodule formed in the skin over the sternum. This was carcinomatous and the bone beneath was found to be infiltrated with cancer at its centre. | Nearly 4 years. |
| 29 | 50 | Married. | A tumour of the left mamma had been noticed for two years. A bad case, much infiltration of the skin and the axillary glands. | August 18th, 1897. Extensive operation. Both pectorals removed and the glands as high as the clavicle. | In September, 1898, this patient developed a large carcinoma of the liver from which she died. There was no local recurrence. | 1 year. |
| 30 | 50 | Married. | For two years a tumour of the left mamma had been noticed. A bad case of infiltrating carcinoma. Deeply depressed nipple and much infection of the skin. The glands extremely involved. Bronchitis and weak action of the heart were present. | Sept. 23rd, 1897. A very extensive operation. Pectorals removed and all axillary lymphatics. | Remained well till May, 1899. Then a small nodule of the size of a pea developed in the skin near the centre of the scar. This was removed under nitrous oxide. | 1 year and 8 months. |
| 31 | 50 | Married. | A tumour of the right breast noticed for two years. Occasional bloody discharge from the nipple. | July 27th, 1898. Exploratory incision revealed a carcinoma of the size of a small orange. There was a large hæmorrhagic cyst in the growth. Very free removal. The pectoral was taken away, and all axillary lymphoid tissue. | In July, 1900, this patient was well. She has now gone abroad. | 2 years. |
| 32 | 40 | Single. | An Italian surgeon discovered a small tumour in the left mamma and desired to tap it, assuring the patient that it was a cyst. She came to this country and many diverse opinions were expressed. I refused to diagnose the case and strongly urged exploration by incision. The tumour was a deeply-seated elastic swelling of the size of a walnut. | July 18th, 1898. Exploration discovered a soft growth distinctly encapsuled but hæmorrhagic and breaking down. The whole mamma and fasciæ with the axillary lymphatics were removed. The growth was a spindle-celled sarcoma. The microscopical characters were very clear and pronounced. | July, 1901. Is in good health, with no sign of return. | 3 years. |
| 33 | 64 | Married. | A tumour had been noticed in the right mamma for 18 months. Ulceration had occurred over the tumour for three months. A large mass of carcinoma. Discharge very offensive. | July 10th, 1898. Ulcer and skin adjacent destroyed freely with cautery. Then the whole mamma, the fasciæ, and the pectoral were removed, with the axillary lymphatics. | September, 1901. In good health. | 3 years. |
| 34 | 42 | Married. | In 1898 a tumour was removed from the left mamma. In six months another tumour formed and this also was removed, but it soon returned. On examination the left mamma was extremely cancerous, and it was only too obvious that the tumours removed were carcinomatous and that a proper free excision ought at first to have been performed. | May 3rd, 1899. I removed the disease by a very free operation. The intercostal spaces below the mamma were, however, infiltrated. | An inoperable return of disease in this situation occurred in six months. | 6 months. |
| 35 | 38 | Single. | A small tumour in the right mamma had been noticed for months. Diagnosis dubious. | Feb. 26th, 1899. Exploration revealed carcinoma. Free removal. | Remained well in September, 1901. | 2 years and 6 months. |
| 36 | 45 | Married. | For 12 months a small lump in the right mamma had been noticed. Unfortunately, opinions given were to the effect that it was nothing and could be left alone. A large carcinoma was found on examination. The symptoms were quite typical. | April 20th, 1899. The pectoral was removed and many diseased glands from the axilla. The carcinoma was of the colloid variety and infiltrated the entire breast. | Remained quite well in September, 1901. | 2 years and 6 months. |

TABLE SHOWING RESULTS OF OPERATION IN CASES OF MALIGNANT DISEASE OF THE BREAST—(*Continued*).

| Case | Years of age | Married or single | History and particulars of case. | Date and nature of operation | Result | Period of freedom from return |
|---|---|---|---|---|---|---|
| 14 | 37 | Married | A small cystic tumour at the base of the nipple on the left side Occasional bloody discharge A history of about 12 months *duration* Section showed a semi solid tumour of dubious nature | July, 1897 The whole mamma removed, with fasciæ and axillary glands Pectoral removed No deposits found in *the glands by the microscope* The tumour was a duct cancer | This patient remains well at the present time | Nearly 5 years |
| 15 | 57 | Widow | A large tumour with much infiltration of the skin and obvious gland implication on the right side Duration quite uncertain | Dec 4th 1897. Extensive operation, all skin over the mamma removed with pectorals and glands from the axilla Skin grafting had to be employed | June 16th, 1898 Recurrence in the skin all over the thorax and the abdomen Scores of small tumours of the size of peas or nuts were slowly forming The glands in the neck were implicated The patient was alive in August 1898 and was getting great relief from thyroid extract | 5 months |
| 16 | 63 | Single | In the right mamma an elastic tumour of the size of an orange Time of existence quite uncertain | Jan 17th, 1898 Exploration showed carcinoma with a large hæmorrhagic cyst A very extensive operation was done The pectoral was removed as well as the axillary contents | The patient remained quite well and was seen in August 1900 in good health Now address cannot be found | 1 year 8 months. |
| 17 | 36 | Married | A healthy young woman, the mother of two children whom she had nursed At the base of the left nipple was a small circular patch of dermatitis maligna Paget's disease Seen by several surgeons all of whom advised excision of the nipple and the areola The mamma and the glands seemed not to be affected | May, 1899 Acting upon my advice the whole mamma was freely removed with the integument and fasciæ The incisions ran at least four inches from the nipple, the breast being voluminous Dr Rolleston examined the mamma carefully and sections subjacent to the diseased skin appeared healthy I felt confident that the disease was cured and got rid of for ever | Remained quite well until the spring of 1901 when to my surprise she presented two nodules of the size of a pea in the scar These were freely excised and turned out to be spheroidal carcinoma The patient has since remained well | 2 years |
| 18 | 50 | Single | A small hard carcinoma in the left mamma, noticed for six months | March 1899 Free removal of the mamma skin, fasciæ pectoral, and all axillary glands No sign of carcinoma found there | June, 1901 Remains quite well | 2 years |
| 19 | 38 | Single | A carcinomatous tumour of the size of an orange below the nipple on the right side History suggestive of chronic mastitis previously | March, 1897 The whole mamma removed with axillary glands pectoral and fascia | The patient wrote in June 1901 to say that she was then married and in good health | Over 4 years |
| 20 | 38 | Married | A bloody discharge noticed from the left nipple for many months A swelling of the size of a large almond at the left side of the areola The late Sir James Paget saw the case several times and advised that only the cyst should be removed He was strongly against removal of the entire mamma | June 18th, 1896 An exploratory incision revealed a cyst with blood stained contents and abundant growth on its walls The breast tissue was indurated with several small cysts A wedge shaped portion was removed Under the microscope two pathologists found evidence of early carcinoma at one spot This was also hard and indurated to the naked eye Another consultation was held and it was discussed whether the whole breast should not be extirpated This *was declined* | This patient remains quite well I have no reason to doubt the diagnosis of early cancer. | Over 5 years |
| 21 | 60 | Married | Central carcinoma of the left mamma of two years' growth Small hard, and puckered A bloody discharge from the nipple | April 11th, 1896 The whole mamma the pectoral and the axillary glands removed | Remained well for three years Died from influenza No sign of recurrence | 3 years |
| 22 | 50 | Married | For two years retraction of the right nipple with hardness and stabbing pain had been noticed A large central hard carcinoma the skin being much involved | Sept 23rd, 1897 Very extensive operation Pectoral removed and all axillary lymphatics | Remained well until April, 1899, when a small nodule of the size of a cherry was removed from the scar In 1900 the patient was well In the spring of 1901 she died from "bronchitis" There was no local return according to medical testimony | Free for 18 months from real return. Free from serious trouble for 4 years |
| 23 | 76 (?) | Single | For three years the patient had had a tumour of left mamma Operation considered dangerous on account of bronchitis and feeble health The tumour now of large size fungating and bleeding but free of chest wall | July, 1899 Rapid and extensive operation The whole mass swept away, the pectoral retracted and the axillary glands dissected out A more complete operation not attempted on account of the feeble state of the patient | July, 1901 Remains well Marvellous improvement in general health No local return | 2 years |
| 24 | 42 | Widow | For one year a tumour was noticed on the right mamma. Typical hard central carcinoma | March 1896 Extensive operation Pectoral divided. | July, 1901 Well, has lately married again | Nearly 6 years |
| 25 | 44 | Twice married, no children | For nine months a tumour of the right mamma had been noticed The tumour was of the size of an orange and was moveable It felt very elastic as though it were a cyst or circumscribed abscess No nipple or skin symptoms | March 29th 1898 Incision revealed a soft growth which was encapsuled A very free operation was done but the pectoral was not divided There was some difference of opinion as to what the tumour actually was The majority of observers considered it to be a duct cancer | July, 1901 Remains quite well | 3 years and 4 months |

Case 17 illustrates very forcibly a truth which all candid surgeons have to admit, the impossibility of certain prognosis in cancerous disease. Here was a case of exceedingly slight infection of the skin round the nipple.[5] The whole mamma with a wide sweep of skin was freely removed as a precautionary measure only; competent microscopists stated that the breast substance was healthy, yet within two years nodules of carcinoma appeared in the scar. A case more favourably situated for permanent eradication could hardly be conceived, and falsification of diagnosis could hardly be more marked and disappointing. It is interesting to contrast this case with Cases 20 and 26. In each of these cases only a portion of the mamma was removed, and yet no recurrence has taken place over periods of five years. It is most important to observe that in both these cases cysts had formed, and the diagnosis was microscopical, not clinical; I am strongly of opinion that carcinoma associated with cysts is of a less malignant type as regards recurrence than others. Both of these cases are open to the criticism that the changes were inflammatory, not really cancerous. It is extraordinary that on examination of these cases the late Sir James Paget counselled only local removal of the cyst and surrounding tissues. He was against the idea that any cancerous change had occurred. It is right, therefore, to observe that in these most important instances cancerous changes were observed with the aid of the microscope rather in opposition to clinical opinion. But the tissues were examined independently by two of the best microscopists of the day who both were positive of cancerous change. At the same time I am coming more and more to the conclusion, which I fear many of my audience will term retrograde, to depend more and more upon naked-eye appearances and less upon microscopical, and unless a nodule of cancer be found showing the typical appearances on section to the naked eye to be hyper-cautious regarding any positive diagnosis made by the microscope only.

The after-results of cases of operation for mammary cancer would hardly be complete without reference to the movements of the arm and the utility of the limb on the affected side. I must say that the condition of some cases I saw a few years ago where very extensive operations had been done impressed me most unfavourably. The arm was practically tied down to the side by a neuralgic and painful scar, while the hand and forearm were useless and œdematous. I believe this condition is due to two factors—one the too free removal of axillary integument and the other the keeping of the arm bound to the side during the healing process. If the *axillary* integument be so diseased as to need free removal I doubt if the operation be worth doing. In my own cases I have merely retained the forearm in a sling for the first week. Then the nurse, by the insertion of cushions, gradually raises the arm to a right angle with the trunk. The cushions are removed and the arm depressed; they are again inserted and the arm raised. After a fortnight gentle passive movements of the limb can be substituted and gradually increased. I regard this after-treatment of the limb and the movements at the shoulder as being among the most important details in the after-treatment of operations where the axilla is extensively dissected out. I believe the methods I have sketched are less irksome and painful and more efficacious than any form of axillary apparatus or splint yet devised. I wish now to relate a very remarkable case which could hardly be tabulated, and yet has a direct bearing upon the story of mammary cancer.

In December, 1895, I saw a robust man of powerful frame, aged 68 years, who had a rounded, fixed hard tumour of the size of an orange on the thoracic aspect of the left axilla. The tumour had all the clinical characteristics of malignancy. The skin over it was livid and marked with venules. The history was curious. The patient stated that a "lump" had existed there for years which he used to examine and pull about, but only in the last six months had it alarmed him by its pain and increased size. He had been much exposed to the weather in the colonies and his skin was freckled and tanned with many pigmented spots and warts. He had also numerous papillomata scattered about on his skin One of these had been snipped off the hand, and I thought that the axillary tumours might be of the nature of secondary epithelioma in the glands. However, the tumour was removed. The operation proved to be very difficult, necessitating division of the pectorals. At the upper part there was a quantity of blood-clot, and free bleeding occurred on the removal of this. A strong evidence of malignancy now showed itself. The tumour had invaded the channel of the axillary vein, a piece of which vessel had to be removed between two ligatures. Speedy healing of the external wound occurred without mishap. The tumour was examined by two distinguished pathologists, and they both believed it to be spheroidal-celled carcinoma of a bad type. They also stated their belief that the growth had originated in a supernumerary mammary gland. This seemed very probable, and this is one of the reasons why I have referred to the case. The sequel is full of interest and of encouragement to surgeons. Feeling sure that I had scarcely removed the tumour with pathological certainty, I expected a return, and in two months this apparently took place. And here the importance of care was strikingly illustrated. Reflecting that much muscular tissue was excised the question arose whether the apparent recurrence might not be merely a mass of cicatricial tissue, and, indeed, on watching and waiting this turned out to be the case. For the mass, which formed slowly, reduced, and at the end of six months had quite melted away and disappeared. The patient was on the verge of taking the "Mattei" remedies, and imagine what he and his friends would have said had we rashly pronounced him to be suffering from recurrent cancer He is now in good health, able to shoot, with free use of the arm. It is upwards of six years since the operation. This is a termination which I could hardly have anticipated and only shows us the excellent results sometimes effected by operation for carcinoma, and how difficult the prognosis of such cases may prove.[7]

It is always customary to dwell upon our successful cases, but to make a paper of this sort useful and reliable our unsuccessful cases must also be alluded to and discussed. In Case 7 spinal growth probably existed before the operation. In Case 15 there was rapid local return in five months. This was entirely due to the skin infection at the time of operation—a most unfavourable condition and one difficult to combat. In Case 34 it was obvious that the preliminary removals before the patient came under my care were of the cancerous tumours only and that extensively infected tissues were left. Thus the intercostal spaces became infiltrated and complete extirpation was impossible. I have already related the two cases of rapid recurrences which have occurred in my 18 recent cases (not tabulated), but these make only five cases in the whole 60 in which the results of the operation may be said to be very poor and quite unsatisfactory, for the instances of local return where small nodules have been excised again and further freedom has been given can hardly be looked upon as altogether unfavourable. What is the explanation of Case 3? Here, after four years' interval of health, the patient died from carcinoma of the ovaries and peritoneum. There was no local return. Again, in Case 29 a large cancer of the liver is developed within one year, but no local trouble is noted. Many surgeons think that these are examples of independent cancerous growth and that it is quite possible for these to occur in elderly women with no breast cancer at all. It is noteworthy that I had to refuse to operate upon two cases because tumours of the liver coexisted. The correct pathological explanation of such cases is very dubious and is open to several interpretations, but their clinical importance is of obvious value and grave errors have arisen when the possibility of visceral tumours has not been fully appreciated.

In conclusion, the following lessons seem to be inculcated from the faithful record of these 60 cases:—1. That the risk of removing cancer of the mammæ by extensive operation is small and should not amount to more than 1 or 2 per cent. Sepsis is preventable, and when it occurs it is a blameworthy error on the part of the surgeon. 2. That early and free removal gives prospect of years of freedom and in a good percentage of cases of good health and enjoyment of life. 3 That the cases which do badly are (1) soft, rapidly growing cancer in young and vascular women, and (2) cases of long continuance before operation where the skin and cervical glands are widely infected 4. That in certain cases visceral cancers and cancers in the liver coexist with or rapidly follow operation, and the explanation of these is uncertain. 5. That the practice of early exploration by incision of small nodules

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[5] This case was seen by the members of the Dermatological Society of London, and they all advised that only the area of affected skin with the nipple needed removal.

[7] See Paul on Carcinoma of Sweat Glands of Axilla. Transactions of the Pathological Society of London, vol. xlvi., 1895, p 153. Champneys. Transactions of the Royal Medical and Chirurgical Society, vol. lxxviii

TABLE SHOWING RESULTS OF OPERATION IN CASES OF MALIGNANT DISEASE OF THE BREAST—(*Continued*).

| Case | Years of age | Married or single | History and particulars of case | Date and nature of operation | Result | Period of freedom from return |
|---|---|---|---|---|---|---|
| 37 | 50 | Married | A well-marked carcinoma of 13 months' duration in the upper quadrant of the left mamma. | Nov. 1st, 1899. Extensive operation. The pectoral and many diseased glands from the axilla were removed. There was suppuration at one part of the wound in this case and it was long in healing. | Remained well in September, 1901. | Nearly 2 years. |
| 38 | 50 | Single | Large carcinoma of the right mamma had been noticed for four months. | July 30th, 1899. Very free operation. A bad case. The pectoral and the diseased glands as high as the clavicle were removed. | Remained well in September, 1901. | 2 years. |
| 39 | 47 | Married | A tall handsome woman, the mother of a numerous family. Nine months' history of swelling in the right breast. All the signs of carcinoma well marked. | July 27th, 1899. Extensive operation. Bad case. Very widely spread glandular infection. Pectoral removed. | In September, 1901, the patient remained well. Had rheumatic pains in the bones which made me suspicious of the ultimate result. | 2 years. |
| 40 | 44 | Single | The left breast was painful and troublesome for nine months. It was indurated and coarsely lobulated, typical of chronic mastitis. The patient had lost two relatives from cancer and was very nervous. I advised removal of the mamma only, as a preventive measure. | June 23rd, 1899. Removed the mamma and the fasciæ. The axilla was not opened. On careful examination of the specimen by sections afterwards a small indurated area was found at one spot. This was pure carcinoma microscopically. I determined however not to interfere further but to await events. | In June, 1901, two small nodules appeared in the scars about its centre. They were well situated for removal. I advised free extirpation and also clearance of the axilla. The patient passed under the hands of another surgeon who operated, but I do not know in what manner. | 2 years. |

## REMARKS.

*Case 2.*—It is now getting on for five years and this patient is well. The return in the scar was quite insignificant.

*Case 4.*—This woman was very thin and spare, and I am not sure that the disease would have made much progress if left alone.

*Case 5.*—The recurrence was slight and the patient had a comfortable existence for about three years. This case illustrates the difficulty of permanent eradication when the axillary glands are extremely infected.

*Case 6.*—This was a very early case and the mammary substance seemed hardly at all involved.

*Case 7.*—This is an instance of a class of case where dissemination of disease has probably taken place prior to operation. The most extensive operating though preventing local return seems powerless to arrest systematic infection of this nature.

*Case 8.*—The microscopical characters of this case were those of duct cancer. They were very remarkable and difficult to interpret, but the cancerous nature of the growth was beyond doubt.

*Case 9.*—A most extraordinary example of dermatitis maligna. This disease was of the most extreme nature and lymphatic infection had doubtless occurred beyond the reach of operation.

*Case 10.*—This most interesting case can hardly be explained unless in the light of dormant infection in the cervical gland. The patient was peculiarly thin and spare and to this I attribute the long quiescence and feeble nature of the malady.

*Case 11.*—This patient will probably remain well. So far as I have seen these cancers exhibit a lesser grade of malignancy than do their fellows.

*Case 12.*—This was a case where no surgeon would have operated who was anxious as to his statistics of long freedom from return. Such operations are done only to alleviate local miseries such as pain and discharge. It is significant that there was no local return in this case.

*Case 15.*—This is a case of extensive infection of the lymphatics of the skin. Unless the operator is prepared to remove all the integument of the thorax he can hardly expect to get free of disease in such a case.

*Case 16.*—This is a most extraordinary case and one of great importance in the clinical history of Paget's disease. That such early and deep contamination occurred was not before present to my mind. This is one of those inexplicable cases which occur and teach us caution in dogmatism.

*Case 20.*—This is a remarkable and exceptional case in which the rules of surgery are distinctly violated and yet no return occurs. Such have been found before in the experience of surgeons, but such practice is fraught with dangers of speedy recurrence.

*Case 22.*—This case illustrates well how removal of a slight local return of disease is compatible with the absence of the malady for several subsequent years.

*Case 23.*—This is a very striking case on account of the age and feebleness of the patient.

*Case 25.*—This is one of those peculiar tumours which used to be termed sarcomata. The structure is very complex. It is an instance of encapsulation of certain malignant mammary growths.

*Case 26.*—This is a most important case as bearing on the value of the microscopical character of early cancer for clinical purposes. The examination was made by two experts. If they are correct the case is very difficult to explain.

*Case 27.*—This is a typical case of cancer growing in an unfortunate position and early infiltrating the thoracic parietes.

*Case 28.*—This was a most unfavourable case owing to the peripheral position of the cancer, and the long period of freedom is very remarkable.

*Case 29.*—This is one of those disputed cases in which it is dubious whether the growth on the liver is a cancer *de novo* or an infective growth from the long neglected mammary disease.

*Case 30.*—After being last seen the patient remained well for two years. She died in June, 1901, from cardiac failure and bronchitis. No local return.

*Case 31.*—I have every reason to believe that this patient is still well or she would have communicated with me.

*Case 32.*—This case illustrates forcibly the importance of exploratory incision before making an absolute diagnosis in deeply seated doubtful swelling.

*Case 33.*—The practice of destroying a cancerous ulcer with the cautery before operating is I think very important. Infection with the septic discharges of the freshly-cut surface is otherwise very likely to occur.

*Case 34.*—This was a case of mistaken treatment at the commencement.

*Case 39.*—This was an extremely bad instance of glandular infection. The freedom from return in this case has impressed me very much.

*Case 40.*—This case illustrates well the difficulty of distinguishing mastitis from early cancer. It is only after prolonged examination of such specimens after removal that early carcinoma can be detected, and even then errors are often made.

probably due to the shortening and pressing back of the face.

The greater importance of the internal maxillary in the lower mammals is interesting; in them it not only supplies the orbit and eye, but helps largely in the formation of the circle of Willis. This internal maxillary is the direct continuation of the external carotid and both jaws are built up round branches of it, the maxilla round the infra-orbital and superior dentals, and the mandible round the inferior dental. After noticing the varying development of the internal carotid and the formation of the circle of Willis I pointed out that the anterior communicating artery was not found in the lower mammals since the anterior cerebral was a single trunk for a long distance after leaving the circle.

After discussing the subclavian artery and its branches I ventured to construct what I regarded as a "generalised mammalian subclavian." In this the vertebral was the first branch, but the superior intercostal rose from the root of it, the thyroid axis and internal mammary came off opposite one another and had definite and constant relations to the phrenic nerve, while more externally still the posterior scapular was placed—a position which it often occupies in man. This arrangement of branches was not intended to apply to any one individual animal but to represent the average of all the specimens I have dissected.

The vertebral artery seems always to the present, but it does not necessarily join its fellow to form a basilar as in man; in the horse and dog, for instance, the basilar is formed by the occipital, while the vertebral expends itself in giving branches to the spinal canal, some of the blood from which reaches the circle of Willis by the anterior spinal artery. The thyroid axis was never once seen to give off an inferior thyroid branch, although this may occasionally rise from the lower part of the common carotid in monkeys. The branches from the so-called axis are therefore superficial cervical, ascending cervical, and sometime supra-scapular.

The branches of the axillary artery in man are more numerous and scattered than they are lower down in the scale, and when it is remembered how often branches which should be separate rise by a common trunk, one is not surprised to find that this fusion is the rule in other mammals. The division of the branches forms various combinations in different animals, but taking them altogether I am inclined to agree with Eichholz to a certain extent and to think that there is a tendency for the vessels to group themselves into two main branches, the first of which is ventral and the second dorsal. The ventral branch may be called the acromio-thoracic or thoracic axis and includes this artery of man as well as the superior, alar, and long thoracics; it has the inner head of the median nerve passing dorsal to it. The dorsal branch most often consists of the subscapular and dorsalis scapulæ, the two circumflexes, and the superior profunda. Unfortunately for exact attempts at dorsal and ventral delimitations, the subscapular artery very often comes from the ventral branch, while the anterior circumflex cannot be looked on as dorsal in distribution.

The brachial artery is chiefly interesting for its relations to the supra-condylar foramen. It is a mistake to think that when this is present the artery always passes through it, though it is true that it usually does so; the median nerve, however, always passes through the foramen, but the artery sometimes passes superficially. The high radial so often seen in man is represented in the Capuchin monkey and one kind of marmoset; in these, both New World forms, the radial rises from the thoracic axis of the axillary.

In the forearm we have in man traces of three different blood-paths to the hand; the oldest is the anterior interosseous, and in a dissection of a lizard it was shown that the blood passed from the flexor side of the elbow, between the radius and ulna, to the dorsal side of the wrist, and then, by perforating branches, passing between the metacarpal bones, to the palmar surface of the hand. That this vessel is really the anterior and not the posterior interosseous of man is evidenced by the fact that it keeps close to the interosseous membrane and does not lie between the two layers of extensor muscles. The arrangement in the lizard (a generalised reptile) also explains why man's anterior interosseous artery pierces the interosseous membrane. When the mammals are reached it is found more convenient to send the blood to the hand by an artery running down the middle of the flexor surface of the forearm accompanying the median nerve; this is the median artery, which occurs as an occasional abnormality in man and is always there in a vestigial condition as the comes nervi mediani. The ulnar artery is always present in mammals with well-developed fore-limbs, but until the Primates are reached it is only a muscular branch. In the Primates, however, beginning with the lemur, it takes over the work hitherto performed by the median and supplies the palm of the hand. The radial artery is formed by the fusion of two or more separate branches. In a generalised mammal, such as the squirrel, there are superior and inferior radials, the former rising from the brachial above the elbow and supplying the muscles of the radial side of the fore-arm; the latter, rising from the median in the lower third of the fore-arm and winding round the outer side of the wrist to the dorsum, becomes connected with the perforating and dorsal interosseous branches which used to be the continuation of the anterior interosseous when that artery was the main supply of the limb. The human radial is probably formed by the fusion of these two arteries, and the superficialis volæ is quite a late development, though in many of the primates it is a very important one. The passage of the radial between the first two metacarpal bones is merely an enlarged perforating branch, and in many mammals it is the second perforating, that between the second and third metacarpals, which is enlarged.

After discussing the thoracic and abdominal aortæ and their varying relations to the great veins I pointed out that in man the bifurcation of the aorta, if it does not occur at the lower margin of the fourth lumbar, is more likely to be lower than higher, and that this agrees with the mammalian tendency. In many monkeys the cœliac axis comes off as a common trunk with the anterior mesenteric, but this is a rare abnormality in man and is seldom met with in other mammals. The three branches of the axis are very constant throughout the mammalian class but extra hepatics are sometimes met with. In man the right kidney is more caudal in position than the left, though the arteries are usually opposite one another. In almost all other mammals the left is nearer the tail, and sometimes, as in the sheep and the phalanger, there is an enormous interval between them. This more caudal position of the left kidney and renal artery is sometimes reverted to in man in spite of the great development of the right side of the liver. Extra-renal arteries are sometimes found in man. These I only saw in two other mammals, the hedgehog and the guinea-pig, in which they appear to be normal, The spermatic or ovarian arteries always rise between the renals and the posterior mesenteric arteries. In many animals they come from the renals, in others from the aorta by a common trunk; both these are recognised human abnormalities. The posterior mesenteric is always absent in marsupials and may be wanting in members of other orders. The lumbar arteries are usually six in number, and in the Diana monkey, the lemur, and the grey seal one trunk serves for the origin of the two vessels of opposite sides. The middle sacral or caudal artery always rises above the bifurcation, as in man; after running down for some distance it gives off a branch on each side, and the three arteries run along the tail in the spaces inclosed by the chevron bones. In the Capuchin monkey, in which the tail is prehensile, extra branching occurs, so that there are seven arteries inclosed by the chevron bones; the most lateral of these supply the anterior segments of the tail, the median one reserving itself for the tip. This is an approach towards the rete mirabile found in the ornithorhynchus and some Edentates.

The aorta always divides into common iliacs in the Primates and Rodentia, and very often does so in the Chiroptera, the Insectivora, and the Edentata, and occasionally in other mammals. In other orders it is usual for the two internal iliacs to come off lower than the externals from a common stem which continues the abdominal aorta backward for a variable distance. It is probable that this last arrangement is the more primitive, since it is found in most reptiles There is a certain resemblance between the presence of common iliac arteries and the origin of the great trunks from the arch of the aorta. In those cases in which the trunks are fused—e.g., the carnivora and the ungulata—there is no common iliac, while in the Primates, in the Rodentia, and in many Edentata, in which the branches of the arch are separate, common iliacs are often found. The seal differs from most Carnivora in having an aortic arch like man's, and it is also remarkable for having common iliac arteries. The resemblance does not bear pushing too far, but it is striking enough to suggest that and indurations in the breast is of the first importance and should be strongly urged upon the profession generally, especially upon those in general practice who so often see these cases in their early beginnings and upon whom the great responsibility of prompt diagnosis falls 6 No one should undertake an operation for mammary cancer unless he is capable, and has had sufficient operative experience, to remove thoroughly all lymphoid tissues from the axilla, the leaving of infected glands towards the apices of the axillary spaces being a common source of failure in the results of this operation 7 The prognosis of mammary cancer is still dubious and sometimes instances arise which falsify ordinary experience Bad cases have long freedom from return Early cases show recurrence But such do not invalidate the rule, Operate early, operate extensively

ABSTRACT OF

# Three Lectures

ON

# THE BLOOD-VESSELS OF MAMMALS IN RELATION TO THOSE OF MAN.

*Delivered before the Royal College of Surgeons of England on March 3rd, 5th, and 7th, 1902,*

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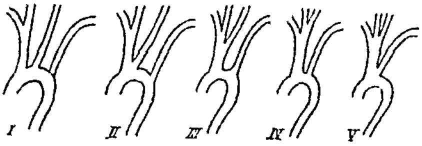
THE arch of the aorta in man, and in all mammals, is a left one, and the two chief points of interest about it are, firstly, its position and, secondly, the arrangement of its branches Its position is not always opposite the fourth thoracic vertebra, although this is, perhaps, the most usual place throughout the mammalian class, it is rarely a little nearer the head but more often nearer the tail.

In considering the arrangement of the great arteries I have records of over 260 dissections many of which were taken from different specimens of the same animal, and these show that there is a good deal of variation not only in the different orders but in different specimens of the same animal These different arrangements can only be satisfactorily classified by a series of diagrams covering the whole range of variations As an example of this the following classification of 107 records of members of the order of Primates may be instanced



| 1 | 2 | 3 | 4 | 5. |
|---|---|---|---|---|
| Man [illegible] | Man [illegible] | | | |
| Gorilla [illegible] | Gorilla, [illegible] | | | |
| Chimpanzee, $\frac{9}{12}$ | Chimpanzee $\frac{3}{12}$ | | | |
| Orang $\frac{3}{17}$ | Orang $\frac{14}{17}$ | Baboon [illegible] | | |
| | Gibbon [illegible] | Mangabey, $\frac{1}{2}$ | Mangabey [illegible] | |
| Macaque [illegible] | Macaque [illegible] | Macaque, [illegible] | | |
| Other cercopitheques, [illegible] | Other cercopitheques [illegible] | Other cercopitheques [illegible] | | |
| Capuchin, [illegible] | Spider monkey, [illegible] | | Spider monkey [illegible] | |
| Howling monkey, [illegible] | Howling monkey, [illegible] | | | |
| Squirrel monkey, [illegible] | | | | |
| Marmoset [illegible] | | | | |
| | Lemur, [illegible] | Lemur [illegible] | Lemur [illegible] | Lemur, [illegible] |

The foregoing material has been collected from the compilation by Keith and a paper by Patten, as well as from animals supplied by the Zoological Society. It will be noticed that the normal human arrangement is also normal for the gorilla and chimpanzee and for two varieties of South American monkeys, and this is especially interesting when it is remembered that in many ways these Platyrhini, or New World monkeys, more closely resemble man and the great apes than the monkeys of the Old World do The second figure shows a frequent abnormality in man (one in 10 according to the English Collective Investigation Committee) and is the normal in the orang, the gibbon, the macaque, and the spider monkey The third figure shows the normal of the lower monkeys of the Old World and of the lemurs, and only differs from the second in that the left carotid rises higher from the innominate stem The last two figures are only put in to include occasional variations in different members of the order The other orders of the mammalia were treated in the same way and I hope to have the opportunity of publishing the details later more fully than can be done here One or two points may, however, be noticed

In the Insectivora, Sirenia, Edentata, and Monotremata man's arrangement is the commonest, in the Rodentia the normal is man's commonest abnormality—that is to say, the left carotid rises from the base of the innominate In the Carnivora and Marsupialia there is a more complete fusion of trunks and the left carotid rises high up from the innominate as the normal, though there is a considerable range of variation In the Ungulata the fusion of trunks reaches its maximum, and one big branch, often called the anterior aorta, is the normal, though the pig, the hippopotamus, the elephant, and the hyrax have the left subclavian rising as a separate branch With regard to the elephant my material points to the conclusion that the ordinary figure of the text books is probably founded on an abnormality, this figure shows a symmetrical arrangement of trunks, the two carotids coming off from a common trunk in the middle and the two subclavians rising one on each side Out of nine records of dissections, two of which were kindly made for me by Professor Paterson, I could only find two with this arrangement In the other seven the left carotid rose from the root of the innominate, which was very short One more symmetrical arrangement is found in mammals, and that is the presence of two innominate trunks, this, I believe, is the normal for whales and bats, and is usually said to be so for Insectivora also though Dobson's writings and my own observation make me think that the human plan is commoner

With regard to the reasons for these various arrangements it is probable that the breadth, depth, and length of the thorax, the size and shape of the anterior thoracic outlet, and the distance of the arch of the aorta from the outlet all play a part In the whales and bats, for instance, the thorax is broad, shallow, and short, and in both double innominates are found, while in the ruminants the thorax is long and narrow and the trunks are all fused into a single vessel It is probable that in the whole mammalian class the arrangement of the great vessels most frequently met with is that in which the left carotid rises near the root of the innominate, so that this, which is the commonest abnormality in man, may be perhaps regarded as an atavistic variation in him The other common abnormalities of the human aortic arch, the origin of a vertebral from the aorta, and the dorsal position of the right subclavian are, I believe, very rare in the lower mammals, at least, I have met with no examples of them in over 260 records

I next described the carotid arteries and, among other things, pointed out that the superior thyroid is more often than not a branch of the common, instead of the external, carotid as in man; that the facial artery shows a series of transitions from a trunk confined to the submental region to one running up to the eye as in man. This fact suggested the possibility that the artery may have come up from the hyoid region with the muscles of expression In animals in which the head is bent, such as all the Primates and the squirrel, the external carotid is thrown into a constant S figure and the two convexities of the S give off respectively the lingual and posterior auricular arteries which are both very constant This curvature is less well marked in animals with stretched out heads and necks, such as the dog, and in man too the curve is not very evident but clearly not for the same reason; in him its disappearance is a constipated habit. Her weight in the summer of 1899 was 9 stones 2 pounds. The present ailment began in January, 1900, with a very intractable diarrhœa, accompanied with internal rumbling and purring noises, there being six or eight loose motions in each 24 hours. In the middle of February the patient took to her bed and was ordered an exclusively milk diet with lime-water. This treatment lessened the diarrhœa to three or four motions each day, sometimes attended with the passage of mucus. On March 8th she was seen in consultation with Dr. Harris of Manchester. 10 days later sand was discovered in the motions and found subsequently in all in which it was looked for.

On March 23rd, in Dr. Harris's absence, Dr. J. Dreschfeld's opinion was taken on the case. No ordinary methods of treatment had any effect in checking the diarrhœa and the formation of intestinal sand. The patient was sent up to London in April, and in Sir Dyce Duckworth's absence from town came under the care of Dr. A. E Garrod. At this time two or three motions were passed each day. They were loose, brown in colour, and on tilting the bed-pan the gritty sand could be seen at the bottom of the vessel, each motion containing about a teaspoonful of it. Early in May Sir Dyce Duckworth saw the patient with Dr. Garrod. She was pallid and sparsely nourished. The thoracic organs were healthy. On examining the abdomen it was found that the colon and its sigmoid flexure were, though empty, too readily palpable, and apparently thickened in their walls. The right kidney was moveable. There was a slight degree of pyrexia at this period, the temperature rising occasionally to 100° F. or a little above this. Specimens of the sand were obtained and submitted to examination. Full details of this are furnished in Dr. Garrod's report herewith. It will suffice to say here that it much resembled at first sight a deposit of uric acid, being of reddish-brown colour and finely gritty. It was insoluble in cold and boiling liquor potassæ and readily soluble in boiling nitric acid. Under a low power of the microscope particles of various shapes and sizes were seen, of a brilliant reddish-brown hue, and translucent.

The patient was confined to bed and kept on milk diet. For medicine salicylate of bismuth and bicarbonate of sodium were given in mixture. Under this treatment the diarrhœa was somewhat checked and the general health improved. The motions were rather more consistent, stained by the bismuth, but still contained sand. Towards the end of May the patient sat up for some time daily and went out for short walks, but there was now complaint for the first time of pain in the large bowel. Chicken broth, turtle soup, mutton broth, and koumiss were now given, and a mixture containing carbonate of bismuth, opium, and tincture of cinnamon. There were gradual improvement in most respects and less pain, but a good deal of rumbling noise in the bowels. The patient returned home early in June and continued the treatment under Dr. Surridge's care. Some benefit was gained by taking bael jelly and also from a mixture containing some aromatic sulphuric acid, tincture of cinnamon, and opium. In July, by our advice, she went to Plombières under the care of Dr. Bottentuit. She took baths and had rectal douches and drank the water in small quantities. All vegetable food was withheld, and digestion was found to be much more comfortable without it, as it caused immediate distension. She lost 10 pounds in weight while at Plombières. The next month was spent in Folkestone with some benefit and some weight was regained. On her return home she reported herself very much better. Her general health and her nervous tone had improved. There were still diarrhœa, with much flatulence at intervals, and some, though less, sand, accompanied with a great deal of mucus. Dr. Bottentuit prescribed bicarbonate of sodium in teaspoonful doses with advantage for the flatulent attacks. The appetite was better and more variety of food could be borne. During October there were alternations of constipation and diarrhœa, and a considerable quantity of sand was passed on Oct. 12th. She was next seen in November. She was rather pallid and languid, was easily tired on exertion, but had regained her usual weight, 9 stone 2 pounds. The large bowel no longer appeared thickened, as it did six months previously, but there was tenderness on pressure about the splenic flexure of it. There was still a looseness of the bowel, from two to four actions occurring daily, but no sand was passed. Her diet was altogether of animal food, and a little whisky was taken with one meal. The urine was turbid with lithates and deposited uric acid. The tongue was large, flabby, and thinly grooved. A mixture with liquid extracts of cinchona and bael and tincture of cinnamon was ordered, and milk with natural seltzer water was added to her diet. The catamenia were regular. She returned home about the middle of the month.

This case presented most of the characters that have been described in the few instances of the disorder that are already on record. It was, however, remarkable for the little pain which was experienced. In most examples of enteric lithiasis this appears to be a marked feature, occurring in paroxysms lasting several hours, somewhat akin to those associated with biliary and renal colic and attended with much flatulent distension and vomiting. According to M. Dieulafoy, who has recorded a series of these cases, there is commonly a family history of gout, and he regards the condition as one of the irregular manifestations of this disorder in many, but not in all, instances. In this case there was a distinct gouty history on the father's side. In a large proportion of the recorded cases there has been noted the co-existence of muco-colitis, often attended with the passage of mucous casts and sheds. Diarrhœa occurs in some cases, and constipation in others. The subjects of the disorder in two-thirds of the cases have been women, and the average age is about 35 years. Examples of it have been recorded in children under four years of age. Some of the cases described by continental observers, as will appear from Dr. Garrod's inquiries, are not truly cases of enteric lithiasis such as here described, the so called sand having been proved to consist of vegetable débris and not of inorganic matter.

*Characters and composition of the intestinal sand.*—When washed and dried in the air the gritty material passed with the motions had the appearance of a fine sand. Its ground colour was a deep brown with an admixture of pale or almost colourless particles. Under a low power of the microscope the individual granules were seen to have a great variety of shapes; some were roughly oval, some oblong or even rod-like, and others, again, were of very irregular outline Their colour varied from yellow to a warm brown. Some were translucent and others opaque, with the exception of their edges. Some had a finely granular appearance, but none of them showed any indication of crystalline structure Their longest measurement varied between 0·05 and 0·2 millimetres. When treated with an acid beneath a cover-glass the particles became surrounded by groups of bubbles and the solution of the inorganic constituents left exposed an organic basis, brown in colour, wholly structureless, and soluble in alkalies. No cellular elements could be seen and the organic basis certainly did not consist of vegetable débris of any kind. As in Eichhorst's case, the organic material, when washed with distilled water and stained with methylene blue, was seen to be rich in bacteria, both bacilli and micrococci being present in large numbers. When, on the other hand, the organic material was got rid of by combustion, the particles of inorganic substance left appeared like decolorised shadows of the original granules, which they resembled both in shape and size The air-dried sand lost considerably in weight at 100° C., owing to the expulsion of water from the organic basis, and the percentages of water and of organic and inorganic materials contained in it were found to be as follows:—

| | |
|---|---|
| Water | 12·40 |
| Organic material | 26·29 |
| Inorganic material | 61·31 |
| | 100·00 |

The inorganic residue left after combustion over a Bunsen's burner had a bluish-white tint and contained only a few dark particles. With the exception of such particles it was completely soluble in hydrochloric acid. This residue was submitted to analysis and was found to have the following composition:—

| | |
|---|---|
| Calcium oxide ($CaO$) | 54·98 |
| Phosphorus pentoxide ($P_2O_5$) | 42·35 |
| Carbon dioxide ($CO_2$) | 2·20 |
| Residue, containing traces of magnesium and iron | 0·47 |
| | 100·00 |

The presence of magnesium was beyond doubt, but the quantity was extremely small. Calcium phosphate was clearly the chief mineral constituent. The pigmentation of the sand proved to be somewhat complex and the small breadth of body must be the chief cause of separation of the branches of the aorta and of the presence of common iliac arteries.

The obturator artery is very often a branch of the internal circumflex in monkeys, and this usually comes from the internal iliac in these animals; lower down in the scale the obturator is often wanting, but in the monotremes it forms a rete. The internal pudic artery often rises from the sciatic trunk outside the pelvis; it is wanting in the hedgehog and the lemur, but in these specimens, both of which were females, the dorsalis clitoridis came from the vaginal and represented the occasional accessory pudic of man. It seems probable that the internal pudic was originally an extra-pelvic branch of the sciatic to the cloacal region.

The sciatic is the original main blood-path of the hind-limb. In the lizard the positions of the brachial and sciatic are quite similar, both of them running along the post-axial surface of the limb. In mammals, where the thighs become adducted and internally rotated the blood makes a new and shorter channel on the inner side of the thigh from the external iliac and deep epigastric which are present in the reptile. In man this main sciatic trunk is occasionally reverted to, but I have never seen it in any other mammal. Probably the position of man's thighs would render the reappearance of this artery easier than it would be in other mammals.

With regard to the branches of the external iliac, the deep epigastric is constant in position, and in the Capuchin monkey (two specimens) it gave off the obturator artery, so that this important human abnormality is probably atavistic. The deep-circumflex iliac, on the other hand, has in man shifted its origin from much higher up; in the Carnivora, for instance, it rises from the hinder part of the aorta.

The femoral artery forms a rete mirabile in the sloths and ornithorhynchus; its division into superficial and deep is not very satisfactory below the Primates. Among its branches the superficial epigastric is the artery of the inguinal and posterior abdominal mammary glands. The internal circumflex is nearer the pelvis and larger than in man; it often in Old World monkeys rises from the internal circumflex in the pelvis and supplies the same area as in man as well as the hamstrings; its origin is always higher than that of the external circumflex. The internal saphenous artery carries the blood to the foot in almost all mammals until man is reached and then it is only represented by the anastomotica magna. In its full development it accompanies the internal saphenous vein and nerve along the posterior margin of the tibia to about the middle, where it divides into two, one for the dorsum of the foot, the other for the sole. The dorsal branch behaves just as the dorsal artery of the hand does, dividing into dorsal, interosseous, and perforating branches, from the latter of which the deep plantar arch is formed in man. This dorsal branch clearly corresponds to the radial in the fore-limb, running as it does along the pre-axial border of the limb to the dorsum. The plantar branch divides into digital branches for the toes and lies between the long flexor tendons and the flexor brevis digitorum; its serial homologue in the forelimb is probably the superficialis volæ. Very often the dorsal branch of the saphena is absent and then the dorsum of the foot is supplied by the anterior tibial which is probably an older blood-path, as it is found in the lizard closely corresponding with the vascular arrangement of the anterior interosseous in the fore-arm. When the dorsal branch of the saphena is well developed it carries the blood to the dorsum and the anterior tibial becomes a mere muscular branch to the extensor muscles, its anterior tibial recurrent branch probably corresponding to the posterior interosseous and posterior interosseous recurrent of the forearm. In man the straightening of the knee has caused the blood to revert to its ancestral path to the dorsum through the anterior tibial. Another marked change which comes over the anterior tibial artery is its relation to the popliteus. In all mammals until the Primates are reached the artery invariably passes in front of the popliteus, but in the lemur the popliteal artery runs behind the muscle and the anterior tibial passes through the membrane beneath the lower border of it, and this arrangement continues until man is reached. The former, more generalised, mammalian arrangement is sometimes found as a human abnormality (twice in 106 cases in the report of the English Collective Investigation Committee).

The posterior tibial artery is a muscular branch running down between the two layers of flexor muscles and clearly corresponding with the median in the forearm. In man, when the saphenous artery disappears, the posterior tibial carries the blood to the sole.

The peroneal artery is not well marked until man is reached; its position on the post-axial side of the flexor surface of the leg suggests that it is possibly homologous with the ulnar in the forearm.

It is interesting to note that although the two limbs start with an identical arrangement of vessels in the lizard, they are modified in a different order in the mammalia; the fore-limb first adopts a median ventral vessel, the median, to carry the blood to the hand, while the hind-limb sends its blood through a pre-axial vessel—the saphenous. Later, in man, with the assumption of the erect position, the systems are reversed and in the leg the median ventral vessel (posterior tibial) carries the blood to the sole, while in the fore-arm this vessel is done away with and two lateral vessels, the radial and the ulnar, are used. At the same time in the leg the old anterior tibial blood-path of the lizard is reopened on the extensor side of the leg. These changes point to the ready adaptability of arteries to change of environment.

# A CONTRIBUTION TO THE STUDY OF INTESTINAL SAND,

## WITH NOTES ON A CASE IN WHICH IT WAS PASSED.[1]

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THE occurrence of intestinal sand has attracted the attention of observers for some years past. Cases presenting this symptom appear to have been of singular infrequency in the British Isles, for it is scarcely possible that they can have been often overlooked. English literature on the subject is, however, almost a blank, and the best text-books in this country and in the United States of America make but little reference to it. A good many cases have been noted and reported on the continent of Europe. The object of this communication is to attempt to place these examples of intestinal sand in their proper nosological position and to record a case of true, as distinguished from false, enteric lithiasis which came under our observation in this country. The particulars of it are as follows.

A married lady, aged 33 years, residing in the provinces, and leading a healthy life, began to suffer from diarrhœa early in 1900 and came under the care of Dr. E. Surridge. No cause for this ailment was made out. The previous health had always been fairly good. The last confinement had occurred three years before. The house which was occupied by this lady was built on a sandy soil and its drainage was reported to be in excellent condition and of recent arrangement. The water-supply was not good, being hard, and containing some organic impurities. The family history was as follows. Both parents were living. The father was a gouty man and a brother and sister of his were gouty. There were five sisters and two brothers; one of the latter suffered from colic. Bowel disorders were said to be prevalent in the family. The youngest sister of the patient, 20 years her junior, suffered badly at one time from a wide-spread eczema. When this disorder was subdued she suffered from asthma, the two conditions alternating. After local treatment and internal medication with arsenic she recovered her health. The patient had two daughters, aged respectively seven and three years, both of whom were in good health. After the last confinement the patient suffered occasionally from eczema around the anus for about 18 months. When this condition yielded to local and general treatment she became subject to looseness of the bowels, having previously been of

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[1] A paper read before the Royal Medical and Chirurgical Society.

In some other cases the proportion of inorganic material has been considerably less. Thus Marquez found :—

| | |
|---|---|
| Organic matter, of animal origin ... ... ... ... ... ... | 72 |
| Inorganic, consisting of calcium phosphate and traces of carbonate ... ... ... ... ... ... ... ... ... ... ... | 28 |
| | 100 |

In a case recorded by Biaggi the sand was agglutinated into balls, from 6 to 8 centimetres in diameter, which readily disintegrated into sand. Much calcium phosphate was present, with traces of magnesium and sodium. The material passed in Mongour's case was *gravel* rather than *sand*, and it occupies an intermediate place between intestinal sand and the large intestinal calculi which are sometimes met with, and which are usually composed, in large part, of ammonium magnesium phosphate. Most of the particles were of about the size of an orange pip, but some attained to the dimensions of nuts. The analysis was as follows :—

| | |
|---|---|
| Organic material (by difference), water, iron ... ... ... | 29·28 |
| Magnesium phosphate ... ... ... ... ... ... ... ... | 26·82 |
| Calcium carbonate ... ... ... ... ... ... ... ... ... | 43·90 |
| | 100 00 |

*Seat of formation of "true" intestinal sand.*—The question remains to be considered how and where sand of this description is formed. Its composition excludes a biliary origin, for it contains no cholesterin, and bile pigment is only present in traces. On the other hand, there is much that points to its origin in the intestinal tract. Such sand is practically always met with in association with intestinal disorders and usually with muco-membranous colitis. The characters of the organic basis and the large numbers of bacteria which are included in it point to the intestine as the most likely seat of origin. When our patient was taking bismuth salicylates the sand passed had a uniform grey tint, but this may have been due to the deposition of a mere surface coating of bismuth sulphide. The richness of the material in urobilin and its poverty in unaltered bile-pigment affords a more satisfactory indication, and suggests that it is formed in a region in which the conversion of the bile-pigment into urobilin is already far advanced. There is good reason to believe that the principal seat of this change is in the upper regions of the colon. Concretions, chiefly composed of calcium phosphate and carbonate, can hardly be formed in any but alkaline surroundings ; but there is so much doubt as to the reaction of the contents of different parts of the intestinal tract, and especially under morbid conditions, that this does not afford any very clear indication of the exact locality in which the sand is formed. The nature of the inorganic constituents is fully compatible with an intestinal origin. Nor is it necessary to look to unabsorbed residues of the calcium of the food as the sole source of supply, for Voit, Friedrich Müller, and von Limberg have shown that a large part of the calcium excretion of the body is effected by the intestine, and Kobert and Koch found calcium, magnesium, and phosphoric acid in the material which accumulated in the empty and cleansed colon of a patient with a fæcal fistula. Like Dr. Thomson and Dr. Ferguson's patient, ours had taken milk and lime-water freely, and, as Bunge has shown, the amount of lime contained in milk is actually greater than that present in an equal volume of lime-water, so that the former may be regarded as a more important source of calcium supply than the latter.

The above considerations leave little room for doubt that true intestinal sand has its origin in the intestinal canal, for chemical and clinical evidence alike point in this direction. The nature of the contained pigments suggests the colon as the most likely seat of formation and the anatomical structure of the large bowel may be looked upon as more favourable than that of the small intestine to the sojourn required for the deposition of the earthy salts of which the material is so largely composed.

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# SOME EXPERIMENTS TO DETERMINE THE ACTUAL EFFICACY OF IZAL OIL AS AN INTESTINAL DISINFECTANT.

BY M. H. GORDON, M.A., B.SC., M.B., B.CH. OXON.

BRILLIANT as are the results that have followed the employment of antiseptics in modern surgery, there is reason to believe that a limit to the scope of the antiseptic method both in preventing and in subduing disease has by no means yet been attained. The success of preventive medicine is witness to the utility of the same principle in another field. But the application of antiseptics in medicine proper—i.e., in curative as distinct from preventive medicine—is, owing to the lack of accurate practical knowledge no less than to the difficulties involved, at present comparatively restricted. Few subjects, however, are more worthy of careful study than the problem of the more skilful employment of antiseptics in medicine ; and this is my excuse for publishing the result of some experiments made with the object of determining the actual value of an intestinal antiseptic.

Izal oil, which is, unfortunately, a proprietary article, was discovered by Mr. J. H. Worrall while investigating by-products met with during the conversion of coal into coke. We are told that it consists chemically of oxidised hydrocarbons having a larger proportion of hydrogen to carbon than the members of the phenol $(C_6H_6O)$ series and a less proportion than the members of the methyl alcohol $(CH_4O)$ series. It has a high boiling point and is insoluble in water. The main preparations are (1) izal oil ; (2) an emulsion containing 40 per cent. of the oil and termed "medical izal" ; and (3) ordinary izal fluid which is also an emulsion containing 40 per cent of the izal oil, but not in this case, as in that of the medical izal, specially refined.

The extensive tests made by Dr. Klein[1] with regard to the germicidal properties of izal showed that while ordinary izal emulsion diluted to the extent of 1 in 200 is a disinfectant *in vitro* of no mean power, its toxicity was low, doses of 0·25 cubic centimetre of a 1 in 100 dilution administered to rabbits either by the mouth or subcutaneously producing no detrimental effect of any kind. The experiments of Professor Sheridan Delépine[2] supplemented those of Dr. Klein and confirmed the conclusion as to the value of izal as a disinfectant *in vitro*.

The history of the use of izal as a germicide *in vivo* is as follows. In consequence of Dr. Klein's results Mr. W. Bruce Clarke[3] thoroughly tested the efficiency of izal as a remainder of the material available did not permit of a complete and satisfactory investigation from this point of view. When some of the material was treated with acetic acid a scanty evolution of carbon dioxide was observed, and the gas rose to the surface in a stream of minute bubbles. The solution had the colour of brown sherry, and when filtered from the organic débris and shaken with ether it imparted to the ether a delicate pink tint, whereas the subjacent liquid remained of a rich yellow colour. The extraction was repeated several times, and the collected ethereal extracts were next shaken with a small quantity of distilled water, whereupon the pigment left the ether and imparted to the water a rich pink tint, which recalled that of a solution of acid hæmatoporphyrin. When examined with the spectroscope this solution showed a broad absorption-band in the neighbourhood of the D line, which lay between λ6120 and λ5370. With hydrochloric acid solutions of the pigment the band appeared composite, consisting of two darker bands united by a dark shading, and the position of the component parts was approximately as follows :—

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[1] Report on the Disinfecting Properties of Izal.

[2] Ibid.

[3] THE LANCET, July 1st, 1893, p. 18, and St. Bartholomew's Hospital Journal, September, 1894.

| | |
|---|---|
| First dark band ... ... ... ... ... ... ... | λ5120—λ5890 |
| Dark shading. | |
| Second dark band ... ... ... ... ... ... ... ... | λ5760—λ5460 |

A second band in the neighbourhood of the F line (λ5060—λ4860) corresponded in position with that shown by a dilute acid solution of urobilin, and was apparently due to a scanty admixture of that pigment. When kept for a day or two, even in the dark, the pink solution became almost decolourised and the urobilin band alone remained visible. The pink pigment was also promptly decolourised by alkalies. *The very unstable pink colouring matter here present did not* agree in its properties with any pigment, fæcal or other, with which we are acquainted. The yellow liquid from which the pink pigment had been extracted with ether showed the band of acid urobilin with great intensity, and urobilin was apparently the chief colouring matter of the sand. It had all the ordinary properties of urobilin, as obtained from urine or fæces; was precipitated by saturation of a watery solution with ammonium sulphate; yielded a green fluorescence with zinc chloride and ammonia, and showed the characteristic E-band spectrum when partially precipitated *from a concentrated alkaline solution by the cautious* addition of an acid. The organic residue upon the filter-paper acquired a green tint on exposure to air, and when treated with a solution of sodium hydrate yielded a pale greenish-yellow solution, which did not become more distinctly green on standing but which gave Gmelin's reaction. Hence it was evident that among the colouring matters present was a small quantity of unaltered bile-pigment. Berlioz mentions the presence of urobilin in one of Dieulafoy's specimens, and Eichhorst observed the presence of biliverdin in some granules of the sand which he examined; but the only recorded case in which a special investigation of the contained pigments has been carried out is that of Dr. R. S. Thomson and Dr. A. R. Ferguson, who found, in addition to some urobilin, a pigment soluble in dilute hydrochloric acid and in alkalies but insoluble in water, alcohol, ether, and chloroform, and which was obviously not one of the recognised colouring matters of the bile.

We are greatly indebted to Dr. Thomson and Dr. Ferguson for the opportunity of examining a small quantity of the sand in question, which in appearance chiefly differs from ours in the larger size of the component granules. From a solution in acetic acid there was not extracted by shaking with ether any of the unstable pink pigment above described, and judging by the intensity of the absorption-band the amount of urobilin present appeared to be considerably less than in our specimens.

### VARIETIES OF INTESTINAL SAND.

Although the literature of intestinal sand is so scanty two distinct classes of materials have clearly been described by this name. These require to be clearly distinguished from each other and they may conveniently be described as *true* and *false* sand respectively

1. *False* intestinal sand is composed of remains of vegetable foods which have resisted the action of the digestive fluids and which may or may not have acquired some incrustation of earthy salts. One particular kind of vegetable débris is especially apt to appear as a sand-like material in the motions—namely, the sclerenchymatous particles which are so abundantly present in the flesh of pears, and especially in that of certain varieties. The occurrence of such sand in the motions was described by C. Robin in 1873, and some at least of the specimens described by Laboulbène in the same year were obviously of this nature. Eichhorst described a case in 1889, and Fürbringer called special attention to this material as simulating biliary concretions. Naunyn also refers to it as one of the varieties of so-called "biliary sand."[2] In this country specimens of this kind have been brought before the notice of the Pathological Society of London by Dr. S Delépine and Mr. S. G. Shattock. A specimen of pear sand in our possession, for which we are indebted to the kindness of Dr. J. H. Drysdale, is paler in colour and more coarsely granular (from 0·3 to 0·6 millimetres) than that passed by our patient and when burnt leaves only 1·76 per cent. of inorganic residue. Other observers have obtained from 2 to 3 per cent. of such residue—figures which contrast sharply with the much higher percentage of mineral constituents in specimens of true intestinal sand. The microscopic appearance of the *pear* sand is very characteristic. When examined under a low power the granules appear as if studded with projecting crystals, and after removal of any inorganic incrustation by an acid they are seen to be composed of woody cells, the thick, transparent walls of which are traversed by channels running from the narrow cell cavities towards the surface. In a word, the granules are easily recognised as identical with the particles of sclerenchymatous tissue in the fruit from which they are derived, and of which the patient will be found to have partaken freely. There is reason to believe that these woody particles may remain for some time in the intestine, and the expulsion of large accumulations of them may be preceded by severe colicky pain. The presence of a black sand-like material in the motions, consisting of cells derived from the banana, has also been described by some American authors. The dark colour is apparently acquired during the passage of the cells along the alimentary canal.

2. *True* intestinal sand, on the other hand, of which the material passed by our patient offers an example, has no such vegetable basis, and, wanting such a rigid skeleton, it owes its hardness and grittiness to the much larger proportion of inorganic material which it contains. The *organic basis of such sand is clearly of animal origin. Some* of the published analyses of such materials show a very close resemblance to that of our specimen. Thus Mathieu and Richand analysed the sand passed by their two patients with the following results :—

| | Case I. | Case II. |
|---|---|---|
| Organic material ... ... ... ... ... ... | 30·800 | 45·80 |
| Tricalcic phosphate ... ... ... ... ... | 64·206 | 46·68 |
| Calcic carbonate ... ... ... ... ... ... | 3·418 | 5·14 |
| Various mineral substances ... ... ... | 1·576 | 2·38 |
| | 100·000 | 100·00 |

Dr. Thomson and Dr. Ferguson's specimen had the following composition :—

| | |
|---|---|
| Organic matter ... ... ... ... ... ... ... ... ... ... | 28·5 |
| Inorganic matter ... ... ... ... ... ... ... ... ... ... | 71·5 |
| | 100·0 |
| In the organic residue: | |
| Calcic carbonate ... ... ... ... ... ... ... ... ... ... | 11·7 |
| Tricalcic phosphate ... ... ... ... ... ... ... ... ... | 87·3 |
| Insoluble residue (silica) ... ... ... ... ... ... ... ... | 1·0 |
| | 100·0 |

Berlioz analysed one of Dieulafoy's specimens and obtained the following figures :—

| | |
|---|---|
| Water ... ... ... ... ... ... ... ... ... ... ... | 11·25 |
| Nitrogenous organic material of fæcal origin ... ... ... | 22·24 |
| Fatty substances ... ... ... ... ... ... ... ... ... | Traces |
| Phosphoric acid ... ... ... ... ... ... ... ... ... ... | 17·56 |
| Lime ... ... ... ... ... ... ... ... ... ... ... | 26·22 |
| Magnesia ... ... ... ... ... ... ... ... ... | 14·05 |
| Silica ... ... ... ... ... ... ... ... ... | 8·68 |
| | 100·00 |

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[2] Since this communication was made we have found a description of the pear sand by Dr Alexander Marcet, in his "Essay on Calculous Disorders" (p 132), published in 1817. The description was based upon specimens the true nature of which had been recognised by Wollaston.

growth in 48 hours at 37° C. In Analysis 1 the broth used had been inoculated with one cubic centimetre of Flask VII., equivalent to 0·000,000,02 gramme of fæces, and in Analysis 3 with one cubic centimetre of Flask VI., equivalent to 0·000,000,2 gramme of fæces. In both instances the guinea-pig died in a few days from septicæmia and a bacillus corresponding in morphological and cultural respects with the bacillus coli communis was recovered from its heart's blood. The fact that the virulent bacillus coli was the most abundant organism that developed in broth in both instances, and also the fact that after taking 42 minims of izal oil by the mouth the abundance of this pathogenic microbe was diminished by presumably 90 per cent., are points that go far to explain the clinical success of izal in the treatment of diarrhœa and dysentery.

*Experiment II.*

| Conditions. | | Analysis 4. —Normal. | Analysis 5. —After 50 minims of izal oil. | Analysis 6. —After 78 minims of izal oil. | Analysis 7. —32 hours after stopping izal oil. |
|---|---|---|---|---|---|
| Since experiment began | Time... | — | 48 hours. | Sixth day. | Eighth day. |
| | Motion | — | Second. | Sixth. | Ninth. |
| Total number of micro-organisms in agar at 37° C. | | 200,000,000 | 260,000,000 | 20,000,000 | 60,000,000 |
| Total number of micro-organisms in gelatin at 22°C. | | 220,000,000 | Approximately 200,000,000 | 20,000,000 | 40,000,000 |

The reduction after taking 78 minims of izal oil was therefore in the case of the organisms developing at blood-heat 90 per cent, and in the case of those growing at 22° C. 91 per cent. On the other hand, 32 hours after stopping the drug, the increase was in the case of the former 300 per cent. and in that of the latter 200 per cent.

*Experiment III.*

| Conditions. | | Analysis 1.— Normal. | Analysis 2 —After 36 minims of izal oil. |
|---|---|---|---|
| Since experiment began. | Time ... | — | Fourth day. |
| | Motion... | — | Fourth. |
| Total number of micro-organisms in agar at 37° C. ... .. .. . ... | | 20,000,000 | 8,000,000 |
| Total number of micro-organisms in gelatin at 22° C. . .. . .. | | 10,000,000 | 6,000,000 |
| Total growth in broth at 37° C. .. .. ... . | | 200,000,000 under 2,000,000,000 | 20,000 000 under 200,000,000 |
| Total indol in broth at 37° C. | | 2,000,000, under 20,000,000 | 200,000 under 2,000,000 |

The reduction after taking 36 minims of izal oil was therefore in the case of the organisms developing at blood-heat 60 per cent. and in the case of those growing at 22° C. 40 per cent The total growth in broth, as also the production of indol, were both reduced by 90 per cent.

The total numbers in agar and in gelatin were in both analyses in Experiment III. estimated from plates inoculated with one cubic centimetre of the fourth dilution—that is to say with an amount representing 0 000,02 gramme of fæces. In the two preceding experiments, on the other hand, the dilution used for this purpose was a much higher one—e g., one cubic centimetre of the sixth or seventh dilutions representing 0 000,000.2 or 0 000,000,02 gramme of fæces respectively. The latter is far more accurate as a gauge of the actual total of the organisms present in the material itself, for, in plates made from the lower dilutions, owing to a larger number of organisms being present, overcrowding occurs and a proportion of them are unable to grow into colonies and so escape being counted. The two analyses, however, in Experiment III. are strictly parallel, the same amount of fæces having been cultivated in each case, so that the numbers are strictly comparable though not necessarily, or, indeed, probably, a gauge of the actual total present in the material itself. The growth in broth is a better index in this sense as a matter of fact.

SUMMARY AND CONCLUSIONS.

The total number of micro-organisms present in a gramme of fæces and developing in agar-plates at blood-heat was reduced in Experiment I. by 86 per cent., in Experiment II. by 90 per cent., and in Experiment III. by 60 per cent. Moreover, the pathogenicity of the fæces was reduced in Experiment I. by presumably 90 per cent. The only condition introduced that accounts for this effect was that izal oil was being taken by the mouth and the diminution of the micro-organisms in the fæces was broadly proportionate to the dose of the drug. Thus in Experiment I. after 20 minims of izal oil the reduction of the blood-heat organisms was 68 per cent., and only after 42 minims did the reduction reach 86 per cent. Again, in Experiment II. after 50 minims of the oil no reduction, but an actual increase, of the blood-heat organisms was noted. But this was only the second motion since the experiment began, and later, after 78 minims of the oil had been taken, their reduction was as much as 90 per cent. On the other hand, in the same experiment 32 hours after izal had been stopped the organisms developing in agar plates at blood-heat were increased by 300 per cent.

I believe that these results justify the inference that not only does the ingestion of izal oil in doses that give rise to no untoward symptoms diminish the number of micro-organisms in the fæces, but that it does so to a very striking extent.

The fact that in spite of the great reduction effected the number of micro-organisms remaining in the fæces was still large is at first sight disappointing. It is, however, no reason for withholding the drug in cases where it is indicated. In the first place the diminution effected may make a great deal of difference to the progress of a given case. Again, for aught we at present know to the contrary, the health of the intestine may be dependent on a state of equilibrium of its bacteriological contents, and a slight disturbance of this equilibrium may be a condition resulting in serious illness. The indication in such a condition would be to restore the disturbed equilibrium, and a drug that can be depended on to achieve this result with certainty and without injury, pain, or even inconvenience, is not to be lightly valued. Thirdly, it is probable that by pushing the dose of izal, but still keeping outside the limit of its toxicity, the number of fæcal organisms may be still further reduced Again, by combination of izal with other drugs and by careful dietetic treatment it may be possible to reduce still further the pathogenicity and foulness of the intestinal contents.

As in the case of other remedies, however, the scope of izal as an intestinal antiseptic is a matter that can only be eventually established at the bar of clinical experience. Possibly other drugs may be still more efficacious for the purpose stated. But my observations so far with salol and with *β* naphthol *in vitro* have not led me to form the opinion that they are likely to be among them. This opinion, however, is advanced with all reserve, as I have not yet tested these drugs *in vivo* in the same way as izal.

The success of izal as a remedy for diarrhœa and for dysentery is, according to the authorities cited, a clinical fact. Whether by means of this or another intestinal germicide it will ever be possible to control typhoid fever, appendicitis, &c., at the site of infection is a matter for the future to determine.

In conclusion, I wish to record my thanks to Dr. Houston for much valuable advice.

# TWO CASES OF LUPUS VULGARIS SUCCESSFULLY TREATED WITH UREA PURA AND THE X RAYS.

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A GREAT deal of interest has been centred , lupus vulgaris of late, owing to the introduction of new methods of treatment. Much has been written of the value of the Roentgen rays in this disease, and many successful cases have been recorded. The Finsen light treatment is being extensively employed and great things are expected from it.

surgical disinfectant and with excellent results. The credit, however, of introducing izal as a disinfectant in the medical sense belongs to Dr. F. W. Tunnicliffe.[4] In his exhaustive report on the pharmacology of izal he remarks that "animals, even after large doses, retain a good appetite and do not suffer from diarrhœa or vomiting. The fæces smell of izal, showing that it is capable of exerting its antiseptic influence throughout the alimentary tract." He also found that "it gives evidence of its presence in the breath." On these grounds, no less than because it combined a low toxicity (0 5 to 1·5 cubic centimetres of the 40 per cent. emulsion pro kilogramme) with high germicidal properties, he recommended its therapeutic trial as a pulmonary or as an intestinal antiseptic.

The event has justified the recommendation. In a recent article in THE LANCET[5] Dr. Tunnicliffe has described some gratifying results obtained by him in a series of cases of phthisis treated with izal As an intestinal antiseptic, also, the therapeutic employment of izal has so far been attended with considerable success. In a note on the treatment of dysentery during the South African campaign Dr. W. Watkins-Pitchford[6] speaks highly of its efficacy combined with bismuth and chlorodyne The trial of izal was made at the suggestion of Dr. G. W. K Crosland. It is stated that "in the few sporadic cases of dysentery which have arisen in our hospital this combination of drugs has in every case brought about a rapid cure, and in those well-advanced cases of a severe type which have come under our care the results of its use have been equally gratifying." Dr. Tunnicliffe has also found izal to be remarkably efficacious in controlling intestinal putrefaction Under its influence the diarrhœa in several cases of infantile summer diarrhœa ceased, and in another case obstinate phthisical diarrhœa was similarly arrested.

A short time since, when making a comparative investigation of the relative germicidal value of various antiseptics *in vitro*, I was much impressed by the results obtained with izal, and especially with the "medical izal" and with the pure izal oil. I proceeded, therefore, to inquire whether the germicidal action of izal could be proved to take place *in vivo*, and, if so, whether it could be measured. The question to be determined was briefly this: Is the number of micro-organisms in the fæces diminished by taking izal by the mouth, and, if so, to what extent? The method adopted for the quantitative investigation of fæcal micro-organisms was as follows. Eight small flasks were plugged with cotton-wool and sterilised. The first flask contained 100 cubic centimetres of sterile distilled water and each of the other seven contained 90 cubic centimetres of the same. Fæces (free from urine) were collected in a sterile vessel and half a gramme was weighed out carefully in a sterile watch glass The watch-glass was then placed in a sterile beaker and the contents of Flask I.—i.e., 100 cubic centimetres of sterile distilled water—were poured over it and thorough mixture was effected by stirring with a glass rod and constantly shaking for about half an hour. The mixture was then transferred to Flask I., which thus contained 0 5 gramme of fæces in 100 cubic centimetres of water, a dilution of 1 in 200. 10 cubic centimetres of Flask I. were next transferred to Flask II. and thoroughly mixed. The dilution made in Flask II. was thus 1 in 2000 With a fresh sterile pipette 10 cubic centimetres of Flask II. were transferred to Flask III and so on up to Flask VIII. Now one cubic centimetre of Flask I. contains 0 02 gramme of fæces and one cubic centimetre of each of the succeeding flasks represents one-tenth less, or respectively 0 002, 0 000,2, 0·000,02, 0 000,002, 0 000,000,2, 0 000,000,02, and 0·000,000,002 gramme of fæces. By making cultures from one cubic centimetre of one of these flasks, therefore, it is possible to determine the relative abundance of the various micro organisms present in a given quantity of the fæces The method combines simplicity with delicacy and by its means a material swarming with micro-organisms and at first sight defying quantitative scrutiny can be bacteriologically analysed with a considerable degree of accuracy.

In the three experiments shortly to be described the izal was given in the form of capsules, each of which contained two minims of pure izal oil Not more than three capsules were given at a time. They were given with food, one capsule before and one or two after the meal, according to its size. The largest amount given in 24 hours was 24 minims of the oil. No unpleasant symptoms resulted. It should be noted that Dr. Tunnicliffe did not give his patients more than 15 minims of the izal oil per diem and that one day's pause in four was always allowed. But he was dealing with phthisical patients who were also breathing izal vapour during the night.

The following have been the two main points determined in fæcal examinations. 1. The total number of micro-organisms present in agar plates after 24 hours' incubation at 37° C. 2. The total number present in gelatin plates after 48 hours' incubation at 22° C. In addition to these two factors the following particulars were also examined in some cases. 3. The extent to which fermentation, as evidenced by the presence of gas-bubbles, may occur in a series of gelatin shake-cultures inoculated with successive tenths—i.e., with from 0 02 up to 0 000,000,002 gramme of fæces—and kept for four days at 22° C. This is a rough test introduced in this sense by Dr. A C. Houston.[7] 4. The extent to which growth takes place in broth cultures also inoculated with successive tenths and kept at 37° C. for five days. 5. The extent to which the bacillus coli was present in these broth cultures after 48 hours' incubation at 37° C. 6. The extent to which indol was present in them after five days at 37° C. 7. In the first experiment the virulence of the fæces as evidenced by the virulence of the growth in broth after 48 hours at 37° C. was also determined both before and after taking izal. Three series of experiments in all were made. Experiments I. and II were made on the same subject. There was a pause of 10 days between the end of Experiment I. and the beginning of Experiment II. Experiment III was conducted on a different subject. Both subjects were normal adult males. The results obtained are shown in the following tables where they are expressed in terms per one gramme of fæces:—

*Experiment I.*

| Conditions. | | Analysis 1.—Normal. | Analysis 2.—After 20 minims of izal oil. | Analysis 3.—After 42 minims of izal oil. |
|---|---|---|---|---|
| Since experiment began. | Time ... | — | 24 hours. | 48 hours. |
| | Motion ... | — | Third. | Fifth. |
| Total number of micro-organisms in agar at 37° C. . . .. | | 440,000,000 | 140,000,000 | 60,000,000 |
| Total number of micro-organisms in gelatin at 22° C . .. | | 520,000,000 | 120,000,000 | 140,000,000 |
| Gas production in gelatin at 22° C . .. | | 20,000,000 under 200 000,000 | 200,000 under 2,000,000 | 200,000 under 2 000,000 |
| Growth in broth at 37° C. | | 200,000,000 under 2,000,000,000 | 200,000,000 under 2,000,000,000 | 20,000,000 under 200,000,000 |
| B. coli ,, ,, | | Do. | Do. | Do. |
| Indol ,, ,, | | Do. | Do. | Do. |
| Pathogenicity of broth at 37° C . ... ... . | | Do. | Not tested. | Do. |

The reduction effected was therefore approximately—

| — | After 20 minims of izal oil. | After 42 minims of izal oil. |
|---|---|---|
| Total number of micro-organisms in agar at 37° C . .. . . | 63 per cent. | 80 per cent. |
| Total number of micro-organisms in gelatin at 22° C . . . | 78 ,, ,, | 73 ,, ,, |
| Gas ... . | 99 ,, ,, | 99 ,, ,, |
| Growth in broth . .. .. | No reduction | 90 ,, ,, |
| Bacillus coli in broth . . . . . | No reduction. | 90 ,, ,, |
| Indol in broth . . . . | No reduction. | 90 ,, ,, |
| Pathogenicity of broth. . ... . | Not tested. | 90 ,, ,, |

The above figures speak for themselves The pathogenicity test was made by injecting a guinea-pig subcutaneously with one cubic centimetre of the last broth culture that showed

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[4] The Pharmacology of Izal, Pharmaceutical Journal, April 18th, 1896.

[5] THE LANCET, Jan. 18th, 1902, p 146.

[6] The Treatment of Dysentery, Brit. Med. Jour., Nov. 10th, 1900.

[7] Reports to the London County Council on the Bacteriology of Sewage.

# ABDOMINAL HYSTERECTOMY FOR CANCER OF THE UTERUS;

### WITH NOTES OF TWO CASES.

By ROBERT O'CALLAGHAN, F.R.C.S. Irel.,
SURGEON TO THE FRENCH HOSPITAL;
AND
HENRI DARDENNE, M.D. Edin., M.R.C.P. Lond.,
PHYSICIAN TO OUT-PATIENTS AT THE FRENCH HOSPITAL.

Case 1. *Cancer of the cervix treated by amputation, followed by pregnancy, necessitating Cæsarean section with complete hysterectomy.*—On March 11th, 1901, Dr. Dardenne was called to see a woman who had been married for 17 years and had never been pregnant. She was 36 years of age. When Dr. Dardenne saw her she complained of pain in the hypogastric region and also of a muco-sanguinolent discharge of a fœtid odour. She was uncertain as to the exact date of the commencement of her present illness, except that four months previously she had a smart attack of hæmorrhage which had compelled her to keep her bed for three days. Ever since she had been troubled more or less with the discharge of which she now complained. Previously to this she had been in good health except for obstinate constipation. Her general surroundings were extremely good and had always been so. Her family history was good. Her facial expression was somewhat anxious and her complexion was pasty. She was stout in body and had no idea that she was seriously ill. There was no œdema; in fact, no morbid appearances could be detected. The temperature was normal; the pulse was 80. On making a vaginal examination, Dr. Dardenne noted at the time that the cervix was invaded by a hard cauliflower growth, and at the back of this there was a crater-like fissure on the right and a similar fissure was present on the anterior and posterior surface of the cervix. On bimanual examination a hard mass of indurated glands was felt in the right iliac region. The bladder gave no trouble to the patient. Dr. Dardenne diagnosed cancer of the cervix and advised her to become an inmate of the French Hospital. This she did and when seen the next day by Mr. R. O'Callaghan he confirmed the diagnosis and operated on the following day. With the knife and cautery he removed all that was possible of the affected tissues. The disease being so far advanced he did not think that a hysterectomy would be of much benefit to the patient. She left the hospital on March 30th. On Nov. 2nd Dr. Dardenne saw the patient again and on examination found that she was five months pregnant. She had quickened a fortnight before. Since the operation she had some slight bleeding which she attributed to her periods. On Dec. 24th labour pains came on and she entered the French Hospital on Christmas Day. The whole of the lower segment was one mass of cancer and after 18 hours of labour pains the little finger could not be introduced through the hard mass. At 8 P.M. Mr. O'Callaghan performed a Cæsarean section. An incision four inches long was made in the middle line and the uterus was brought well forward and incised; the child and the placenta were rapidly extracted without any difficulty; there was some sharp hæmorrhage which was easily controlled by the house surgeon. The greatest difficulty experienced was now to be met with in the complete removal of the uterus. The new growth having destroyed all landmarks made it difficult to get into the vagina safely without injuring the bowel, the bladder, or the ureters; this, however, was done successfully, after very tedious manipulation owing to the very fat parietes. The ligatures were brought into the vagina and the peritoneal vault was sutured, the abdominal wound was then closed, and the patient was quickly removed to bed, having borne the operation very well. She, however, never seemed to rally from the shock and died in 48 hours.

Case 2. *Cancer of the cervix complicated by cystic ovary and adhesions treated by complete abdominal hysterectomy.*—A woman, aged 34 years, came to Dr. Dardenne in the out-patient department of the French Hospital on Dec. 9th, 1901, complaining of a bloody discharge from the vagina which had been preceded for about three years by a muco-purulent one. She had been married for 18 years; she had had two children, the younger being 16 years of age, and one miscarriage. Menstruation began when she was 15 years of age, and up to three years previously she was quite regular when she had a period lasting for 18 days, and ever since then she had been irregular. Her family history was good. She was admitted into hospital under Mr. O'Callaghan and on the following day she was examined under ether. The uterus was fixed and the cervix was enlarged and of a dark-red colour; bimanually the uterus was found to be enlarged and an enlarged ovary was felt on the left side. The uterus was fixed and could not be brought down to the vulva. A portion of the posterior lip was removed with the knife and sent to the Clinical Research Association. Mr. J. H. Targett reported that it was an epithelioma. The patient having given her consent for the removal of her uterus she was operated upon on Jan. 10th, 1902. The abdomen was opened by a three-inch incision. The right ovary, which was cystic, was removed as well as the left, when it was freed from adhesions. The uterus was with difficulty freed from old adhesions, then well drawn out and removed in the usual method. The ligatures were drawn into the vagina, and as there was considerable oozing a strip of cyanide gauze was passed into the vagina for a drain. The peritoneal vault was closed over all and the abdominal wound was sutured in two layers. The patient made an easy recovery.

*Remarks by* Mr. O'Callaghan.—In Case 1 it is interesting to note that after 17 years of barrenness this poor woman became pregnant after amputation of her cervix for malignant disease followed by a thorough efficient use of the cautery. It was a matter of regret that she did not come into hospital, as we had arranged she should do, before labour, which came on at seven months, and she was, unfortunately, in labour for 18 hours and the membranes had ruptured (an important factor as regards the result). She was very tired as a consequence and for an hour before operation, while finding me and an anæsthetist, the house surgeon gave her frequent inhalations of chloroform. It was an emergency in which the difficulties were, I am glad to say, rare. The patient never seemed to rally from the shock of the operation, although she was given hypodermic injections of strychnine sulphate by Dr. H. Leclezio, and despite his unremitting care she died in 48 hours. A post-mortem examination could not be obtained, but the right breast was found to contain a new growth which had affected the axillary glands. Such cases are, fortunately, rarely met with, and demand prompt action if only to prolong life for a little while. A simple Porro's operation, and fixing the stump of the uterus in the abdominal wound might have saved shock and prolonged life in this case for a short time, but it would not have been a good precedent.

In Case 2, although the uterus was fixed and could not be drawn down into the vagina the history of the case and the appearance of the growth suggested chronic endometritis with erosion more than epithelioma. As it would have been very difficult, if not impossible, to remove the uterus by the vaginal route I decided to do a complete abdominal hysterectomy. The appendages on both sides were adherent and one ovary was cystic. This caused a good deal of venous oozing which was treated by packing with a strip of gauze, leaving the end in the vagina; this drain was removed in 48 hours, the patient making an uninterrupted convalescence. I have no hesitation in saying that when the uterus is at all fixed the abdominal route is the method of selection in these cases, as the operation is more satisfactory from a surgical point of view, and the ovaries and tubes can be removed, no matter how large or adherent they may be, which I hold should be done in all cases of hysterectomy, as they are absolutely useless after the removal of the uterus and can only become nuclei for further pelvic mischief.

I have to thank the house surgeon for his efficient assistance in these cases and for his intelligent preparation and after-care of them.

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# ELECTRIC SHOCKS.[1]

By F. B. ASPINALL.

I bring this question before the institution principally with a view of obtaining particulars of severe electric shocks which have not proved fatal, and therefore I trust that any one who from his own experience can give particulars of cases will kindly do so. My reason for trying to obtain this

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[1] A paper read before the Institution of Electrical Engineers on Feb. 27th, 1902.

The idea of using urea pura for lupus suggested itself to my mind after reading a most interesting paper by Dr. H. Harper[1] of Nottingham on the value of pure urea in phthisis. I had in my wards at the asylum two very bad cases of lupus vulgaris, and I decided to put them both on urea and to give them daily exposures to the x rays. Photographs were taken before and after the treatment.

The general outline of the treatment employed was as follows:—On May 21st, 1901, in the one patient, and on June 7th, 1901, in the other, I ordered urea in 20-grain doses three times a day and commenced the exposures on these dates respectively. The x-ray apparatus used was a 10-inch coil, with a platinum interrupter, and a Crookes's focussing tube with a spark length of six inches The exposures were made daily and were of seven minutes' duration, at a distance of from two to three inches from the face. The voltameter registered 12 volts and the indicator of the galvanometer oscillated between four and six ampères. It was never found necessary to protect the healthy skin from the rays, as the only effect produced was a slight red areola round each scab.

In the July number of the *Practitioner* Mr. A. H. Buck, of the Sussex County Hospital, published a paper entitled "A Case of Lupus of 12 years' standing Treated with Urea Pura and Cured." I read this monograph with great interest and found that his treatment differed from mine in that he combined cod-liver oil and malt extract with the urea and applied some ointment as a local dressing, the Roentgen rays not being used at all.

CASE 1.—The patient, a woman, aged 30 years, was admitted into the Kent County Asylum on Feb. 1st, 1901. The following note, taken from the case-book, shows her condition on admission: "She is demented and quite lost to her surroundings. She is weak, badly developed, and poorly nourished. She has chronic lupus of the face. There is a suspicion of tubercle at the right apex. The heart's action is weak." The lupus extended from ear to ear, spreading out like the wings of a butterfly. These two areas were connected by extension of the disease over the bridge of the nose and the upper lip. The whole of the cartilages forming the tip had ulcerated and the lower ends of the nasal bones were visible through the weak and indolent tissue. The glands of the face and of the submaxillary and cervical regions were enlarged on both sides, but especially on the left. There was distinct softening in some and fluctuation could easily be felt. The softening had proceeded so far in the one immediately in front of the left ear that just as I was exposing the photographic plate the pus burst through the skin and ran down the face. The patient was unable to breathe through the nose, owing to blocking of the nasal passages by dried mucus and pus. Her breath was extremely foul, and she was very weak and anæmic. Her pulse was soft, weak, and rapid. The action of her heart was very feeble There was slight impairment of the percussion note over the right apex The breath sounds were somewhat harsh. The patient's weight was six stones five pounds. The dose of urea at first was 20 grains three times a day. It was gradually increased up to November, when the patient was taking as much as 120 grains three times a day. Since July I have followed Mr. Buck's example and added cod-liver oil and malt extract to the mixture. On Sept. 30th, 1901, as all active signs of the disease had disappeared, the exposures to the x-rays were discontinued, and since that time the redness has gradually subsided, and a thin, smooth, white scar now occupies the place of the apple-jelly nodules and ulceration. On examination of the chest on March 2nd the difference in the percussion note was so slight that had I not the knowledge that the right lung had been affected I should have said that there was no difference. The breath sounds were not quite pure on the right, but they were not so harsh as when the patient was admitted. The heart sounds were regular and of normal volume. The pulse was 78, regular, full, and well maintained. She has recovered from her anæmia. She sleeps well and eats well, and is altogether in very much better general health. She takes some interest in things going on around her, talks a little, and is, as a matter of fact, much more trouble to manage than on admission. There was no increase in the percentage of urea in the urine, for out of several estimations the highest percentage found was 2 (the normal). Her weight is six stones six pounds.

CASE 2.—The patient, a woman, aged 30 years, was admitted into the Kent County Asylum on March 1st, 1901. The following are notes from the case-book taken on admission: "She is demented. No evidence of mind. She never speaks. Cannot make her wants known in any way, and is most filthy and degraded in her habits. She is very weak, badly developed, badly nourished, and very anæmic. Has lupus on face. Heart's action rapid and weak. Lungs very weak. Weight five stones 13 pounds." When the treatment was commenced on June 7th she was in a very low condition. Her face was one mass of ulceration and dried scabs Her eyelashes were turned inwards and swept the cornea. Pus welled out of both eyes from the conjunctivæ, which were red and inflamed. Her eyes were directed downwards and inwards. It was very doubtful whether she could see or not. On the left side of the nose, over the situation of the nasal duct, was a small sinus from which thick creamy pus exuded. Her upper lip was enormously swollen and protruded one and a half inches beyond the lower. The mucous membrane of the nose was red, swollen, and ulcerated Her breath was very foul-smelling. The submaxillary, cervical, and supraclavicular lymphatic glands were greatly enlarged, many being in a condition of softening Almost the whole of both cheeks were involved in the disease. For the first fortnight I had the face dressed with olive oil night and morning to soften the scabs, which I then removed with a pair of forceps and a warm solution of chinosol. This was the only local application, and was discontinued as soon as all the scabs had been removed. She never spoke but made unintelligible sounds, and this I believed was due to the enormous size of the upper lip and the blocking up of the nose with dried mucus and pus. The dose of urea was gradually increased from 20 grains three times a day to 120 grains three times a day, and, just as in the last case, since July cod-liver oil and malt extract have been added. She had exactly the same Roentgen-ray treatment as the first case, but she improved much more rapidly, and as a result the exposures were discontinued on Sept. 3rd. I think that this is accounted for by her not having had the disease for such a long time as the other patient had. Since that time the redness due to the exposures has gradually subsided, and at the time of writing (March 2nd) a smooth white scar occupies the place of the ulcerated surface. There is no discharge from the eyes, and the sinus over the nasal duct has quite healed. Her lip has returned to its normal size and she speaks quite distinctly at times. She can see very well and appears to take much more interest in her surroundings. It was impossible to get a 24 hours' specimen of this patient's urine, so I have been compelled to make my estimations from the specimens which I could secure, no matter how small the quantity. But in no case did I discover more than the normal percentage of urea, the average being about 1·7. There are no signs of phthisis in the lungs The heart sounds are normal. She has gained flesh, sleeps well, eats well, talks, chatters, and sings, and at times she is very violent and troublesome. Her weight is five stones 13 pounds.

*Remarks.*—The points to which I particularly wish to draw attention are: the low-pressure tube used (viz., six inches) and consequently the absence of any severe dermatitis in the neighbouring healthy skin; secondly, the comparatively short duration of the treatment and the small amount of trouble entailed in carrying it out; thirdly, the great improvement in the general health—lungs, heart, mental condition, and anæmia; and, lastly, the absence of all puckering of the skin and unsightly contractions, so commonly seen in cases treated by the older method of scarification. The great objection undoubtedly is the expense of the urea.

Maidstone.

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REVACCINATION OF TRAMPS.—At the meeting of the Stonehouse Board of Guardians held on Feb. 27th the medical officer (Mr T Leah) stated, in reference to the revaccination of tramps, that unless he inspected the cases afterwards the Local Government Board auditor might perhaps not allow the fees, and he did not wish to keep tramps in the workhouse for a week in order to inspect them. Eventually the matter was referred to the house committee. —The Torrington (Devon) Board of Guardians at its meeting on Feb 22nd decided that all vagrants should be vaccinated on their admission to the workhouse—a procedure which has also been enforced by the Bideford Guardians.

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[1] THE LANCET, March 9th, 1901, p. 694.

is, I know, a firm belief that the path which the current takes is of the utmost importance, and therefore in handling high-tension apparatus we always try not to make contact in such a way that a vital part is directly in the circuit. To illustrate the different paths which the current can take I will give a few cases which have come under my notice and also what the victim felt most: from hand to hand, a blow in the chest; from the right hand to the right foot, nothing; from the right hand to the left foot, nothing; from the right hand to both feet, nothing; from the left hand to the left foot, a blow in the back of the neck; from the left hand to the right foot, a blow in the back; from the left hand to the head, a blow on the top of the head; and in the case of a current from the head to the buttocks, it could not be ascertained if anything was felt. Of course, I cannot say why they should feel differently, but I bring these facts forward as perhaps medical men can give an explanation. I think, however, that it proves that different organs of the body are affected. Dealing with this part of my subject the following two cases may be given. A man was oiling an alternator and he touched the inner brush accidentally with his elbow; his right foot was on the earthed frame of the machine and his left foot was insulated. The pressure was 2200 volts, and although he gave the cry and was sensible till the circuit was broken he could not get away. He remembered them running to shut the machine down, but became insensible when this was done and was treated for 40 minutes by artificial respiration before he showed any signs of life. One would have expected this man to be killed, but it is only fair to say that he was badly burnt on the elbow and the foot. In the second case a man was adjusting an arc lamp. He had his left foot earthed, and with his left hand he touched the carbons. I am unable to state the number of volts that he received, as I could not ascertain where the current earthed; but he was killed. There was only a slight discolouration noticeable and he was not burnt. I will discuss the question of burning later, but I think it is a fair conclusion that the left side is more vulnerable, and I believe the reason is that the valves of the heart on this side are more easily damaged. To my mind these cases prove conclusively that the path which the current takes is a most important factor.

5. *Does the question of contact made, and whether burning takes place or not, have any effect upon a person's chance of being killed?*—In my opinion the question of contact is perhaps the most important of any arising when a person receives a shock, and I should like to go into it rather minutely. In our ordinary every-day work perhaps the question of contact receives more attention than anything else, as not only is it a question of good contact, but the area of contact must be sufficient to carry the current. Now, when a man receives a shock this is equally true, and although it might be safe under ordinary conditions to work with even a high voltage, yet if he really did his best to kill himself he could most probably manage it with even a small voltage, provided that he had a sufficient area of contact. To illustrate what an important part this area of contact plays I had my resistance measured holding a No. 20 B.W.G. copper wire between the finger and thumb of each hand, and afterwards I connected these two wires to two pennies and held them in the same way. With the pennies my resistance was 20,000 ohms lower. I therefore think if the area of contact were only sufficiently large the resistance would be practically nothing. Of course, if the skin were wet the area necessary to get no resistance would be much less, but as one does not work with wet hands I need not consider the question. On the other hand, if the skin were oily it would be much more.

Another point on which I would lay particular stress is that the area of contact to get the same resistance in different persons would not be the same, and even with the same person in different parts of the body the area of contact would have to be changed. To illustrate this I measured the resistance of six people, picked haphazard, from thumb to thumb, and although I was careful to obtain what I believe was the same amount of contact in each case, yet A measured 30,000 ohms, B 50,000, C 60,000, D 60,000, E 100,000, and F over 100,000. This was due most probably to different thickness and moistness of the skin. As regards the same person, I had my resistance measured from thumb to thumb, which gave 100,000 ohms, but from the heel (where the boot rubs) to the big toe I got 200,000 ohms, although in each case I believe the same contact was made.

The question of area of contact also plays an important part from another cause, as, if the area is small, the chance of burning is largely increased, not only from the fact that heat is generated at a bad contact, but that it is easier to form an arc, which causes the burning to be still more severe. I shall discuss the question of burns by alternating and direct current later, but a direct current burns much more severely, especially at the positive pole.

No doubt it may be questioned why I am laying so much stress upon a point which is thoroughly understood by everyone, but my reason for doing so is that I believe this question of burning is a wonderful provision of nature to protect us against fatal shocks, as the burning not only numbs the nerves and thus prevents us from feeling, but will also, I believe, be found to increase the resistance, thus preventing the current passing. It is impossible for me to experiment on burnt live flesh, but I think it would well repay a medical man to do so. The two following cases may be cited. A man who was working on a high-tension switchboard received a 2000-volt alternating shock and was killed. I myself saw the body and noticed that there was only a slight burn on the left hand, no other mark being found on the body. It was therefore impossible to say how the man really received the shock. I am sure the burn was only slight, and as I have had considerable experience of electrical burns at various voltages (both alternating and direct) I think that I am in a position to judge as to their severity. The second case was that of a man who received a 2000-volt alternating shock from hand to hand and in which death occurred. The engineer on watch at the time told me that only slight burns were on each hand.

In the case already mentioned of a man who was killed on an arc circuit only a slight redness was seen on his hand Of course, this may not always be the case, as it is quite possible that the victim in his struggles to escape may reduce the contact and therefore may cause severe burning after he has received sufficient current to kill him. In previous cases which I have mentioned in which the victim recovered severe burning took place and I shall mention more later.

I know I am laying myself open to severe criticism in bringing forward this theory, as the majority of electrical engineers and also medical men believe that severe burning means a severe shock, and to illustrate this I cannot do better than again quote Dr. Oliver[3]: "If the skin at the time of contact was moist, so much more the burning. If a current sufficient to produce this severe local burning pass through the body fatal results are more probable." My own opinion is, however, from reasons stated above, that moistness of the skin reduces the chance of burning as it ensures better contact, and if no burning takes place efforts to help the victim should be redoubled if it is thought that he has received a shock, as it is quite possible that, owing to this misapprehension, he may be thought to be ill from some other cause. I should like to say a good deal more on this question, but as the time is short I will proceed to the next point.

6 *Can a person receive a fatal shock without giving the "cry," and also can he speak after receiving a fatal shock?*—It may be of interest to attempt to describe the "cry," and as I have heard it three times, and have discussed this matter with others who have heard it, I think it can be accepted that this cry is best described as a rapid drawing in of the breath, followed by a half sigh, half shriek. In each of at least a dozen cases of more or less severe shocks that have been reported to me the victim gave the cry, but in the case in which I personally saw the victim three witnesses were sure that he did not give it.

With respect to the question as to whether a person can speak after he has received a fatal shock I may say that I have always thought this impossible; but in the above case the victim was asked if he was hurt and he said: "I am all right," and yet directly afterwards dropped down dead. Of course, one may ask: Did he really die from an electric shock? but as a post-mortem examination was made and the medical man satisfied himself that all the organs were healthy I think that there can be no doubt about it. I think, therefore, that further information is most urgently required, but at present one can only say that a man need not give the cry and that it is possible for him to speak after a fatal shock has been received.

7. *Is an alternating- or a direct-current shock more likely to prove fatal?*—This question may be looked at from two points of view. First, if a man is killed by an alternating

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[3] Loc. cit.

information is that I believe we, as electrical engineers, can render great assistance to the medical profession by doing so; and possibly by enabling them to tell us some better methods of rendering aid to those who, unfortunately, are the victims of accident we shall be well repaid.

I have been personally deeply interested in this subject for some years and have collected from my own experience and from that of friends, both in this country and abroad, particulars of as many cases as possible. I have also, whenever I could, made it a rule to see the man who received the shock and also any witnesses All cases, therefore, which I have chosen as of sufficient importance to mention in this paper are, to the best of my belief, thoroughly accurate and trustworthy. In obtaining this information I have been much struck by the fact that it is most difficult to obtain a really accurate description from the victim or witnesses of what actually does occur, and this can hardly be expected when one considers the circumstances; but still, if I only mention what they are absolutely certain about, these cases can be taken as fairly typical.

I should like to say that, not being a medical man, I have no medical knowledge, and therefore I trust that any medical man reading this paper will take this into account if I say anything which to him may seem absurd.

In discussing this question with my personal friends in the electrical profession I find that there are many points upon which more information is required, and therefore these points may be summarised as follows. 1. Is everyone susceptible to an electric shock? 2 Is a person suffering from disease more liable to be fatally injured by an electric shock than a person in good health? 3 Does the physiological condition which a person is in at the time of his receiving a shock make any difference? 4 Does the path which the current takes through the body have any effect as regards the shock proving fatal? 5. Does the question of contact made, and whether burning takes place or not, have any effect as regards the shock being fatal? 6. Can a person receive a fatal shock without giving the "cry," and also can he speak after receiving a fatal shock? 7. Is an alternating- or a direct-current shock more likely to prove fatal? 8 Cannot medical men give us some more certain method of saying whether a man is dead or not? 9. Cannot something more be done than at present to help those who receive a severe shock? I will now proceed to discuss these points separately.

1 *Is everyone equally susceptible to an electric shock?*—In considering this question I believe I am stating the opinion of the medical profession when I say that there is no absolutely reliable proof whether everyone is equally susceptible or not. Dr. T. Oliver[2] says "We have no positive proof that one individual is more susceptible to an electric shock than another. It is, as already stated, rather a question of the amount of current, and whether it wholly enters the body." My own opinion is, and I hope to prove it in this paper, that not only are different people differently affected, but the same person under different conditions does not feel the same. Of course, if one could obtain two people alike in every respect and subject both of them to exactly the same voltage and current, and also in every respect get the same conditions, no doubt they would both feel the same, although they might describe it differently; but when it is considered that moistness, callosity, and condition of skin, nervous temperament, the path which the current takes through the body, health or disease, drunkenness or sobriety, whether the sufferer is awake or asleep, area, the excellence and nature of contact, familiarity with shock, and no doubt other causes, as I shall point out later, all play most probably an important part in deciding what one feels, I think that my opinion will be accepted

2. *Is a person suffering from disease more likely to be fatally injured by an electric shock than a person in good health?*—As an electrical engineer this is a most difficult matter for me to discuss; but from cases which have come under my own observation, and which I have heard of from friends, in whose veracity I can place the most implicit confidence, I think I can prove that this question is of the utmost importance. Some years ago a number of friends were in the habit of measuring their resistance periodically, and it was found that one man was always the lowest, although they all varied. This man was also abnormally sensitive to an electric shock, as he could feel even so low a voltage as that from three Leclanché cells. It was afterwards found that he was suffering from kidney disease, and although I should very much like to measure the resistance of others similarly affected I am afraid to do so in case I might injure them. This seems to indicate that the resistance of the body may be altered by disease, and it is most probable that the skin, by fulfilling the functions which by rights belong to the kidneys, had a lower resistance due to the impurities thus removed from the body. (It is well known that in kidney disease medical men give medicine to make the skin help the kidneys) In a central station with which I was connected it was the habit of the men to give an electric shock from a magneto-machine to visitors, and although it was found that different people seemed to feel differently, yet one boy could stand more than anyone else. He was, however, unfortunately of weak intellect. Another case of which I heard was at a bazaar where money was placed in a bowl of water charged from a Rhumkorff coil. One woman took the money out every time and had to be paid to go away, as she nearly made them bankrupt. She also was of weak intellect. No doubt this insensibility was due to the brain being affected. It appears, therefore, fair to say that a diseased person may be either more or less susceptible according to what disease he may be suffering from.

3. *Does the physiological condition which a person is in at the time a shock is received make any difference?*—The first point which naturally occurs is, Does a person in a heavy perspiration stand a better chance than one who is in a normal condition? and to illustrate this I think I may quote the following case A man had been doing very heavy work which made him perspire freely; to rest himself he sat down on a transformer, which was earthed, and in leaning back his head touched an inner terminal; as the outer was earthed he received a 2000-volt shock. He was wearing a thick flannel shirt, which was wet with perspiration. The result was that he received a most severe shock, a hole being burnt in his trousers, and the back of his head and his buttocks were severely burnt. This man, I think, should have been killed, but he was not even insensible. Surely, this seems to show that the sweat shunted the current, thus saving his life; although the burning probably protected him, as I will show later.

Again, would a man, when drunk, be less liable to be fatally injured? and to illustrate this I give the following case. A man working in a transformer station as a labourer touched an inner terminal with one hand and an outer with the other, the potential difference being 2000 volts. It was found out afterwards that this man was a heavy drinker and was under the influence of drink when he received the shock, which did not even make him insensible. It is only fair, however, to state that his hands were exceptionally callous, due to the fact that he had been working as a gas stoker, and also that his hands were severely burnt. Personally, however, I think he received quite enough to kill him, and that his being drunk had something to do with his not being killed

Next, Are persons less liable to be killed when they are asleep? Some years ago I was carrying out a contract which necessitated all the work being done at night. One of the men employed was always going to sleep, so the other men as a practical joke gave him a shock whilst he was in this condition from a magneto-machine capable of ringing through 30.000 ohms, but although they tried all they could he did not awake. As they thought that this was peculiar the men called my attention to it, and I personally saw him receive a shock without taking any notice of it. I may also say that I arranged for my assistant to give me a shock when I was in bed asleep, and although two witnesses guaranteed that he had done so I felt nothing. Illustrating this, I should like to mention the following case A man was stationed to watch a cable under test charged to 5000 volts, and going to sleep he fell on to it. He was most severely burnt about the hands but was not killed.

Of course, with so few cases it is impossible for me to say that my deductions are absolutely correct, but I bring them forward as I think that they are of profound interest both to the electrical and to the medical professions.

4 *Does the path which the current takes through the body have any effect as regards the shock proving fatal?*—Although I have been present in three cases where a medical man was called in to attend to a man who had received a severe shock I have never been asked where the current entered and left the body, and this, to me, has always been a complete puzzle, as amongst all electrical engineers there

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[2] Allbutt's System of Medicine, vol. v., p. 856.

The question, therefore, which I wish to ask the medical profession is, Should we adopt the same treatment as is used for collapse from chloroform, and when a man receives a shock should we, before applying artificial respiration, hold the body for a few seconds head downwards at an angle of 45°, thus flushing the brain and stimulating its action? I bring this theory forward with the greatest diffidence, but as I have actual cases to bear me out and also other evidence which points the same way, I think that, considering its vital importance to humanity, I am justified in doing so in the hope of its being investigated by the medical profession, but until this has been done no one realises better than myself that my evidence cannot be considered as conclusive.

In conclusion, I can only say that I am fully aware of the shortcomings of this paper, but it is a real attempt possibly to save a human life by thus endeavouring to get members to give information on this question which so immediately concerns us as electrical engineers.

# Clinical Notes:

## MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

### LATENT VACCINIA.

By J. W. Washbourn, C.M.G., M.D. Lond.,

PHYSICIAN TO GUY'S HOSPITAL AND TO THE LONDON FEVER HOSPITAL, ETC.

THE patient, a girl, aged two and a half years, was vaccinated two years ago in four places, only one of which took, and that very slightly. She was seen by Mr. Percy Rose on Feb. 3rd, with the history that she had been ailing for three days. The tonsils were red and swollen, and the sub-maxillary glands on one side were enlarged; there was some stomatitis, and the temperature was 102° F. On the 4th Mr. Rose was informed that "marks" were coming out over the old vaccination sites. On the 5th he saw the patient and found the temperature to be 101·4° F. There were exudation on the left tonsil and a scarlatiniform eruption over the chest and the back. A younger child was also ill with an injected throat, vomiting, and a scarlatiniform eruption. The diagnosis of scarlet fever was made. On inquiry of the mother the following history of the vaccination spots was elicited. On Jan. 31st, the day on which the child was first taken ill, a dry sore was observed on the left arm at the site of the original vaccination; the mother was quite sure that no marks were previously visible. On Feb. 2nd three fresh red places with a scab over them were observed. On the 5th Mr. Rose found that there were four spots on the left arm at the usual site of vaccination; they were all of about the same size as a vaccination lesion, and each of them was surrounded by a small red areola with a thin dry scab in the centre. The appearance was exactly that of mild vaccination at about the seventh day.

I saw the patient on Feb. 7th with Mr. Rose and confirmed his observations. The mother was quite certain that the spots were at the site of the old vaccination, and she was sure that the child had not been recently vaccinated and that nothing had occurred before Jan. 31st On examining the child there was very slight impetigo of the scalp and the skin was clear elsewhere. The appearance of the marks on the arm and their arrangement were quite unlike anything in the way of secondary infection from impetigo. There was no doubt that the child was suffering from scarlet fever, and the only explanation that we could give was that the vaccination had remained latent during two years and had started afresh with the onset of scarlet fever.

Cavendish-place, W.

### NOTE ON THE DISCOVERY OF A NEW TRYPANOSOMA.[1]

By D. Bruce, M.B., C.M. Edin., F.R.S.,

LIEUTENANT COLONEL, ROYAL ARMY MEDICAL CORPS.

I HAVE received from South Africa specimens of blood taken from cattle which contain a new species of trypanosoma. This new species can be at once distinguished from the trypanosomas of surra, of tse-tse fly disease, or of the rat by its larger size, it being almost twice as large as any of the others. In general appearance it conforms closely to the others in possessing an oval protoplasmic body, a longitudinal fin-like membrane, and a single flagellum. This new trypanosoma was lately discovered by Dr. A. Theiler, who is in charge of the bacteriological laboratory of the medical officer of health, Pretoria, Transvaal. He states that at first he was under the impression that he had merely hit against the familiar trypanosoma of tse-tse fly disease. He, however, was struck by its larger size and he tried a few inoculation experiments. He found that the new trypanosoma only infected cattle. Horses, dogs, goats, rabbits, and guinea-pigs were all immune, neither showing symptoms nor the presence of the parasites in the blood. With the same blood he infected two calves, which showed distinct febrile reaction, and at the same time the parasites appeared in the blood. He found the parasite for the first time in the blood of a young ox which had just recovered from an attack of rinderpest, and since then he has successfully inoculated calves from two other cattle. He describes the disease as an acute pernicious anæmia with grave blood changes, a general anæmia without deformation of the elements of the blood, or, lastly, only a slight fever. He also believes that there exists a natural immunity in cattle against this trypanosoma. He is of opinion that this disease is the same as that attributed by Dr. Kolle—who studied rinderpest in South Africa with Koch during the last outbreak—to bovine malaria. Dr. Kolle overlooked the trypanosoma, saw that the disease was infectious, and thought that he observed endoglobular parasites and pigment in the red blood corpuscles.

As this discovery seems to me to be an interesting one, and as Dr. Theiler deserves great credit for the observation, I would propose that this trypanosoma be named after the discoverer *Trypanosoma Theileri*.

### A CASE OF REDUPLICATED CARDIAC IMPULSE AND SOUNDS.

By John McClymont, M.D. Edin.

THE following case illustrates the assistance which the Roentgen rays may afford us in connexion with certain cardiac abnormalities.

A gardener, aged 33 years, with no previous special history, consulted a medical man in regard to an attack of coryza On examination of the chest the cardiac rhythm and sounds presented such unusual features that the medical man formed the opinion that the heart was diseased. This fact coming to the knowledge of the patient's employer he lost his situation and was next at new work as a coalman in London. He did this laborious work with such obvious impunity and in perfect health that he resolved to have his heart re-examined with the prospect of returning to his former pleasanter occupation and in this way came under my notice. The man presented himself in perfect health and without any cardiac symptoms. There was a double cardiac impulse of regular occurrence in the normal position, the second slighter impulse immediately following on the heels of the first There was no increase of præcordial dulness There was a slight impurity of the first sound in the aortic area, and the sounds, like the impulse, were reduplicated. This was specially clear at the apex, the second group being like an echo of the first or louder sounds. There was, however, no reduplication of the pulse. The complete absence of any cardiac symptoms, the lack of either hypertrophy or dilatation of the heart, and the unfailing regularity of the second impulse did not suggest the missed beat of a played-out organ.

Through the kindness of Dr. Betrand Dawson and Mr. Harnack, the superintendent of the radiograph department at the London Hospital, I was able to see the working of this heart on the skiagraph screen. There was the first systole dilating the great blood-vessels and causing the pulse wave and first strong cardiac impulse. The apex remaining all the time in systole, there then occurred a second contraction of muscular fibres, principally or alone at the base of the ventricles. The great blood-vessels were not dilated by this contraction, but it doubtless gave rise to the second cardiac impulse and to the fainter, echo-like heart sounds This peculiar condition of secondary fibrillar contraction was no doubt due to some irregular innervation of the cardiac muscle and was not of the nature of the missed beat of a failing organ.

Leyton, Essex.

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[1] A paper read before the Royal Society on Feb. 27th, 1902.

shock, would not a direct-current shock prove equally fatal provided the conditions in each case were exactly the same? Secondly, is there anything in the actual working conditions which makes one supply more dangerous than the other? Considering this from the first point of view, the question immediately occurs, Do both kinds of shock affect the body in the same manner from a medical standpoint? Of course, I am not in a position to judge, but as a direct-current causes electrolytic action, and an alternating-current does not, it seems that more must take place with direct-current than with alternating-current shock. It is also open to discussion whether, disregarding electrolytic action, the two act the same, as the alternating-current shock from its nature must have a spasmodic effect, whilst a direct-current shock seems to paralyse at once. From my own experience of shocks, I am certain that the after-effect of a direct-current shock is worse than that of an alternating current. When looking at the matter, however, from an electrician's point of view, I can see a great difference, as there is no doubt that if contact is made with metal of such a shape that it cannot be gripped, and the current passes from hand to hand, the direct-current shock seems to knock the victim down, whilst an alternating-current shock seems to draw him closer and to tie his body as far as possible into a knot. On the other hand, if he can grip the metal the direct-current shock seems to hold him tighter than does that of the alternating current. Of course, I am only judging from what I have seen and felt myself.

Another influence which I believe plays an important part is the different action which the two currents have in breaking down a fault. For instance, if the insulation is faulty when current once commences to pass, the direct current will break a fault down quicker than an alternating current. No doubt this has some effect when a shock is received, as most probably the direct-current shock would reach its maximum before the alternating-current shock, and, therefore, if a person were only in circuit for a short time, the direct-current shock would have the greatest effect. On the other hand, more burning will take place with direct-current shock than with that of the alternating current, and, as I have pointed out before, this is most probably a protection. My own opinion is that both currents will kill a man equally well, provided that the conditions are the same, and that death ensues from an electric shock.

Although not strictly included in this paper, I should like to draw attention to the fact that an arc is more easily started with direct than with alternating current, and that when once started it is more easily maintained. This is evident from the fact that a fuse which is quite safe on alternating- is utterly useless on direct-current circuits. From the above cause it is possible for a man to be severely burnt on a continuous current, and, therefore, all cases of exceptionally severe burning, if they occur on a low-tension supply, should be thoroughly investigated to prove whether death occurred from a shock due to burns or from an electric shock. The conclusion which I come to is that if death occurs from an electric shock, both are equally dangerous; but if death occurs from burns the continuous-current shock is more dangerous. To make myself thoroughly clear, I should also like to say that although burns are a protection against electric shocks, yet if carried to extremes they may themselves cause death due to shock.

In considering the second question, it must be remembered that although the majority of deaths from electric shocks occur with alternating currents, yet the potential usually worked at with an alternating current is higher than with a direct current, and therefore the conditions required to cause death have to be more favourable with direct current than with alternating current.

Taking the actual voltage required to cause death, independently of nature of supply, I should say that at below 600 volts the conditions must be abnormally favourable; at below 1000 volts they must be favourable; and at above 1000 volts the higher the pressure the more easy it is to get the conditions necessary to cause death. In comparing the relative dangers of the two sources of supply, it must be remembered that even with the same voltage and conditions it is quite possible to meet with an accident from quite different causes due to the kind of supply. For instance, with an alternating supply where the outer is earthed, nine times out of 10 a shock is received, not by getting into the circuit proper, but by touching some metal which has become charged owing to its not being properly earthed or to not realising that any earthed metal is practically the outer. I think, however, that accidents from this cause will be fewer in the future now that the precautions required are thoroughly understood, and, more important still, that we are able to obtain trained men. On the other hand, with direct current, most accidents occur due to an earth on circuit causing a man to receive a shock when he accidentally earths the circuit in another place through himself.

The conclusion which I come to is that there is nothing more dangerous in one system than in another. It is purely a question of voltage and of the conditions being favourable, and it must be remarked that as many conditions have to be favourable it is really so difficult to get killed, even with a high voltage, that practically, with our present knowledge, the chance of this occurring is no greater than in numerous other occupations where a person is likely to meet with an accident.

8. *Cannot medical men give us a more certain method of ascertaining whether a man is dead or not?*—In the *Electrical Review* Rules, which I consider most excellent and, indeed, invaluable, it is recommended to ascertain if the sphincter muscle is relaxed; but as this is for obvious reasons objectionable, and also to a non-medical man most difficult to judge, I ask medical men if they can tell us some better method. If they only knew what one feels when, after doing all one knows to restore a fellow-worker to consciousness, the question arises, Am I simply manipulating a dead body? I feel sure that they would do all they could to tell us how to arrive at a definite conclusion.

9. *Cannot something more be done to help those who receive a shock?*—In discussing this question the first thing which strikes me is how utterly we engineers are in the dark as to what really happens to a human body when death is caused by electricity. Of course, death is a stoppage of the functions of the body, and, looked at from an engineering point of view, I think the organs of the body can be best described as follows—namely, the lungs as the boiler, the heart as a pump, and the nervous system as the mains to transmit signals from the controlling power (the brain) to the various machinery operated, and the arteries and veins as feed-pipes. Now, to my mind, what we want to know is, what breaks down when a shock is received? Are the lungs so damaged that they are useless for further work? or is the pump, the heart, broken in any way that it cannot work—for instance, are the valves ruptured or the arteries (viz., the feed-pipes) broken? or is the blood (the feed water) so decomposed that it precipitates and chokes the pipes? or cannot signals be sent from the brain, owing to the nerves being paralysed? or what happens? Looked at from this point of view, the first thing which requires clearing up is, Are the conditions found inside the body different when death has been caused by electricity from those found when it occurs from shock from fright, excitement, burns, amputation of a limb, &c.? Of course, I, personally, cannot say, but from medical evidence which I have read it appears as if the only thing which is unusual is that the blood appears different post mortem; but I believe that this is open to discussion. I myself think, however, that when it is considered, as I have pointed out previously, that an idiot does not seem to feel a shock so severely as an ordinary person, and also that during sleep less is felt, the truth will probably be found to be that electricity acts like an anæsthetic, such as chloroform. My reasons for believing this are also due to the fact that in two cases of an electric shock where death would have been expected the men recovered, in my opinion, from the head being lowered, thus flushing the brain with blood, which is exactly what medical practitioners do when they want to revive a patient who has collapsed when under chloroform. The cases I give in this connexion are as follows. A man received a 2000-volt shock from hand to hand, but was not badly burnt. He was insensible; his heart could not be felt beating and his breath did not cloud a mirror; his eyes were turned so that the white of the eyes only could be seen, his jaw was dropped, and thus seeing the man I could have been certain that he was dead. This man gave the cry and an engine-driver who picked him up stood him on his head and thumped his chest, his reason being, as he put it, to start the blood flowing, and, as the heart is a pump, to free the valves if they were stuck. After 45 minutes' artificial respiration this man recovered. In another case a man received a 2000-volt shock from hand to hand. He was standing on a pair of steps. As no one was present I cannot say if he gave the cry, but at any rate he fell head first off the steps about four feet to the floor. He came round without assistance in about 25 minutes. It is fair to say that his hands were badly burnt.

The question, therefore, which I wish to ask the medical profession is, Should we adopt the same treatment as is used for collapse from chloroform, and when a man receives a shock should we, before applying artificial respiration, hold the body for a few seconds head downwards at an angle of 45°, thus flushing the brain and stimulating its action? I bring this theory forward with the greatest diffidence, but as I have actual cases to bear me out and also other evidence which points the same way, I think that, considering its vital importance to humanity, I am justified in doing so in the hope of its being investigated by the medical profession, but until this has been done no one realises better than myself that my evidence cannot be considered as conclusive.

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Leyton, Essex.

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# A Mirror
OF
# HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

## GERMAN HOSPITAL, DALSTON.

### SOME CASES OF ELEPHANTIASIS OF THE EXTERNAL GENITAL ORGANS FOLLOWING THE REMOVAL OF THE INGUINAL GLANDS.

(Under the care of Dr. J. P. ZUM BUSCH.)

ELEPHANTIASIS of the external genital organs not the result of the filaria sanguinis hominis is certainly rare. It is obvious that it may follow any extensive obstruction of the inguinal lymphatics; and that it does not more commonly follow removal of the inguinal glands is probably to be attributed to the fact that it is very rare for all the glands to be removed. The question of treatment is difficult. Some improvement follows removal of much of the hypertrophied tissue, but in many cases as the lymphatic obstruction continues there is a great tendency to a re-formation of the condition. In this connexion a case shown by Mr. R. J. Godlee at the last meeting of the Clinical Society of London is of interest. A man had obstruction of his thoracic duct with consequent dilatation of the inguinal lymphatics. Mr. Godlee, acting on a suggestion of Dr. P. Manson, effected an anastomosis between one of the dilated lymphatics and the saphenous vein, with the result that the dilated lymph-vessels subsided. A similar operation in some forms of elephantiasis of the scrotum and penis might lead to an equally successful result.

CASE 1.—A man, aged 21 years, was admitted into the German Hospital in April, 1893, suffering from soft sores and lymphadenitis in both groins. Whilst the bubo on the left side became smaller and painless, that on the right side showed signs of suppuration and had to be incised. The patient was discharged by the end of May, but was re-admitted shortly afterwards owing to the formation of a fistula on the right side; the glands of the left side had also become re-enlarged and painful. As incisions and scrapings which were undertaken several times did not effect a cure, the whole of the remaining glands (which were swollen and dotted with numerous small abscesses) with the surrounding tissues were removed by two operations in the middle of August. The operations proved lengthy and difficult, but the large vessels were not injured. Both wounds healed by granulation and the patient left the hospital in October apparently quite well. Three months later (January, 1894) he first noticed an occasional œdematous swelling of the prepuce which disappeared on applications of lead lotion. Gradually, however, the œdema recurred more frequently, extended over the penis and scrotum, and became persistent. When the patient presented himself again at the hospital in April, 1894, the scrotum was as big as two fists, the skin being hard and greatly thickened; the penis was about twice its normal size, the prepuce being especially enlarged, and the whole region was in a condition of chronic elephantiasis. In spite of different methods of treatment this condition had remained unchanged up to June, 1901, when Dr. zum Busch had an opportunity of examining the patient for the last time. Surgical interference of any kind was firmly refused.

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CASE 4.—This case occurred in private practice and is illustrative of other cases. A married woman, aged 32 years, consulted Dr. zum Busch in May, 1901, and gave the following history. Three years previously she was infected by her husband and suffered from a sore in the vaginal orifice followed by suppuration of the inguinal glands. As far as one could judge from the resulting scars very extensive operations had been done in the United States. About three or four months later she developed erysipelas of the vulva which left a permanent enlargement of the labia majora. There was no fever during the erysipelatous state nor was there any marked increase of the temperature during four recurrent attacks in 1900. Each attack left the external genitals more swollen and harder. On examination in May, 1901, both labia and the clitoris were found to be very much increased in size and very hard; they, as well as the mons Veneris, were in a typical condition of elephantiasis. The patient was advised to have the labia removed by operation, but she refused.

*Remarks by* Dr. ZUM BUSCH.—This unforeseen and untoward result of the radical treatment of such cases has not been sufficiently recognised either in the text-books or in the special literature of this branch of surgery. Riedel[1] has published notes of two cases and advises surgeons to avoid too extensive operations in inflammatory conditions of the inguinal glands. Of my own numerous cases of clearing out the inguinal region in bubo and cancer I have so far only heard of two having become subject to chronic œdema and elephantiasis (Cases 1 and 2), but I should not be surprised if there were more such cases, as many of my patients probably left England after having been discharged from the hospital.

I may here add one other case in which the elephantiasis occurred in the upper extremity. The patient, a man, aged 24 years, was admitted into the German Hospital in November, 1900, suffering from chronic brawny œdema of the left upper extremity. The arm was enormously swollen and the skin was hard and in many places scaly; the condition was said to have followed an operation for suppurating axillary glands which was undertaken in France two years previously. There was a long scar in the axilla as well as a smaller one above the clavicle. Such an occurrence seems to be very rare, as I have never seen it following Halsted's operation except when the vein had to be tied or when recurrences implicated the vessels, yet it seems important to remember such cases and to be as conservative as possible in the treatment of extensive inflammatory disease of the glands. The recommendation of some surgeons to remove the whole affected area should never be followed except as a last resource in otherwise incurable cases of bubo in which a radical operation is all the more justifiable as the suppuration

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[1] Archiv für Klinische Chirurgie, vol. xlvii.

The question, therefore, which I wish to ask the medical profession is, Should we adopt the same treatment as is used for collapse from chloroform, and when a man receives a shock should we, before applying artificial respiration, hold the body for a few seconds head downwards at an angle of 45°, thus flushing the brain and stimulating its action? I bring this theory forward with the greatest diffidence, but as I have actual cases to bear me out and also other evidence which points the same way, I think that, considering its vital importance to humanity, I am justified in doing so in the hope of its being investigated by the medical profession, but until this has been done no one realises better than myself that my evidence cannot be considered as conclusive.

In conclusion, I can only say that I am fully aware of the shortcomings of this paper, but it is a real attempt possibly to save a human life by thus endeavouring to get members to give information on this question which so immediately concerns us as electrical engineers.

# Clinical Notes:

## MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

### LATENT VACCINIA.

BY J. W. WASHBOURN, C.M.G., M.D. LOND.,
PHYSICIAN TO GUY'S HOSPITAL AND TO THE LONDON FEVER HOSPITAL, ETC.

THE patient, a girl, aged two and a half years, was vaccinated two years ago in four places, only one of which took, and that very slightly. She was seen by Mr. Percy Rose on Feb. 3rd, with the history that she had been ailing for three days. The tonsils were red and swollen, and the sub-maxillary glands on one side were enlarged; there was some stomatitis, and the temperature was 102° F. On the 4th Mr. Rose was informed that "marks" were coming out over the old vaccination sites. On the 5th he saw the patient and found the temperature to be 101·4° F. There were exudation on the left tonsil and a scarlatiniform eruption over the chest and the back. A younger child was also ill with an injected throat, vomiting, and a scarlatiniform eruption. The diagnosis of scarlet fever was made. On inquiry of the mother the following history of the vaccination spots was elicited. On Jan. 31st, the day on which the child was first taken ill, a dry sore was observed on the left arm at the site of the original vaccination; the mother was quite sure that no marks were previously visible. On Feb. 2nd three fresh red places with a scab over them were observed. On the 5th Mr. Rose found that there were four spots on the left arm at the usual site of vaccination; they were all of about the same size as a vaccination lesion, and each of them was surrounded by a small red areola with a thin dry scab in the centre. The appearance was exactly that of mild vaccination at about the seventh day.

I saw the patient on Feb. 7th with Mr. Rose and confirmed his observations. The mother was quite certain that the spots were at the site of the old vaccination, and she was sure that the child had not been recently vaccinated and that nothing had occurred before Jan. 31st. On examining the child there was very slight impetigo of the scalp and the skin was clear elsewhere. The appearance of the marks on the arm and their arrangement were quite unlike anything in the way of secondary infection from impetigo. There was no doubt that the child was suffering from scarlet fever, and the only explanation that we could give was that the vaccination had remained latent during two years and had started afresh with the onset of scarlet fever.

Cavendish-place, W.

### NOTE ON THE DISCOVERY OF A NEW TRYPANOSOMA.[1]

BY D. BRUCE, M.B., C.M. EDIN., F.R.S.,
LIEUTENANT COLONEL, ROYAL ARMY MEDICAL CORPS.

I HAVE received from South Africa specimens of blood taken from cattle which contain a new species of trypanosoma. This new species can be at once distinguished from the trypanosomas of surra, of tse-tse fly disease, or of the rat by its larger size, it being almost twice as large as any of the others. In general appearance it conforms closely to the others in possessing an oval protoplasmic body, a longitudinal fin-like membrane, and a single flagellum. This new trypanosoma was lately discovered by Dr. A. Theiler, who is in charge of the bacteriological laboratory of the medical officer of health, Pretoria, Transvaal. He states that at first he was under the impression that he had merely hit against the familiar trypanosoma of tse-tse fly disease. He, however, was struck by its larger size and he tried a few inoculation experiments. He found that the new trypanosoma only infected cattle. Horses, dogs, goats, rabbits, and guinea-pigs were all immune, neither showing symptoms nor the presence of the parasites in the blood. With the same blood he infected two calves, which showed distinct febrile reaction, and at the same time the parasites appeared in the blood. He found the parasite for the first time in the blood of a young ox which had just recovered from an attack of rinderpest, and since then he has successfully inoculated calves from two other cattle. He describes the disease as an acute pernicious anæmia with grave blood changes, a general anæmia without deformation of the elements of the blood, or, lastly, only a slight fever. He also believes that there exists a natural immunity in cattle against this trypanosoma. He is of opinion that this disease is the same as that attributed by Dr. Kolle—who studied rinderpest in South Africa with Koch during the last outbreak—to bovine malaria. Dr. Kolle overlooked the trypanosoma, saw that the disease was infectious, and thought that he observed endoglobular parasites and pigment in the red blood corpuscles.

As this discovery seems to me to be an interesting one, and as Dr. Theiler deserves great credit for the observation, I would propose that this trypanosoma be named after the discoverer *Trypanosoma Theileri*.

### A CASE OF REDUPLICATED CARDIAC IMPULSE AND SOUNDS.

BY JOHN MCCLYMONT, M.D. EDIN.

THE following case illustrates the assistance which the Roentgen rays may afford us in connexion with certain cardiac abnormalities.

A gardener, aged 33 years, with no previous special history, consulted a medical man in regard to an attack of coryza. On examination of the chest the cardiac rhythm and sounds presented such unusual features that the medical man formed the opinion that the heart was diseased. This fact coming to the knowledge of the patient's employer he lost his situation and was next at new work as a coalman in London. He did this laborious work with such obvious impunity and in perfect health that he resolved to have his heart re-examined with the prospect of returning to his former pleasanter occupation and in this way came under my notice. The man presented himself in perfect health and without any cardiac symptoms. There was a double cardiac impulse of regular occurrence in the normal position, the second slighter impulse immediately following on the heels of the first. There was no increase of præcordial dulness. There was a slight impurity of the first sound in the aortic area, and the sounds, like the impulse, were reduplicated. This was specially clear at the apex, the second group being like an echo of the first or louder sounds. There was, however, no reduplication of the pulse. The complete absence of any cardiac symptoms, the lack of either hypertrophy or dilatation of the heart, and the unfailing regularity of the second impulse did not suggest the missed beat of a played-out organ.

Through the kindness of Dr. Betrand Dawson and Mr. Harnack, the superintendent of the radiograph department at the London Hospital, I was able to see the working of this heart on the skiagraph screen. There was the first systole dilating the great blood-vessels and causing the pulse wave and first strong cardiac impulse. The apex remaining all the time in systole, there then occurred a second contraction of muscular fibres, principally or alone at the base of the ventricles. The great blood-vessels were not dilated by this contraction, but it doubtless gave rise to the second cardiac impulse and to the fainter, echo-like heart sounds. This peculiar condition of secondary fibrillar contraction was no doubt due to some irregular innervation of the cardiac muscle and was not of the nature of the missed beat of a failing organ.

Leyton, Essex.

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[1] A paper read before the Royal Society on Feb. 27th, 1902.

# A Mirror
OF
# HOSPITAL PRACTICE,
## BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

## GERMAN HOSPITAL, DALSTON.

### SOME CASES OF ELEPHANTIASIS OF THE EXTERNAL GENITAL ORGANS FOLLOWING THE REMOVAL OF THE INGUINAL GLANDS.

(Under the care of Dr. J. P. ZUM BUSCH.)

ELEPHANTIASIS of the external genital organs not the result of the filaria sanguinis hominis is certainly rare. It is obvious that it may follow any extensive obstruction of the inguinal lymphatics; and that it does not more commonly follow removal of the inguinal glands is probably to be attributed to the fact that it is very rare for all the glands to be removed. The question of treatment is difficult. Some improvement follows removal of much of the hypertrophied tissue, but in many cases as the lymphatic obstruction continues there is a great tendency to a re-formation of the condition. In this connexion a case shown by Mr. R. J. Godlee at the last meeting of the Clinical Society of London is of interest. A man had obstruction of his thoracic duct with consequent dilatation of the inguinal lymphatics. Mr. Godlee, acting on a suggestion of Dr. P. Manson, effected an anastomosis between one of the dilated lymphatics and the saphenous vein, with the result that the dilated lymph-vessels subsided. A similar operation in some forms of elephantiasis of the scrotum and penis might lead to an equally successful result.

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[1] Archiv für Klinische Chirurgie, vol. xlvii.

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# STATION FAMILY HOSPITAL, RAWAL PINDI.

## A CASE OF CARCINOMA OF THE RECTUM; OPERATION.

(Under the care of Captain T. H. GOODWIN, R.A.M.C.)

THE choice between the perineal operation of proctectomy and that introduced by Kraske must depend chiefly on the locality and extent of the malignant growth. If the upper limit of the tumour does not extend beyond three inches or so from the anus the perineal route is far preferable, for the operation is distinctly less severe; inasmuch as in such a case the peritoneal pouch does not need to be opened and the risk of peritonitis is greatly lessened. If, however, the growth involves a portion of the rectum covered by peritoneum Kraske's operation, or some modification of it, is needed for the complete removal of the tumour. In the following case the operation itself was a success, death occurring apparently from a secondary deposit in the brain.

A married woman, aged 59 years, was admitted to the Station Family Hospital, Rawal Pindi, on August 29th, 1901, complaining of continuous pain in the region of the rectum and anus which was much increased by defecation. The family history was unimportant. The patient had always enjoyed good health until three and a half months previously when she had an attack of dysentery accompanied by a good deal of tenesmus. Since that time she had experienced an almost constant desire to defecate, the resulting motions being small and blood-stained. She had suffered from constant very severe pain which was much increased by defecation. On examination per rectum a hard nodular mass could be felt within the anal margin; the growth extended completely around the rectal wall and was in the shape of a signet ring, extending for about two and a quarter inches upwards posteriorly and for about half that distance in front. The sacral glands were apparently not enlarged. The general health was fair. No secondary growths could be discovered. The tip of the forefinger could reach above the mass in every direction and the growth was freely movable. Excision of the growth was decided on, the patient herself being very anxious to undergo operation. On account of her age and condition Kraske's method of operation was rejected as being too severe and lengthy in performance. She was placed on a nourishing diet and the bowels were kept opened with mild laxatives.

On Sept. 9th, an enema having been previously administered, the patient was placed under chloroform and was put in the lithotomy position. Captain Goodwin then removed the lower three inches of the rectum by the perineal route, the tissues between the rectum and the coccyx being completely divided. The gut was drawn down and was united to the margins of the incision by a few sutures. The hæmorrhage during the operation was extremely free and many vessels required ligature. The vaginal wall was not invaded by the growth. An iodoform and gauze dressing was applied. On examination of the excised growth it appeared to have been completely removed, with a surrounding margin of healthy tissue. A stained section under the microscope proved the growth to be a squamous carcinoma. On the following day the wound was dressed and appeared to be healthy. From the date of operation to Sept. 30th the patient improved steadily; she was quite free from pain and gained in weight and strength considerably. The wound

healed well and rapidly rectal bougie and the gut

showed no tendency to ight after the opera-

tion she was able to the day.

On Oct. 5th she had over

the lower bowel, the

sciously. On the 9th

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reaction, dilated, and for

were

permitted by the relatives. Examination per rectum revealed no enlarged sacral glands, the wound had healed, and there was no sign of local recurrence.

*Remarks by* Captain GOODWIN.—The eventual termination of the case was extremely disappointing, as, from the absence of local recurrence, the rapid healing of the wour and the early control over the fæces, there appeared to every prospect of a successful result. The chief point interest in the case appears to me to be that, although n enlargement of the sacral glands could be felt per rectum yet the probability is that they were involved to a sligh degree. Had circumstances permitted of an operation by Kraske's method, with complete extirpation of the glands, I believe that the eventual result of the case would have been successful.

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# Medical Societies.

## PATHOLOGICAL SOCIETY OF LONDON

*Low Proteid Metabolism.—Proteolytic Enzymes in t Spleen.—Chylous and Chyliform Ascites.—New Urinar Pigments.*

A MEETING of the Chemical Section of this society was held on March 5th, Dr. W. D. HALLIBURTON, chairman of the section, being in the chair.

Dr. VAUGHAN HARLEY and Dr. FRANCIS GOODBODY made a communication on cases of Low Proteid Metabolism. It was popularly believed that when large eaters remained thin they did so because a large proportion of the food taken by them passed through the alimentary tract unaltered, and Dr Harley and Dr. Goodbody brought forward these cases to show that this was not always correct. As a matter of fact, certain individuals had a remarkably low metabolism, so that they actually needed less food than other people. Thi cases were described in which the patients were kept und similar conditions—namely, in bed and having only massag as exercise. The diet in all cases was carefully analysed and the urine and fæces were examined, the fæces being divided into different periods by means of charcoal. A woman, weighing 72 kilogrammes, was found to be able to live on a very small amount of food—in fact, on one pound of mutton per diem. During the seven days of observation she only lost two kilogrammes in weight and during the first six days only one kilogramme. During this time the quantity of nitrogen taken in the diet was 12·16 grammes per diem, while the average output of nitrogen in the urine was 13 51 grammes, so that she lost from the tissues in the body generally one gramme of nitrogen per diem. During this period of seven days she passed only five motions and the charcoal showed that there was a marked delay in the passage of the fæces along the alimentary canal because the charcoal did not reappear till from 60 to 70 hours after having been given. The quantity of nitrogen in the fæces was extremely small, being only 0·48 gramme, while the fat was 1·09 grammes—amounts corresponding, in fact, to those found in fasting individuals by other observers On comparing this woman with a man on a diet of one pound of meat per diem it was found that when he was taking 14 72 grammes of nitrogen per diem in his food he excreted in the urine no less than 22·71 grammes, so that whereas the woman lost only one gramme on an average per diem the man, on the other hand, lost no less than sev grammes of nitrogen. During the four days of observati the man lost two kilogrammes in weight; the nitrogen in th fæces was 0 66 gramme and the fat was 2·43 grammes pe diem. The woman was now put on a very small diet durin two periods of five days each. In the second period of five day she took 6 08 grammes of nitrogen, the diet containing only 4·16 calories per kilogramme. During this time she passed 7 32 grammes of nitrogen per diem in the urine, so that during the five days there was a loss of one gramme of nitrogen per diem from the tissues. During the two periods in which she took this remarkably small diet her average weight was, for the first period 66·8 kilogrammes, and for the

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—Dr. F. G. HOPKINS (Cambridge)

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(Under the care of Dr. J. P. ZUM BUSCH.)

ELEPHANTIASIS of the external genital organs not the result of the filaria sanguinis hominis is certainly rare. It is obvious that it may follow any extensive obstruction of the inguinal lymphatics; and that it does not more commonly follow removal of the inguinal glands is probably to be attributed to the fact that it is very rare for all the glands to be removed. The question of treatment is difficult. Some improvement follows removal of much of the hypertrophied tissue, but in many cases as the lymphatic obstruction continues there is a great tendency to a re-formation of the condition. In this connexion a case shown by Mr. R. J. Godlee at the last meeting of the Clinical Society of London is of interest. A man had obstruction of his thoracic duct with consequent dilatation of the inguinal lymphatics. Mr. Godlee, acting on a suggestion of Dr. P. Manson, effected an anastomosis between one of the dilated lymphatics and the saphenous vein, with the result that the dilated lymph-vessels subsided. A similar operation in some forms of elephantiasis of the scrotum and penis might lead to an equally successful result.

CASE 1.—A man, aged 21 years, was admitted into the German Hospital in April, 1893, suffering from soft sores and lymphadenitis in both groins. Whilst the bubo on the left side became smaller and painless, that on the right side showed signs of suppuration and had to be incised. The patient was discharged by the end of May, but was re-admitted shortly afterwards owing to the formation of a fistula on the right side; the glands of the left side had also become re-enlarged and painful. As incisions and scrapings which were undertaken several times did not effect a cure, the whole of the remaining glands (which were swollen and dotted with numerous small abscesses) with the surrounding tissues were removed by two operations in the middle of August. The operations proved lengthy and difficult, but the large vessels were not injured. Both wounds healed by granulation and the patient left the hospital in October apparently quite well. Three months later (January, 1894) he first noticed an occasional œdematous swelling of the prepuce which disappeared on applications of lead lotion. Gradually, however, the œdema recurred more frequently, extended over the penis and scrotum, and became persistent. When the patient presented himself again at the hospital in April, 1894, the scrotum was as big as two fists, the skin being hard and greatly thickened; the penis was about twice its normal size, the prepuce being especially enlarged, and the whole region was in a condition of chronic elephantiasis. In spite of different methods of treatment this condition had remained unchanged up to June, 1901, when Dr. zum Busch had an opportunity of examining the patient for the last time. Surgical interference of any kind was firmly refused.

CASE 2.—A young man, aged 20 years, was admitted into the German Hospital in March, 1896, suffering from double-sided bubo of long standing. The integument of both sides was inflamed and perforated by many fistulæ and the superficial and deep glands of the inguinal and crural regions were enlarged and fixed. Whilst the left bubo was successfully treated by numerous incisions and scrapings that on the right side showed no signs of improvement and was finally removed by an extensive operation as in Case 1. This patient remained well for about four months after his discharge from the hospital when the penis and the scrotum began to swell and gradually assumed a state of chronic elephantiasis. In this case, however, the enlargement was much more severe on the right side than on the left. When last seen, in November, 1898, the condition was rather worse than it had been two years previously.

CASE 3.—A sailor, aged 24 years, was admitted into the German Hospital in November, 1901. Dr. Lauenstein of Hamburg, under whose treatment the patient had been from August to November, 1899, has kindly informed me that the patient was operated on for double-sided bubo and that extensive operations were done on both sides, no large vessels being injured. Not very long after his discharge from the hospital the man noticed a gradually increasing œdema, first of the prepuce only, but later attacking the whole penis and the scrotum. On admission into the German Hospital the scrotum was nearly as large as a cocoanut, the penis was three or four times its normal size, whilst the prepuce hung down from the end of the penis like a balloon. In this case the lymph-stream was not entirely obstructed as by elevation in bed the size of the affected parts could be temporarily diminished; the swelling which remained was like elephantiasis in character and was exceedingly hard. As the patient was very anxious to have something done the prepuce was removed, together with a large piece of integument from the whole length of the penis. As the wound healed well and the patient was very satisfied with the result it was decided to operate in a similar way on the scrotum. Unfortunately, however, the patient developed typhoid fever and he had afterwards to be sent to a convalescent home. He is now on board ship again, but has asked for an operation to be performed on his scrotum after his return in spring.

CASE 4.—This case occurred in private practice and is illustrative of other cases. A married woman, aged 32 years, consulted Dr. zum Busch in May, 1901, and gave the following history. Three years previously she was infected by her husband and suffered from a sore in the vaginal orifice followed by suppuration of the inguinal glands. As far as one could judge from the resulting scars very extensive operations had been done in the United States. About three or four months later she developed erysipelas of the vulva which left a permanent enlargement of the labia majora. There was no fever during the erysipelatous state nor was there any marked increase of the temperature during four recurrent attacks in 1900. Each attack left the external genitals more swollen and harder. On examination in May, 1901, both labia and the clitoris were found to be very much increased in size and very hard; they, as well as the mons Veneris, were in a typical condition of elephantiasis. The patient was advised to have the labia removed by operation, but she refused.

*Remarks by* Dr. ZUM BUSCH.—This unforeseen and untoward result of the radical treatment of such cases has not been sufficiently recognised either in the text-books or in the special literature of this branch of surgery. Riedel[1] has published notes of two cases and advises surgeons to avoid too extensive operations in inflammatory conditions of the inguinal glands. Of my own numerous cases of clearing out the inguinal region in bubo and cancer I have so far only heard of two having become subject to chronic œdema and elephantiasis (Cases 1 and 2), but I should not be surprised if there were more such cases, as many of my patients probably left England after having been discharged from the hospital.

I may here add one other case in which the elephantiasis occurred in the upper extremity. The patient, a man, aged 24 years, was admitted into the German Hospital in November, 1900, suffering from chronic brawny œdema of the left upper extremity. The arm was enormously swollen and the skin was hard and in many places scaly; the condition was said to have followed an operation for suppurating axillary glands which was undertaken in France two years previously. There was a long scar in the axilla as well as a smaller one above the clavicle. Such an occurrence seems to be very rare, as I have never seen it following Halsted's operation except when the vein had to be tied or when recurrences implicated the vessels, yet it seems important to remember such cases and to be as conservative as possible in the treatment of extensive inflammatory disease of the glands. The recommendation of some surgeons to remove the whole affected area should never be followed except as a last resource in otherwise incurable cases of bubo in which a radical operation is all the more justifiable as the suppuration

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[1] Archiv für Klinische Chirurgie, vol. xlvii.

Mr. G. R. Turner exhibited a man, aged 28 years, from whom he had removed a Sarcomatous Tumour from the Synovial Membrane of the Ankle-joint.—The President remarked that it had only recently been recognised that sarcoma arose in synovial membrane. This subject would form a topic of discussion on a future occasion.

Mr. W. G. Spencer showed a case of Appendicitis with Secondary Abscess occurring in a man, aged 38 years, in which there had been union by secondary suture of an ilio-lumbar incision after the evacuation of an abscess which had recurred for the fourth time.

Dr. J. Purves Stewart (introduced by Mr. W. G. Spencer) exhibited a case of Paralysis of the Cervical Sympathetic accompanied by photographs showing the distribution of the anidrosis. The patient, a soldier, aged about 26 years, had been wounded 14 months previously by a Mauser bullet which entered the left side of the neck one and a half inches below the mastoid process and came out in the seventh right intercostal space in the posterior axillary line, lodging in his bandolier. The bullet thus passed in front of the vertebral column. He had temporary total paralysis of the right arm which gradually cleared up. There were some hæmoptysis and slight dysphagia for a few days only. Ever since the injury the sight in the right eye had been less acute than in the left, and he had noticed that he did not sweat on the right side of the face, scalp, neck, or upper limb. As regarded the present condition, there were slight weakness of the small muscles of the right hand and an area of slight analgesia along the inner border of the upper arm, forearm, and hand, including one and a half fingers, with a small patch in the axilla. The lower limbs and the left upper extremity were normal. The right pupil was smaller than the left and did not dilate when shaded. Both pupils reacted briskly to light and on convergence The cilio-spinal reflex was absent on the right side. The right palpebral fissure was narrower than the left and the right eye was slightly sunken. He did not sweat on the right side of the face, scalp, neck, upper part of the thorax, or upper extremity. This area of anidrosis was bounded by the middle line and extended down as far as the third rib in front, and posteriorly as far as the middle of the scapula The lesion was apparently one of the first dorsal nerve-root on the right side, involving the cervical sympathetic.

Dr. H. D. Rolleston and Mr. Lawrence Jones exhibited a case of Splenic Anæmia with a Splenic Bruit, occurring in a man, aged 22 years, who had noticed a swelling in his abdomen for four years, increasing in size. There was no history of malaria or syphilis. Two years ago he had an attack of epistaxis, and since then he had repeated attacks of epistaxis, hæmatemesis, and melæna. He had considerable enlargement of the spleen. The blood showed anæmia of what is usually called the chlorotic type. There was apparently no change in the relative numbers of the varieties of leucocytes. There was a distinct blowing continuous murmur to be heard over the spleen, most distinct at the back in the ninth space, just outside the scapular line, and in front, in the ninth space, just posterior to the anterior axillary line —In the discussion which followed the general opinion was expressed that removal of the spleen constituted a rational treatment of cases of pure splenic anæmia (as distinct from leukæmia), since it resembled a chronic infective process dependent on the spleen.—Dr. Rolleston, in reply, referred to Warren's statistics, in which 20 out of 24 patients who were operated upon recovered.

Dr. S. Vere Pearson and Dr. Rolleston showed a case of Idiopathic Muscular Atrophy associated with Peculiar Pigmentation of the Legs. The patient was a man, aged 22 years, who eight years ago had scarlet fever, in the second week of which there were rheumatic pains and swellings in the knees. Weakness in the back was noticed a week later, followed by wasting of the thighs. Pigmentation of the legs had been noticed for one year. He had never taken medicine continuously for more than six weeks and he believed that he had never taken arsenic. There were now atrophy of both thighs and legs and slight foot-drop, talipes equinus, and pes cava. The muscles of the chest and spine were also wasted and there was lordosis. Although most of the muscles showed A.C.C. > K.C.C. there were no other reactions of degeneration. Sensation was normal. The skin of the legs was uniformly reddish-brown. In the discussion which followed it was suggested that the association of an amyotrophic paralysis with pigmentation having this distribution occurred in pellagra, and Dr. Ewart suggested the administration of suprarenal substance in cases of muscular atrophy.

Dr. J. A. Ormerod exhibited a woman, aged 39 years, presenting an Eruption of a Psoriasis Type but of somewhat uncertain nature.—In the discussion which followed several members expressed the view that it was of syphilitic origin, but Mr. Bowlby and others could not agree with this, and it was suggested that the case resembled mycosis fungoides in some respects; finally, this case was referred to a sub-committee for further investigation.

Dr. Ormerod also exhibited a case of Atrophic Paralysis of the Hands and Wrists supervening upon a recurrent generalised paralysis of obscure origin.

Dr. F. E. Batten exhibited five children belonging to the same family the subjects of Paralysis allied to the Myopathies and to Friedreich's Disease. The eldest was a girl, aged 15 years, who had always walked slowly and had been weak on her legs, though the calves were apparently hypertrophied. There were foot-drop and pes cavus. The knee-jerks and plantar reflexes were absent; reaction to strong faradic current was also absent. There were slight nystagmus and ataxy; the pupils reacted well. The other children presented many of the same symptoms.

Dr F. G. Penrose exhibited a case of Hydromyelia in a boy, aged six years, who presented generalised weakness and generalised loss of sensation to heat and cold.

Dr. C. H. Fennell (introduced by Dr. Archibald Garrod) exhibited a case of General Paralysis of the Insane in a girl, aged nine years. No definite history of congenital syphilis could be obtained. The child was mentally bright up to the onset of symptoms six months before.

Mr. Rickman J. Godlee and Dr. Patrick Manson exhibited two cases of Filariasis, one of which had been treated by a new operation. The younger of these, a man, aged 21 years, had not been operated upon and presented large fusiform lymphatic tumours in the groins and thighs due to filariæ. The other case was that of a man, aged 31 years, on whom Mr. Godlee had operated, producing an anastomosis between one of the dilated lymphatic vessels and a tributary of the internal saphenous vein. Subsequently another of the dilated lymphatics had been introduced into the spermatic vein. The result of these operations, which had been suggested by Dr. Manson, had been extremely successful.

## HARVEIAN SOCIETY OF LONDON.

### *Exhibition of Cases.*

A clinical evening of this society was held on Feb 20th, Mr. W. Watson Cheyne, the President, being in the chair.

Dr A. Whitfield showed a young woman the subject of Psoriasis and said that many such cases were to be seen at present in consequence of the epidemic of small-pox. The patient had suffered from psoriasis at intervals for a number of years, and the present attack came on 14 days after vaccination. The vaccination marks on the left arm were very severely affected, the right arm being more or less clear. The chest and back and knees and shins also showed the condition She was said to have had eczema since she was quite a child, and he presumed that what was thought to be eczema was really psoriasis. She was otherwise apparently in perfect health and did not complain of anything.—Mr. Campbell Williams asked whether Dr. Whitfield had tried salicin which was a favourite remedy for the condition, and he had had a good deal of success with it.—Dr. Whitfield, in reply, said that he was using creasote, which he had found to be especially useful in acute cases. He had never seen a patient benefit on salicin, though he had tried it in 50 or 60 cases. Arsenic was contra-indicated during the acute stage of the attack. He had no special theory to advance as to the connexion between the vaccination and the eruption On Feb. 18th he saw a woman, aged 35 years, with an attack of psoriasis which also came on 14 days after vaccination

Dr. A. Morison showed a boy, aged five years, who was the subject of Congenital Heart Disease. There was an abnormally placed heart, giving a considerable amount of dulness to the right side of the sternum. The second sound was felt by the hand very clearly over the præcordial region and to the right of the sternum. There was a systolic bruit, which gained in intensity towards the pulmonary area and was very loud over the front of the chest. It was also heard over the back, the flanks, and the neck. His belief was that there was pulmonary constriction.—Dr. H. A. Caley said that he thought there must be pulmonary stenosis in the case, because of the features of the bruit and of nitrogen was only about six or seven grammes without loss of weight. There could be no question as to the possibility of these men doing work, yet they only metabolised between four and seven grammes (taking the extreme limits) of nitrogen per diem. This ability to work on such an extremely low diet was apparently due to slow and thorough insalivation, which was one of the tenets of the "cult" into which they had formed themselves.—Dr. E. H. STARLING remarked that in using the expression "calories" it must be remembered that fat was included which did not play an active part in metabolism. In this sense fat simply played the part of ballast.—Dr. HALLIBURTON referred to the popular notion that Eastern nations existed on a very low nitrogenous diet; but recent analysis of Chinese dietaries showed a large aggregate of proteids in the fruits and grains. This was especially true of nuts.

Dr. S. G. HEDIN made a communication on the Proteolytic Enzymes in the Spleen of the Ox. Spleen juice pressed from the disintegrated cells of the spleen contained a proteolytic enzyme which acted very strongly in an acid medium, whilst in a neutral or alkaline medium it acted very weakly or not at all. The disintegrated and not pressed spleen-cells contained, in addition to this enzyme, another enzyme that acted upon proteids only in alkaline media. This enzyme seemed to be present in the cells in the form of a zymogen which was not soluble in water, but when exposed to the action of weak alkali or weak acid it yielded an active enzyme soluble in water. As to the purpose of the enzymes, it seemed probable that they had to carry out digestion inside the leucocytes. Intracellular digestion, according to researches mainly carried out in Metchnikoff's laboratory, appeared in most cases to be performed in an acid media, although in some instances it could be performed also in alkaline fluids.

Dr. ROBERT HUTCHISON read a paper on the conditions known respectively as Chylous Ascites and Chyliform Ascites. He stated that in the former of these conditions the opacity of the fluid was due to the presence of fat and the fluid became quite clear on agitation with potash and ether. A specimen of fluid from a case of true chylous ascites was exhibited which exactly resembled milk in appearance and contained 2·3 per cent. of fat. The patient, a man, aged 32 years, exhibited no other symptom and his blood contained no filariæ. The cause of the ascites in this case was obscure. In chyliform ascites, which had only been accurately investigated within recent years, the fluid was less opaque than in the chylous form and often had a greenish tinge. Different observers had ascribed the opalescence to (1) lecithin, (2) mucoid substances, and (3) in a smaller group to a casein-like body. The fluid exhibited was obtained from a man, aged 46 years, who suffered from chronic parenchymatous nephritis and chronic purulent peritonitis. It contained neither lecithin nor mucoid substances, but a proteid which yielded nuclein or paranuclein on digestion, and which was presumably derived from cellular disintegration. The methods of analysis employed were described in detail and a brief bibliography of the conditions was added.

Dr. H. A. SCHÖLBERG read a paper on a hitherto Undescribed Purple Pigment in Urine. This pigment was met with in a patient admitted to St. Bartholomew's Hospital suffering from Peripheral Neuritis under the care of Dr. J. A. Ormerod. The condition was probably congenital and was met with in the patient's father and in another member of the family. The pigment was not due to any drugs taken and it was differentiated from other purple pigments hitherto recognised. The means of its detection were described, and the conclusion arrived at was that it was a purple pigment allied to, though different from, the purple-coloured pigment that produced the deep colour in hæmatoporphyrinuria. When the urine was in large bulk the condition described might resemble alkaptonuria.

Dr. F. H. THIELE read a paper on a Brown Urinary Pigment. The pigment had been found in four patients admitted to University College Hospital. The first was a middle-aged woman suffering from pyorrhœa alveolaris; the second was a woman suffering from parotitis; the third was a child; and the fourth was a woman admitted for sloughing ulceration of the vagina. The pigment was precipitated from solution by ammonium sulphate, lead acetate, and alkaline baryta mixture. It was soluble in alcohol, amylic alcohol, and chloroform, and to a less extent in water. It yielded no spectroscopic band and in concentrated solutions it blotted out the spectrum from the red onwards. An alkaline solution of the pigment in caustic soda did not yield on the addition of calomel the rose-red colour obtained with urobilin. The pigment was very much like urobilin, but differed in several respects. In one case it was worth noting that the patient subsequently had a distinct urobilin band in the urine and besides having a yellowish pigmentation of the skin she had a raw surface on the abdomen the edges of which were green.

Dr. A. E GARROD remarked on the interest of both of these papers, which bore eloquent testimony to the value of the spectroscope in the recognition of biliary derivatives in the urine. Dr Scholberg's case appeared to be an individual variation in metabolism.—Dr. H. BATTY SHAW remarked on the interest attaching to the second of Dr. Thiele's cases in which the skin was certainly very yellow, but as there was no bile pigment in the urine possibly the case belonged to the condition which some writers had described as "urobilin jaundice."—Dr. HOPKINS and Dr. GARROD dissented to the use of the term "urobilin jaundice," the latter remarking that there was no evidence that the colouration of the skin was due to urobilin.—Dr. J. R. BRADFORD had seen cases at long and rare intervals in which there was yellowness of the skin, and the urine, though containing no bile pigments, contained large quantities of urobilin.—Dr. HALLIBURTON remarked on the difficulty of the spectroscopic recognition of urobilin.

## CLINICAL SOCIETY OF LONDON.

### *Exhibition of Cases.*

A MEETING of this society was held on Feb. 28th, Mr. HOWARD MARSH, the President, being in the chair.

The PRESIDENT showed a man who had sustained a Dislocation of the Semilunar Bone, the displaced bone hav been removed by operation. Skiagrams of the case w shown by Mr. Mackenzie Davidson.

Dr. GRAHAM BROWN (introduced by the PRESIDEN exhibited a new form of Æsthesiometer for estimating t degree of acuteness of tactile sense at different parts of t skin. The instrument consisted essentially of a smoot surface which could be made rough to any desired degree b means of adjustable projections from this surface. It wa specially suitable for clinical work in cases in which tactile sensation was impaired and was designed to measure the degree of loss in any given case.

Dr. WILLIAM EWART exhibited a case illustrating the Treatment of Bronchial Dilatation and Bronchial Catarrh by Posture and Respiratory Exercises. Dr. Ewart described the method, which consisted of keeping the foot of the bed raised, sometimes to a considerable height, whilst the shoulders were kept low, only the head resting on the pillow. The first case in which it occurred to him to carry out this indication had been published; others, including some cases of phthisis, had been under treatment. The method, however, had been previously thought of and described by Quincke. The patient exhibited was a man, aged 21 years, who was suffering from bronchiectasis.

Mr. JOHN R. LUNN exhibited cases of (1) Locomotor Ataxy with Disease of the Shoulder-joint in a man, aged about 65 years; (2) Polyarthritis in a man, aged 30 years; and (3) Osteitis Deformans in a man, aged 72 years (with skiagram).—In the discussion which followed reference was made to cases of osteitis deformans in which fracture had occurred, though this was thought to be unusual unless sarcoma was present.—Mr. ANTHONY A. BOWLBY, in discussing the case of polyarthritis, thought that this resembled some cases exhibited on a previous occasion by Dr. Percy Kidd in which bronchiectasis had existed. He (Mr. Bowlby) believed that there was a great deal to learn about polyarthritis, and he suggested that Mr. Lunn's case was due to some form of chronic septic infection by reason of the number of joints involved and the long duration.

Mr. CUTHBERT S. WALLACE exhibited a case of Excisi of the Lower End of the Ulna for an old Colles's Fractu The patient was a man, aged 55 years, who was admitted hospital in August, 1899, for loss of power in the hand i consequence of a Colles's fracture which he had receive some time previously. There was much abduction of th hand and flexion was extremely limited owing to the lowe end of the ulna overlapping the carpus. About three-quarters of an inch of the ulna was removed through an incision on the inner side of the wrist. Skiagrams showed the condition before and after operation. The patient could now follow his occupation.

muscular. He had seen a similar tumour mistaken for neurofibroma.

Dr. H. TILLEY showed a girl, aged 14 years, who had an Aural Exostosis with Extensive Mastoid Disease. He reflected a post-aural flap and gouged out the broad-based exostosis. The antrum was full of inspissated pus which was cleared out and the complete post-aural operation was done. The external wound was sewn up and the packing was done through the meatus. The membranous portion of the meatus was slit up and the flap was made in the usual way. The wound healed at the back by first intention. A fortnight later he reopened the wound and produced a clear surface by scraping away the granulations and putting in a large flap from the inside of the thigh, after the method introduced by Mr. Ballance. The skin graft had taken satisfactorily and the cavity was practically dry. The girl was now able to hear a whisper at a distance of four inches.

Dr. CALEY showed a case of Abdominal Aneurysm involving the aorta and the right common iliac artery. The patient was a man, aged 39 years, who had suffered from syphilis 16 years previously but who gave no history of injury or strain. With prolonged rest in bed, restricted diet, and 20 grains of iodide of potassium three times a day the pulsation much diminished in extent and in degree, the tumour became more solid, and the distension of the veins of the leg almost disappeared.—Mr. BARNARD said that a man at the London Hospital had a superior mesenteric aneurysm. The case had been twice described as an example of cure by different treatments. In the first place it was said to have been cured by gelatin treatment. Then it relapsed and was treated with anti-diphtheritic serum, and was cured under that. Now, three years afterwards, the man was in the London Hospital again, being treated with morphia, and it was suggested that the surgeon might like to resort to the ligature. But the risks of this were too great and the man would not allow a wire to be introduced into the sac.

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# LIVERPOOL MEDICAL INSTITUTION.

*Long Duration of Pregnancy.—Gastric Ulcer.—Appendicitis running an Unusual Course.—Cerebro-spinal Rhinorrhœa.—The Relation of Mental Symptoms to Bodily Disease.*

A MEETING of this society was held on Feb. 27th, Mr. RUSHTON PARKER, the President, being in the chair.

Mr. C. THURSTAN HOLLAND read a note on the Duration of Pregnancy, based on a case—that of a young primipara—in which, counting from the last date of normal menstruation to the birth of the child the duration was 340 days, from the date of the last coitus to the birth 323 days, and from the date of the menstruation following the last coitus (an abnormal period only lasting two days) 316 days.—Dr. W. MACFIE CAMPBELL said that he had notes of 64 cases in which the date of impregnation was known, and the average came to 268 days, or rather less than is generally allowed. In one case of seduction 273 days elapsed after one coitus. Nine cases of no menstruation after marriage gave an average of 264 days, and in five cases in which the husbands (sea-faring men) were only at home for one night 277 days He never had a case similar to that of Mr. Holland, which was open to a little doubt; it was so difficult to be quite sure of the data in these matters. He had, however, notes of six cases ranging from 293 to 303 days, of three cases of 308 days, of one case of 310 days, and of one of 312 days. Mr. Holland's paper was of much interest from a professional and legal point of view, and it showed how important such a question might be.

Dr. R J. M. BUCHANAN and Mr. R. A. BICKERSTETH brought forward a case of Gastric Ulcer in which a successful operation had been performed for perforation. The patient was a female, aged 27 years, who gave a history of epigastric pain and occasional vomiting extending over a period of two years. 27 hours after the symptoms of perforation came on laparotomy was performed at the Liverpool Royal Infirmary. Much turbid fluid was found in the abdomen, collected in pockets formed by recent adhesions. A perforation near the cardiac end of the stomach was found with some difficulty, and eventually it was closed by passing a rectangular cleft palate needle deeply through the tissues on each side of it Dr. Buchanan said that on admission to the infirmary the patient did not exhibit any signs of collapse, but rather of reaction, the pulse was of good volume, 120, and steady, her temperature was 100° F., and the respirations were shallow and purely costal. Her face was pallid and somewhat pinched, the expression being indicative of pain and distress; the skin was moist. On examination of the abdomen it was seen to be much distended, the distension being localised to two areas. One, the upper, was bounded by Harrison's furrow above, and the second was a transverse furrow below, about one inch above the umbilicus. Over the epigastric distension the abdomen was tender on palpation and the wall felt somewhat boggy; it was tympanitic on percussion, and on auscultation the heart sounds were heard as if echoed in a gas-containing cavity. The liver dulness was diminished to one inch above the lower costal margin. The lower portion of the abdomen was distinctly stretched and tympanitic. The abdominal walls did not move on respiration. The patient complained of most severe pain in the left hypochondrium and extending towards the base of the left lung behind; it was intensified on deep inspiration, and auscultation revealed a soft friction-sound most marked below the diaphragm. It was not of the usual near and harsh pleuritic character and was considered to be of peritoneal origin and sub-diaphragmatic. It was impossible to locate the ulcer with accuracy, but the localised friction suggested that its position might be at the cardiac end. That such was the case was verified at the operation. Dr. Buchanan said that the points which influenced their decision for operation, even after the long period of 27 hours from perforation, were the symptoms of reaction, the steady pulse, and the rising temperature. The localised distension of the epigastrium pointed to adhesions acting as a safeguard from further leakage The operation was performed on August 6th, 1901, and the patient left the hospital on Oct. 20th, and had continued well up to the present time.

Dr. W. BLAIR BELL related a case of Appendicitis which had run an unusual course. At the operation he found an empty abscess cavity. The stump of the appendix was ligatured and was removed from the cæcum and the apex from the ileum to which it adhered and where there was a large perforation through which the abscess had discharged into the bowel. He closed the perforation and packed the abscess cavity with gauze soaked in iodoform emulsion. The patient, a girl, aged 16 years, made an uninterrupted recovery.

Mr. C. F. LARKIN read the notes of a case of Cerebro-spinal Rhinorrhœa. The fluid had escaped through a fracture of the basi-sphenoid. The patient lived for 27 days after the fracture and then died from septic meningitis.

The three last cases were discussed by Dr. C. J. MACALISTER, Dr. E T. DAVIES, Mr. F. T. PAUL, Mr. G. P. NEWBOLT, and the PRESIDENT.

Dr. NATHAN RAW read a paper on the Relation of Mental Symptoms to Bodily Disease. He first of all minutely described the symptoms present in various diseases of the viscera, with special reference to reflected visceral pains, and agreed in the main with the conclusions of Head that they were present in a fair proportion of cases of heart disease, phthisis, and diseases of the stomach and liver. He then described the various mental symptoms occurring in the course of kidney disease, gout, exophthalmic goitre, myxœdema, and chorea, mentioning several cases of temporary insanity which he had noticed. The mental symptoms occurring in the course of typhoid fever, pneumonia, and rheumatic fever he divided into two important groups, those of the initial stage of the fever due to the severity of the infection and characterised by mania and delirium and those supervening on convalesence, chiefly of a depressant and melancholic type. He had often observed post-typhoid insanity of the melancholic type with delusions, and was of the opinion that it was due to nervous exhaustion and insufficient food. In his experience post-typhoid insanity always passed off and the patient's mind was restored to the normal. He had never observed insanity to follow an attack of pneumonia. After a long observation of many thousands of cases Dr. Raw was of opinion that there was a form of temporary mental disorder which occurred as part and parcel of some bodily disease, and which rendered the patient insane for the time, but which rapidly passed away. He was strongly of opinion that these patients should not be certified as lunatics and sent to an asylum, but that they should be treated in a special hospital for mental diseases. He advocated the provision of a reception house or hospital for mental disorders in Liverpool, where patients suffering from delirium tremens and other forms of temporary mental disorder could be sent and specially treated and where the hypertrophy of the right ventricle. There was probably also an incomplete intra-ventricular septum.—Dr. E. CAUTLEY said that the case illustrated a difficult point in diagnosis. Dr. Morison had pointed out the presence of cyanosis and a murmur and had suggested the diagnosis of pulmonary stenosis. On the other hand, there was no thrill, and his own experience was that pulmonary stenosis was much more commonly diagnosed ante mortem than post mortem. The last case of the kind which he had seen was typical. The patient was a child who during life had practically no cyanosis, but had a systolic murmur which could be heard all over the cardiac area and was subsequently found to have atresia of the conus pulmonalis. The orifice was so narrowed that it would only admit a fine probe, and yet there was no cyanosis. There was, in addition, a patent septum ventriculorum. That led to the question as to the cause of cyanosis. In the child he referred to, who was four or five months old, there was extreme atresia of the conus pulmonalis; there was no obstruction in the artery, and none in the valves. It scarcely seemed probable that mixture of blood in the two ventricles could give rise to cyanosis. Therefore he asked why in the present case cyanosis was present. Was it to be ascribed to extreme pulmonary stenosis? If so, why in other cases was there no cyanosis? He, however, was not prepared to suggest any other diagnosis.—Dr MORISON, in reply, said that he thought the intermixture theory of cyanosis had been largely abandoned, obstructive conditions as the chief cause of the cyanosis holding the ground.

Mr. H. L. BARNARD showed a young woman who was the subject of Bazin's Disease and who had had the ulcers on her legs for the last five years. They appeared first as nodules under the skin and felt somewhat like erythema induratum. Those burst and broke down and formed little round ulcers each of about the size of a shilling, punched out, and extraordinarily like specific ulcers, for which they were often mistaken. They were supposed to be tuberculous, and he regarded the present patient as being tuberculous. She had had tuberculous disease of the spine and of the left ankle, the latter having got well after being put into a plaster-of-Paris case. The ulcers left a pigmented scar which looked extremely like that left by a specific ulcer. Mr. Hutchinson had pointed out that such subjects were singularly predisposed to chilblains. The present patient never had chilblains or enlarged glands in the neck. In a case similar to the present one he endeavoured to find the tubercle bacillus but failed, nor did injection of the substance into guinea-pigs and rabbits produce tuberculosis.—Mr. CAMPBELL WILLIAMS thought that there was no doubt about the diagnosis, but one point about the case was abnormal—namely, its symmetry. In his original description of the disease Bazin said that he had never seen it extend above the knee. That was obviously wrong, because it was not only seen there but might be limited to that region. Recently he saw a woman who had a patch on either knee, on the vastus internus, the lower part of the limb being free. It might occur on the hands. The present case was typical because it had ulcerated. Occasionally resolution occurred without ulceration, leaving a fawn-coloured depression. The lesions were often mistaken for tubercle, but more frequently for syphilis. Tonics, cod-liver oil, and warmth, with antiseptic dressings to keep the part clean, did much good. If the patients could go to a warmer climate they got rapidly well.—Dr. A. EDDOWES said that most of such patients had a good deal of standing, and a fair number of them were washerwomen. Another peculiarity was that the condition was worst in the winter; indeed, it occurred in some cases only in the winter.—Mr. BARNARD, in reply, said that he put the girl upon a good course of iodides and mercury, but the original ulcers got well under treatment by strapping with Scott's dressing. The last crop of lesions had got well under boric acid ointment with bandaging, combined with a tonic.

Mr. BARNARD also showed a girl with an Anomalous Condition of the Hand. She consulted him three or four months ago for what was regarded as an erysipelatous rash. Vesicles came up at night, then burst and left linear marks. The marks were upon the left hand and in a direction from right to left. The case was no doubt of artificial origin. The girl was left-handed.—Mr. CAMPBELL WILLIAMS said that the case was one of dermatitis factitia. No vesicular disease took a linear form. If the patient's hands were tied behind her back for 48 hours the rash would entirely disappear.

Dr. JAMES TAYLOR showed a woman, aged 23 years, who was the subject of Syringomyelia. Five years ago, after bathing, she had what was called a poisoned hand. Apparently there was a gathering at the base of the index finger of the left hand and that was opened. What attracted attention at that time was that although a considerable incision was made she did not seem to find it painful and was complimented by the surgeon on her pluck and composure. The wound did not readily heal. As a matter of fact there was no pluck because she did not feel the incision. Afterwards the hand was contracted and in the few years which elapsed there had been a gradual development of symptoms in the shape of weakness of the left arm, with claw hand and the vaso-motor disturbance, of which evidence could be seen. Frequently bullous sores appeared on the fingers and hand, not, so far as the patient knew, caused by any external application, but probably from hot and irritating things which she could not feel, such as burning. There was wasting of the hand and shoulder, but she said that she could walk fairly well. The knee-jerks were both of them exaggerated; ankle clonus could be elicited on both sides, as well as the extensor plantar response in the left foot. She had very marked anæsthesia to all forms of stimulation over the hand and lower part of the forearm. Higher up in the arm she had a certain degree of thermal anæsthesia and analgesia. Over the trunk there was a similar condition. On the left side of the face she had distinct thermal anæsthesia and marked analgesia on the left side of the forehead. There were marked nystagmus, which was not uncommon in such cases, and lateral curvature of the spine. Apparently until five years ago she was quite well, and Dr. Taylor thought that the condition probably depended upon some inherited peculiarity of the spinal cord which after the age of puberty took on some modification which had resulted in a spread or greater dilatation of the canal and consequent encroachment upon the anterior horn of the left side in the cervical region, and the pressure probably also resulting in some degree of sclerosis in both lateral columns.—Dr. MORISON, the PRESIDENT, Mr. BARNARD, Dr. CAUTLEY, and Dr. D. DALLAWAY took part in the discussion.—Dr. TAYLOR, in reply, said that as the patient had been under his care for only a month he did not know the rate of progression of the disease. It seemed to be extremely slow, as was usually the case. In cases of syringomyelia there were two conditions; first, a cord with a congenital abnormality which took on some slowly progressive change, probably under some condition of stress; and another kind in which it was conceivable that the whole process was one of new growth starting in the way in which new growths did, of which very little was known. He thought that Charcot's disease in such cases was rare. He had seen only one case—namely, in the elbow, which Dr. J. Hughlings Jackson and Dr. James Galloway published in THE LANCET ten years ago.[1] With regard to flushing, no doubt girls subject to the condition had the pretty pink and white complexion shown by the present patient, and he would be inclined to associate that with some vaso-motor disturbance analogous to what was present in the hands of his patient. That was all the more likely in a case in which there was definite evidence of involvement of the fifth nerve.

Dr. EDDOWES showed a man, aged 23 years, who had for nine months found a tendency for his nails to separate, but there was no other indication of disease about him. Slight influenza two years ago was the only illness that he had had for 15 years. There was no indication of psoriasis. The nails had been carefully examined for a fungus or other parasitic cause, but with a negative result.—Dr. PHILLIP said that he had never seen an exactly similar case, but a somewhat analogous condition had existed in his own person in the great toe-nails of both feet. For many years the inner three fourths died, and he had to cut that portion away. Underneath was a horny pulpy matter which he also cut away. He suffered from bad circulation, and he attributed it to that, combined with a neurotic origin. Both his hair and his nails were of very slow growth.

Dr. EDDOWES also showed a nurse who presented a Swelling in the Right Forearm which had now existed for three years and appeared to have been aggravated by sewing. Sometimes she complained of a good deal of pain and tenderness.—Dr. BOYD B. JOLL suggested that the condition might be neuroma or neuro-fibroma.—Dr. C. J. N. LONGRIDGE suggested the possibility that it was phantom tumour of the muscle.—The PRESIDENT thought that the tumour was cirrhosis of the liver in children might be explained as the result of an acute enteritis.—Dr. Taylor alluded to a case in a girl, aged 15 years, who suffered from choreiform movements associated with cirrhosis of the liver.—Dr. Weber and Dr. Sansom also discussed the specimen.—Dr. George Carpenter showed a case of Paroxysmal Hæmoglobinuria in a boy, aged three years. There was no evidence of syphilis. Application of ice-cold water to the extremities induced an immediate destructive action on the red corpuscles to the extent of 20 per cent., but failed to produce hæmoglobinuria.—Dr. Weber urged the importance of a warm climate in the management of such cases —Dr. Hawthorne, Dr. Sutherland, and Dr. Taylor discussed the case, and Dr. Carpenter replied.—Dr. Carpenter also showed a case of extreme Ichthyosis in a male infant, aged five months, which developed a few days after birth. The infant had craniotabes and chronic snuffles as well.—Dr. Carpenter also showed a boy, aged eight and a half years, with a large head, probably hydrocephalic, a supposed sequel of basic meningitis during infancy. There were rigidity of the lower extremities and a feeble gait. The enlarged head was not characteristic of hydrocephalus and was somewhat suggestive of hypertrophy of the brain.—Dr. Gwynne described the case of a boy, aged six and a half years, who was admitted to hospital suffering from obstinate constipation and great emaciation. His abdomen was enormously enlarged. As no action of the bowels could be obtained, either by medicine or by injections, left iliac colotomy was performed. The condition was diagnosed as a Congenital Dilatation of the Sigmoid Flexure of the Colon. The result of the operation was satisfactory.—Dr. J. Porter Parkinson read a paper on the Local Treatment of Adenoids. This consisted in the direct application to the naso-pharynx of an astringent compound of equal parts of solution of perchloride of iron and glycerine, applied by means of a curved brush passed behind the soft palate. Dr. Parkinson advised this treatment for soft and gelatinous adenoids which caused temporary recurrent obstruction of the nasal passages and other symptoms, such as cough, headache, aural discharges, and deafness The method was applicable to patients of any age and could be carried out with a minimum of discomfort.—Dr. Sutherland having spoken, Dr. Parkinson replied.

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[1] THE LANCET, Feb. 20th, 189[illegible], p. [illegible].

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—An ordinary meeting of this society was held at Liverpool on Feb. 21st, Dr. S. Buckley, the President, being in the chair.—Dr. T. Arthur Helme (Manchester) showed the following specimens. 1. A Carcinoma of the Cervix Uteri with Double Pyosalpinx removed per vaginam from a nullipara, aged 23 years. The patient had been married 12 months. The husband had gonorrhœa a few months before marriage. The symptoms of menorrhagia and discharge had existed for about six months The points of interest in the case were the early age for cervical cancer, its occurrence in a nullipara, and the association with gonorrhœal pyosalpinx. The growth consisted of columnar carcinoma. 2 A Polypoid Carcinoma of the Corpus Uteri removed by vaginal hysterectomy from a virgin, aged 41 years. The operation was rendered difficult by the smallness of the vagina, and incision of the perineum was required and also median incision of the anterior uterine wall. The ligaments were clamped. The growth was adeno-carcinoma It originated in the right side of the body of the uterus, forming a large polypoid mass protruding into the vagina 3 A Solid Ovarian Tumour and Primary (?) Tuberculous Peritonitis with Ascites. Wasting, ill-health, and abdominal enlargement had been noticed for some months previously. There was an evening rise of temperature which was subnormal in the morning. The signs were those of a considerable amount of free fluid in the peritoneal cavity, together with the presence of a solid ovoid tumour in the right ovarian region. The uterus was not enlarged. The history, general condition, and physical signs suggested tuberculous peritonitis rather than simple ascites associated with the tumour. The abdomen was opened and the tumour was removed. It was a fibroma of the right ovary. There was no evidence of malignancy. The whole of the posterior surface of the right broad ligament and uterus was covered with a thick caseous tuberculous-looking material and the pelvic peritoneum generally showed the usual evidences of tuberculous peritonitis. Both Fallopian tubes appeared to be healthy. The ascitic fluid was removed and the abdomen was closed. The patient had completely recovered health at the present date, nine months after operation.—The specimens were discussed by Dr. E T. Davies and others.—Dr. Lloyd Roberts (Manchester) showed a large Uterine Polypus removed from a married woman, aged 52 years. There was commencing necrosis with offensive discharge and bleeding. The pedicle, which was of about twice the thickness of a thumb, sprang from the posterior uterine wall above the internal os. In addition to the polypus the posterior cervical lip and adjoining vaginal fornix showed superficial ulceration. The appearance of the polypus suggested the possibility of malignancy, but examination failed to reveal such a condition. A further investigation would be made —Dr. W. Walter (Manchester) showed a Solid Tumour of the Right Ovary removed by abdominal section from a multipara, aged 39 years, whose periods suddenly ceased five years previously. The other ovary was small and atrophied and no ascites was present. At the outer end of the tumour, which was of the size of a small cocoanut, the capsule was very thin and friable, and over a small area the contents were pink and of the consistence of putty. The remainder of the tumour was firm and cut like a pear. Some parts looked like a fibroma, but microscopically the ovarian stroma was found to be extensively infiltrated with round-celled sarcoma —Dr. H. Briggs (Liverpool), Dr. A. Donald (Manchester), and the President discussed the difficulty of distinguishing benign from malignant connective-tissue tumours of the ovary, and Dr Walter replied.—Dr. Donald and Dr. W. K. Walls related a case of Spontaneous Rupture of a Uterus Bicornis Unicellis during Pregnancy. The first four confinements had been tedious or instrumental. The fifth occurred in St. Mary's Hospital, Manchester, and was described by Dr. Walls in the society's *Transactions* for 1899. The present labour commenced with pain and hæmorrhage and the placental edge was felt just within the cervix. The cervix was plugged, but as bleeding returned and pains ceased a leg was brought down under chloroform. The skin of the fœtus was peeling. No progress taking place multiple incisions of the cervix were made and the base of the skull was perforated. The cervix tore, the laceration involving the broad ligament through the peritoneum. On passing the hand to remove the placenta the two horns were found to have separated, the thin intervening tissue having given way. The abdomen was opened and pan-hysterectomy was done. The patient made a good recovery.—Dr. Briggs exhibited: (1) three examples of Solid Ovarian Carcinomata; (2) Necrobiosis of Fibroma of the Ovary; (3) Double Ovarian Cystoma and Pregnancy; and (4) Vaginal Nodules in a case of Adeno-Carcinoma of the Cervix —Remarks were made by Dr. Donald, Dr. Lloyd Roberts, Dr. Walter, Dr. N. Raw, and Dr. Helme, and Dr. Briggs replied.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Feb. 28th, Dr. A. G. Barrs, the President, being in the chair.—Mr. T. Pridgin Teale read a note on the Relief of a Distended Joint by the Establishment of Subcutaneous Leakage. The first case on which this practice was based was one of acute distension of the knee-joint attended by intense pain which he had punctured with a narrow knife expecting to find pus. As the fluid which escaped along the knife-blade was but slightly turbid synovial fluid, instead of opening and draining the joint externally he made three or four punctures with the narrow knife, taking care that the openings into the synovial cavity should be about half an inch in extent. The result was that the fluid escaped from the joint into the tissues outside the joint and was there harmlessly absorbed. There was at once relief to pain and the joint rapidly recovered. Mr. Teale had adopted the same method on several occasions. Mr. J. Hardie of Manchester had written to Mr. Teale that he had adopted this plan several times with relief in early disease of the hip-joint, but had not continued to use it as he became convinced that most of the cases to which it was applicable needed early excision, inasmuch as the disease in the majority of cases began in the subchondral layer of bone and then affected the synovial membrane.—Mr. H. Littlewood and the President took part in the discussion.—Dr. A. L Whitehead read a paper on the Influence of Nasal and Naso-pharyngeal Obstruction upon the Development of the Teeth and Palate. The conditions giving rise to such obstruction were enumerated and the changes brought about in the shape of the palate and the position of the facilities could be given to students for studying this important group of mental disorders; and he was of opinion that such patients should not be subject to the stigma of having been certified as lunatics when a few weeks of special care would restore the mental equilibrium.—Dr. W. B. WARRINGTON mentioned the important observations of Sherrington who found that the emotional life of dogs seemed to be unimpaired after a complete section of the spinal cord below the origin of the phrenic nerves, and also in addition section of one vagus nerve. He also alluded to the innumerable poisons which could be demonstrated in the nerve-cells, and expressed the opinion that these changes had no distinguishing features from one another. He considered that the characteristics of mental disorder in visceral lesions depended rather upon the psychical life of the individual.—Dr. T. R GLYNN, Dr. W. CARTER, Dr. F. A. GILL, Mr. C. T. STREET, and Dr. J. BARR spoke, and Dr. RAW replied.

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## ROYAL ACADEMY OF MEDICINE IN IRELAND.

### SECTION OF PATHOLOGY.

*Fractures of the Radius and Femur.—Cultivation of the Tubercle Bacillus.—Exhibition of Specimens.*

A MEETING of this section was held on Feb. 21st, Professor E. J. McWEENEY, the President, being in the chair.

Professor E. H. BENNETT presented a cast and a skiagram of a Fracture of the Lower End of the Radius with Displacement of the Lower Fragment Forwards (reversed Colles's fracture, Smith's fracture), and described the details of the injury which had occurred six months before its examination by him; he also discussed the treatment. He then recorded the history of a case of impacted intra-capsular fracture of the neck of the thigh-bone, and presented to the Academy a skiagram which showed very fully the details of the bone lesion—a fracture in which the lower fragment was driven into the upper, and so by the impaction the pieces were fixed in apposition. All surgeons, he said, were now agreed that the non-union of non-impacted intra-capsular fractures was due to want of contact of the fragments and want of rest of the part. In all the specimens which he had seen the lower fragment was impacted in the upper.—Dr. J. KNOTT discussed the case.

The PRESIDENT (the chair being temporarily occupied by Professor BENNETT) demonstrated a case of Tuberculous Pleuro-pericarditis in which the bacilli were unusually numerous, so that cultures made direct on Löffler's serum gave abundant growths of the tubercle bacillus. He exhibited these primary cultures, showing the lichenoid appearance of the colonies and their characteristic tendency to grow on to the glass. Secondary cultures on glycerinated potato were also shown. They were most luxuriant, of a light reddish hue, nd the bacilli formed a scum on the dilute glycerine. He lso exhibited tertiary cultures on glycerine agar which were cceeding well. On this medium the colonies were whitish e patient was a man, 55 years of age, who suffered from erculous pleurisy on the left side. In the right lung there were nodules of tuberculous broncho-pneumonia, but the pleura was free. The superior pericardial glands were tuberculous, and the parietal layer of the pericardium was much thickened and infiltrated with caseous matter. The spleen was enlarged so as to form a tumour readily palpable during life. It was studded with yellowish necrotic masses larger than miliary tubercles and containing tubercle bacilli in large numbers. In the affected parts of the pericardium the bacilli formed masses large enough to be seen with the low power in the stained preparation.

The SECRETARY read (for Dr. D. F. RAMBAUT) a description of a Case of Congenital Hydronephrosis. The patient was a male who died from pulmonary phthisis. He had shown no symptoms or signs of kidney disease and his urine was free from albumin. The right kidney, which showed the hydronephrotic change, appeared a little larger than the left and weighed five and a half ounces, or half an ounce more than the left. Its capsule was non-adherent, and its cortex appeared normal. Much absorption of the pyramids had taken place. The ureter was not dilated The left kidney, the bladder, the prostate, and the urethra appeared normal.—The PRESIDENT said that he considered the specimen to be a case of dilatation of the pelvis and calyces of the kidney rather than one of hydronephrosis.

Dr. W. J. THOMPSON read a paper on a Large Abdominal Cyst. The patient was a mechanical engineer, 36 years of age, and was admitted into Jervis-street Hospital on Oct. 9th, 1901. On admission he was thin and emaciated, weighing 10 stones. The upper part of the abdomen was greatly distended. In May, 1900, he first noticed a swelling in the region of the liver and this gradually increased until it attained its present size. He lost flesh rapidly, and shortly before his death, which took place on Dec. 13th, he only weighed eight stones and four pounds. He was frequently urged to allow an operation, but would never consent. The diagnosis arrived at was that it was a huge cyst, and that it was either in connexion with the pancreas or the omentum, or that it was situated in the lesser sac of the peritoneum. At the necropsy a great number of adhesions were found but there was no ascitic fluid. The cyst was very moveable and had the stomach stretched over and adherent to the anterior surface. The pancreas and descending aorta were embedded in its walls. Its circumference measured 32 inches. All the other abdominal organs seemed healthy and there were no enlarged glands.—The PRESIDENT said that the specimen was a good illustration of the rapid growth to an enormous size that pancreatic tumours, or tumours connected with the pancreas, might attain to.

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SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.—An ordinary meeting of this society was held on Feb. 21st, Dr. James Taylor being in the chair.—Mr. J. Jackson Clarke showed a girl, aged nine years, who sustained a Fracture of the Outer Condyle of the Humerus in August, 1901. When seen two weeks after the injury the elbow was rigidly extended, the ulna was dislocated backwards, and the bones of the forearm were dislocated outwards. Under chloroform the elbow-joint was fixed at a right angle. There was now perfect power of pronation and supination, as well as an increasing degree of flexion and extension.—The case was discussed by Mr. Alfred H. Tubby.—Dr. C. O. Hawthorne showed a case of Congenital Spastic Paraplegia in a boy, aged two and three-quarter years. There were crossed-leg progression and heightened tendon phenomena, but no positive evidences of a cerebral lesion. There was no specific disease or family neurosis.—Mr. H. L. Carre-Smith inquired as to the results of ophthalmoscopical examination —Mr. Tubby was of opinion that the subjects of this affection were never mentally complete.—Dr. G. A. Sutherland regarded the slight strabismus present in the case as confirmatory of a cerebral origin.—Dr. Robert Hutchison was inclined to regard the case as one of Little's disease.—Dr. Taylor thought that syphilis undoubtedly played a part in the causation of the disease, for he had seen some patients with syphilitic choroiditis —Dr. Hawthorne, in reply, said that the fundus showed no changes and that the family history was not suggestive of syphilis.—Dr. Hawthorne also showed a case of Hypertrophy affecting the right lower limb of a boy. The condition seemed to affect the bones as well as the soft tissues. The tibial arteries were probably enlarged. Hæmorrhagic spots and patches were present on the leg and on the dorsum of the foot. There was no other deformity except a moderate degree of hypospadias.—Dr. A. L. Sansom believed that this was an instance of genuine hypertrophy.—Dr F Parkes Weber thought that the spots and patches were distinctly nævoid. The veins and arteries of the limb were much dilated.—Dr. Hawthorne replied.—Mr. Sydney Stephenson showed a girl, aged 11 years, with a Congenital Paralysis of the Oculo-motor Nerve on the Right Side. After discussing the theories of causation he concluded that the condition was due to an absence of, or to functional inactivity of, the nuclei of origin of the nerve.—Dr. Taylor, after mentioning the rarity of such cases, said that he did not know whether any definite lesion had yet been found in the nerve nucleus.—Mr. Carre-Smith asked if there was any evidence of congenital syphilis.—Mr. Stephenson, in reply, stated that there was neither family nor personal evidence of syphilis.—Mr. E. W. Goble exhibited a specimen showing Perforation of a Tuberculous Ulcer of the Small Intestine in a boy, aged six years. The child died from general tuberculosis —Dr. C. N. Gwynne (Sheffield) remarked that tuberculous nodules in the intestines sometimes existed without causing any symptoms. He had met with such nodules when operating for the radical cure of hernia in children.—Dr. W. C. Chaffey (Brighton) exhibited a specimen of Cirrhosis of the Liver from a girl, aged 10 years. —Dr. W. T. Lister thought that some obscure cases of and diagnosis by Dr. F. W. Eurich, and its treatment and complications by Dr. H. J. Campbell.—Dr. Evans said that in Bradford during the years 1897 to 1900 cases arose in 934 houses; of these houses 737 were furnished with midden closets and the remainder with water-closets or "tipplers." He exhibited a Pettenkofer's chart for the town of Munich in which the height of the subsoil water and the prevalence of typhoid fever were represented. He expressed the opinion that Pettenkofer's theory was not proved, but that the diminution of typhoid fever in Munich was due to the general improvement in the sanitary conditions of the place.—Dr. Eurich dealt with the bacteriological diagnosis of typhoid fever. After describing the characters of the bacillus typhosus, cultural and morphological, he concluded that the direct bacteriological test was impracticable for diagnostic purposes. He alluded to the direct examination of the splenic blood obtained by aspiration and condemned it as dangerous and uncertain. Widal's test was described, but it was pointed out that trustworthy results could be obtained only if a proper proportion of serum to bouillon culture were present. This proportion was stated to be about 1 to 40.—Dr. Campbell, speaking of treatment, said that up to the present no very satisfactory result had been obtained from treatment by antitoxic sera. In regard to the treatment by drugs, they were to be divided into three classes: (1) intestinal antiseptics; (2) cardiac and respiratory stimulants; and (3) antipyretics. He condemned the use of antipyretics except on very rare occasions. The second class of drugs must be used in general indications. He considered that strychnine should be used only in large doses and for a short time in cases of collapse. Digitalis might be useful in small doses, both for its diuretic effect and also for its action on the heart muscle. He thought that alcohol would be required in most cases, but should not be given as a routine practice. Cases treated systematically by baths showed a lower percentage mortality than others, but the bath treatment could only be carried out satisfactorily in hospitals, or at any rate where plenty of assistants were available. In regard to diet a decided opinion was expressed in favour of milk as the staple diet for typhoid fever patients.—Dr. Dunn related some of his experiences with the troops in South Africa. He said that in 30 per cent. of the cases there was no eruption of the skin. Milk was not usually available, except sweetened condensed milk which the men disliked. They had pulped bread, thin bread-and-butter, and beef-tea In 10 days or less from the time that the temperature was normal the men often had to shift pretty much for themselves and were fed on ordinary diet of bread or biscuit, jam, and corned beef. He said that relapses were infrequent and deaths from perforation were uncommon.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Feb. 19th, Dr. E. C. Kingdon, the President, being in the chair.—Dr. C. B Taylor showed two cases of Recent Extraction for Double Cataract.—Dr. H. Poole Berry read a paper on the Importance of the Attempt at the Diagnosis of Common Functional Disorders—The President, Dr. W. B Ransom, Mr. T. Geraty, Dr. F. H. Jacob, and Miss S. Gray discussed the subject, and Dr. Berry replied.—Dr. Jacob read a short paper on the Diagnosis and Treatment of Empyema. Bronchiectasis at the base of the lung, subphrenic abscess, and pyopericardium might be mistaken for empyema, and withdrawal of pus by means of a needle of large calibre was necessary for diagnosis; examination of pus was valuable—thick creamy pus showing pneumococci, thin pus streptococci, and putrid pus the possibility of subphrenic abscess. As regards *treatment*, aspiration alone was not trustworthy, though it was sufficient in some cases; removal of a piece of the ninth rib just outside the angle of the scapula and free drainage he had found most successful. Tuberculous cases never did well if opened and drained, as they became infected by other organisms and death was thereby hastened. The value of treatment by means of irrigation and baths of a weak solution of boric acid were instanced; also Estlander's operation in chronic cases—The subject was discussed by the President, Dr. Ransom, Dr. W. E Tresidder, and Mr. R. G. Hogarth, and Dr. Jacob replied.

HEALTH OF BUDLEIGH SALTERTON.—Mr. C. Beesley, the medical officer of health of Budleigh Salterton, states that during 1901, on an estimated population of 1883. the death-rate was equal to 18 per 1000, but more than half of these deaths occurred in persons over 65 years of age. The birth-rate was extremely low, being 12 2 per 1000.

# Reviews and Notices of Books.

*Lessons on Diseases of the Nervous System, 1898–99.* By Professor F. RAYMOND of the Salpêtrière Hospital, Paris. Fifth Series. Paris: Octave Doin. 678 pages. Price 16 francs.

THIS volume, which is accompanied by some coloured plates illustrative of various degrees of changes of sensibility with regard to heat, cold, and touch, shows the same degree of analytical subtlety in diagnosis and of general acquaintance with the views of authorities on the various subjects that we noted in a review of the fourth series of lectures [1]

There are 32 discourses, of which eight are devoted to the question of epilepsy in its sensory and psychical relations, and there are some chapters describing modifications of insular sclerosis, hysterical deafness for words, cases of scleroderma, troubles of sensibility in syringomyelia and insular sclerosis, and two examples of amyotrophic lateral sclerosis. In Chapter VI. there is an interesting and comprehensive *résumé* of our knowledge concerning the topography of the cortical centres for general sensibility, from which it seems that whilst the doctrine of motor localisations in the area of the Rolandic zone appears to be impregnable, the same cannot be said of the centres for general sensibility. Discussing the method of Flechsig the author says that the Rolandic zone is the first territory of grey matter which enters into centripetal connexion with the periphery. Towards the end of intra-uterine life a second system of sensory fibres connects the optic thalamus with the convolution of the corpus callosum. After birth a third system of sensory fibres spreads out in the three frontal convolutions and in that of the corpus callosum, but especially in the foot of the third frontal convolution. The tactile sphere of Flechsig must not be confounded with that of general sensibility which occupies an area greater than the Rolandic but the precise limits of which we do not yet know.

One of the most interesting chapters is on three cases of scleroderma. Professor Raymond says that though at first sight this affection would appear to belong exclusively to dermatology, yet when viewed fundamentally it betrays its neuropathic origin, resembling the tropho-neuroses. The proof of this position is furnished by the nature of the pre-sclerodermic manifestations and by the order of distribution of the foci of thickening which are often symmetrical, or placed along the course of a nerve, or segmentary as if from a lesion of the radicles of a spinal nerve Again, scleroderma is generally found in people whose personal or family antecedents show a predisposition to nervous affections, and it is also associated with other affections of a neuropathic character—e g., hemiatrophy of the face, a complaint which often results from a central trophic neurosis. It may also be associated with exophthalmic goitre, or with tabes or infantile paralysis. There is, however, one capital objection to make against this view of the origin of scleroderma—viz., that up to the present time not any constant material alterations have been found in the nervous system, and nothing has been detected in the seat of the cutaneous alterations, in the great sympathetic, in the spinal ganglia, or in the roots of the nerves. The conclusion arrived at is that although it is a disease of the nervous system, yet its true nature and seat are not settled. Quite recently Leredde and Thomas have maintained that the lesions of the skin in the slow and extensive form of scleroderma are due to a toxic agency, but this is merely a theory, and Professor Raymond prefers to believe that a trophic neurosis is more acceptable

Chapter XXXII. is devoted to a very complete and teeth were described in detail.—Dr. A. Bronner, Mr. W. E. Margetson, Dr. J. E. Eddison, Mr. Teale, and the President took part in the discussion.—Dr. J. Gordon Sharp read a paper on Some Points in the Action of Digitalis and Strophanthus. He said that of the preparations of digitalis the tincture was the best because it contained a portion of all the active principles. The infusion was not so useful because it contained practically only one active glucoside. The old belief that the tincture did not keep was fallacious, for Dr Sharp obtained a tincture in the ordinary way of trade and found it physiologically active at the end of 14 months The active principles, such as digitoxin, digitalin, and digitalein, were not so trustworthy as the tincture or dried leaf in pill form. One advantage of the tincture or dried leaf over an isolated active principle was the combination of active principles whereby overaction was obviated, one active agent neutralising another to a large extent. The slowing of the pulse-rate in the patient taking digitalis was discussed, and it was ascribed to the heart being able to do more work in a given time; hence there was not the need for the heart to beat so fast, and what was lost in number was more than made up in increased contraction force. Within certain limits the nitrites and similar bodies were antidotal to digitalis, and the reverse held good, but it had to be remembered that there was a "difference in time" action, as, for example, sweet spirits of nitre in attaining its maximum action was 96 times more active than digitalis. In ordinary doses he believed that the drug was mainly excreted by the kidneys, and by treating large volumes of the urine of a patient taking digitalis with alcoholised chloroform he was able to obtain an extract which reacted similarly to extract of digitalis, and the same extract when perfused through the blood-vessels of a frog produced contraction and this contraction could be undone by subsequent perfusion of sodium nitrite. Coming to strophanthus, he said that the drug was not so poisonous as was supposed when given by the mouth because it was perhaps rapidly excreted by the kidneys. A woman had been known to take one fluid ounce of the tincture in 24 hours without being any the worse. In its action the drug was not like digitalis Any action which it had on the heart was that of a heart poison pure and simple, and any diuretic action it had was that of an irritant to the kidneys. Dr. Sharp believed that strophanthus would in time disappear from the present list of cardiac tonics.—Dr. C. M. Chadwick, Dr. Eddison, Dr D Sanderson Long, and Dr. Liddell joined in the discussion.—Dr. Bronner showed Picsbergen's Massage Vibration for the Treatment of Some Diseases of the Eyeball. —Dr Maule Smith showed a specimen of Tuberculosis of the Kidney of a Cow.—Other specimens were shown by Dr E Ward, Dr. J. Allan, Mr. W. Thompson, Mr. H. R. Beale, Mr. S. Walker, Mr Whitehead, Mr. W. H. Brown, Dr. T. W. Griffith, Mr. A W. Mayo Robson, Dr. J. B. Hellier, Mr. B. G. A. Moynihan, and Mr. L. Knaggs.

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[1] THE LANCET, Feb. 22nd, 1902, p 525.

**WINDSOR AND DISTRICT MEDICAL SOCIETY.**—The fifth meeting of the session of this society was held on Feb. 26th, Mr. W. B Holderness, the President, being in the chair.—Dr. H. Sinigar of Leavesden Asylum showed microscopical preparations of Typhoid Bacilli, Diphtheritic Membrane, Pneumococci, Leprosy and Plague Bacilli, Staphylococci, and the Bacilli of Anthrax.—Dr. E B. Hulbert showed, by permission of Mr. J. R. Lunn, specimens of Desquamated Skin from cases of Epidemic Eczema (Savill's disease).—Mr. T. H. E Meggs showed photographs of a case of Small-pox which had been recently under his care. The patient was 14½ years of age and had been vaccinated unsuccessfully when a baby She was again vaccinated five years ago when only one place took.—Dr. G. E. Hale showed a case of Retinitis Pigmentosa. Though not a deaf mute the patient had been very deaf for years. There was considerable limitation of the field of vision, but in spite of this the patient was a good shot.—Dr. C. R. Elgood showed a case of Successful Vaccination in a woman who had had Small-pox.—Dr Sinigar read a paper, entitled, "Results of the Vaccination of 1050 Adults." These results showed the number of vesicles that ensued in the case of primary vaccinations in the case of those once vaccinated, of those twice or three times vaccinated, and in the case of those who had had small-pox. The percentage of successes was recorded and all failures and doubtful results were duly noted. At the outset stress was laid on the want of uniformity in the potency of the different strains of lymph on the market. The paper then dealt more particularly with the clinical aspect of revaccination. Most of the cases presented very little constitutional disturbance and the vesicles ran a perfectly normal course, but in a certain proportion of cases the following were noted: papules from dressing irritation in 24 cases, pustules spreading beyond the vaccinated area in six cases, boils in 21 cases, carbuncle in one case, abscesses in four cases, reappearance of old skin trouble in one case, eczema in three cases, herpes in one case, erythemas in 23 cases, auto-inoculation in five cases, and generalised vaccinia in one case. The high percentage of successes among patients who had previously had sma pox was noted and conclusions were drawn. After describin a staphylococcus which had been grown from the lymp used, the paper concluded with an expression of the hope that the specific agent of vaccinia might soon be discovered, so that a standardised lymph and one free from extraneous organisms might then be used.—Dr. E. S. Norris (Eton) read a paper entitled, "1000 Cases of Vaccination and Revaccination" The paper commenced with an account of the small-pox epidemic of 1876-77, as witnessed by Dr. Norris at the Homerton Fever Hospital. The conclusions arrived at as to the effects of vaccination and revaccination were in the main that neither operation prevented an attack of small-pox in every case, though each did so in very many cases. Tables were next given showing the incidence of small-pox in the vaccinated and unvaccinated respectively, the general agreement of the experience of Dr Norris with that of other observers being especially shown in the heavy mortality among unvaccinated infants The value of good marks as distinguished from bad ones was next dealt with, this value being much more manifest after puberty, for in very early life it would appear that almost any kind of vaccination might suffice to obviate the worst effects of small-pox. The question whether vaccinia and variola could run their course together was gone into, several cases of interest being quoted. The paper ended with an allusion to the very high protective influence exerted by revaccination—a fact admitted by all observers.—Mr. J Brickwell, Mr. J. H. Tomlinson, Mr. T. H. E. Meggs, Dr. Hale, Dr W. A. Ellison, Mr. E. W. Adams, and the President spoke on the subject matter of the papers, and the discussion, on the motion of Dr. Ellison, was adjourned to the next meeting.

**DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.**—A meeting of this society was held on Feb. 26th, Dr A. J. Harrison, the President, being in the chair.—The President announced that Dr. Unna of Hamburg had most kindly accepted the invitation of the council to give the oration at the annual meeting on May 22nd.—Dr. J. H. Stowers then showed (1) a case of Lichen Planus; (2) a boy with extensive Alopecia and severe Vesicating Erythema of the Hands; and (3) a girl suffering from Favus. The last patient was born, and had lived all her life, in London. The origin of the condition could not be traced. Microscopical preparations of the fungus were exhibited.—Mr. George Pernet showed a case of Trophic Disorder of the Nails. He sought for an explanation of the disorder in some toxæmic state induced by carious teeth.—Dr. Alfred Eddowes showed a case of Calcification of Follicular Plugs found in Acne-like Papules on the Legs. The man, a painter, aged 70 years, had tophi on both ears and this led the members present to consider the salt found to be urate of soda. Microscopical sections of a papule were shown.—Dr. E. G. Graham Little showed the following cases: 1. Keratoderma Symmetrica of six months' duration in a woman. Dr. Little would not definitely exclude syphilis, but he believed the case not to be syphilitic. He suggested the possibility of arsenic, taken in beer, as a cause. He drew attention to the fact that the disease was preceded by tingling of the legs. 2. Lupus Vulgaris in a little girl, one of whose eyes had been completely destroyed by old phlyctenular ulceration. 3. Lichen Scrofulosorum in a boy.—Mr. Arthur Shillitoe showed (1) a case of Extensive Gummatous Infiltration of the Thoracic Wall in a man who contracted syphilis 30 years ago and had never since been free from som manifestation of the disease; and (2) a case of Genera Scaling Papular Syphilide.—Dr. Wilfrid B Warde showed (1) a case of Lupus Erythematosus; and (2) a case of Erythema Induratum

**BRADFORD MEDICO-CHIRURGICAL SOCIETY.**—A meeting of this society was held on Feb. 10th, Dr. H. Honeyburne being in the chair.—A general discussion was held on Typhoid Fever, the public health aspect of the disease being introduced by Dr. Arnold Evans, its pathology sterilised milk giving absolutely no evidence to the taste of having undergone a sterilising process.

### LECITHINE PREPARATIONS (CLIN) AND THE CACODYLATES (CLIN).

(F. COMAR AND SON, 64, HOLBORN-VIADUCT, LONDON, E.C.)

It is well known that lecithine is a phosphorised organic constituent found in nervous tissues, in egg yelk, and in the soft roe of fishes, while it is undoubtedly one of the phosphorised principles of the brain. It is a glycero-phosphoric acid in which two stearyl groups replace two hydroxyls, and distearyl-glycero-phosphoric acid combined with choline is lecithine, a yellowish-white, waxy solid, yielding on decomposition glycero-phosphoric acid, stearic acid, and choline. Lecithine has a very favourable influence on metabolism. It is a natural glycero-phosphate and is stated to increase the appetite and to effect a notable augmentation of weight in patients suffering from tuberculosis or anæmia. M. Lancereaux regards it as an excellent food, rendering great service in cases of rapid denutrition. In the preparations before us, consisting of pills of pure lecithine, granulated lecithine, and solution of lecithine, the lecithine was extracted from eggs by a carefully conducted process. The pills contain each 0·05 gramme of lecithine. The same quantity is contained in a teaspoonful of the granular preparation and the same quantity again in the hypodermic solution. The use of lecithine would appear to be a distinct advance therapeutically on the administration of chemically prepared glycero-phosphates. From the same firm we have received specimens of cacodylate preparations (Clin). The preparation of iron called "marsyle Clin" is worthy of notice in particular. It is a true compound of ferrous iron with cacodylic acid. It is reported to have given excellent results in those pathological conditions, such as anæmia or chlorosis, for which the use of iron or arsenic, or both, is indicated. The globules of marsyle are so made as to pass through the stomach without being dissolved, so that the garlic odour and taste occurring in eructations are said to be avoided. This interesting compound of arsenic and of iron, the former an adjunct to the latter, may also be had in the form of "drops" or in solution for injection. These Clin preparations are of distinct therapeutic merit.

### SCOTCH WHISKY, THE ALL MALT BRAND (A.M.B). No. 1 AND No. 2.

(P. MACKENZIE AND CO., LIMITED, 69, SOUTH JOHN-STREET, LIVERPOOL.)

On analysis the two samples of whisky submitted to us, each representing a separate vat, presented similar characteristics, as the following figures show. Whisky from vat No. 1: alcohol, by weight 43·14 per cent., by volume 50·72 per cent., equal to proof spirit 88·88 per cent.; extractives, 0·15 per cent.; acidity, recorded as acetic acid, 0·03 per cent. Whisky from vat No. 2: alcohol, by weight 43·71 per cent., by volume 51·32 per cent., equal to proof spirit 89·59 per cent.; extractives, 0·13 per cent.; acidity, recorded as acetic acid, 0·03 per cent. Each whisky possessed a pale colour which is consistent with the low amount of extractives shown in the above analysis. The degree of acidity was so slight as to be negligible. It is stated that this whisky is a pure malt whisky, and there is nothing in these analyses to show the contrary. Moreover, both whiskies possessed a delicate flavour which was decidedly malty, while they are soft rather than harsh to the palate, from which it may be deduced that both also have been duly matured.

### SPARKLING MOSELLE NATURAL BRUT.

(M. EISENHARDT AND CO., 20, CLIFFORD-STREET, BOND-STREET, LONDON, W.)

This wine is for all practical purposes sugar-free. Though it shows a reducing action on alkaline copper solution this is comparatively trifling and not entirely due to sugar. safely be stated that the sugar is decidedly less than one-fifth per cent. That there are just traces of sugar present is evident from the fact that we obtained characteristic crystals of glucosazone on treating the wine with phenyl-hydrazine in the usual way. Further results of analysis were as follows: alcohol, by weight 10·92 per cent.; by volume 13·52 per cent., equal to proof spirit, 20·30 per cent.; extractives, 1·78 per cent.; mineral matter, 0·15 per cent.; volatile acid recorded as acetic acid, 0·01 per cent.; non-volatile acid recorded as tartaric acid, 0·36 per cent. The wine possesses a delicate flavour and it is attractive and agreeably sparkling. We have very seldom examined a sparkling wine so free from sugar as this is, and it may therefore be recommended to those who are forbidden sugar-containing wines.

### WAND'S PILLS, PERLES, CAPSULES, AND TABLETS.

(MR. S. WAND, HAYMARKET, LEICESTER.)

We have received types of the products of this firm illustrating the improvements which the latest machinery effects in regard to the making of pills, capsules, perles, &c. We have put some of these to the test and find that the contents are as described, while each particular form of medicament yields readily to the dissolving action of water or dilute acids or alkalies. The gelatin-coated pills and granules, oval in shape, are perhaps worthy of special remark. They keep well, are soft, and are readily swallowed; they are said to be free from pinholes—a statement certainly true of the specimens sent to us. The specimens included phenacetin tablets, compound sulphur tablets, capsules, oval gelatin-coated pills, and pearl-coated pills containing the Blaud iron mass, and varnished aperient pills and santal perles.

### (1) ALGINOID OF IRON; AND (2) THYROGLANDIN.

(EVANS, LESCHER, AND WEBB, 60, BARTHOLOMEW-CLOSE, LONDON, E.C.)

Alginoid of iron is a compound of alginic acid and iron, the former being derived from the gelatinous substance prepared from algæ. Alginic acid appears to form definite metallic salts; that of iron is known as ferric alginate and contains 10·97 per cent. of iron. It is said to be unaffected by the gastric digestion and to pass the stomach unchanged and to be without astringent effect on the bowels, and is laxative rather than constipating. This curious iron compound may be obtained in the form of pills, pellets, or powder and has been administered, it is said, with good results in anæmia and chlorosis. Thyroglandin occurs in the form of powder, which is said to contain all the active principles of the thyroid gland of the sheep and to be four times the strength of the fresh gland. It is prepared under a patented process and is said to be of uniform strength and quality.

### HOVIS FOOD FOR INFANTS AND INVALIDS (No. 1 AND No. 2).

(HOVIS BREAD FLOUR CO., LIMITED, MACCLESFIELD.)

The advantages of these foods are that they are almost entirely soluble and that by the addition of them to diluted cow's milk a milk is obtained presenting the same composition as human milk. The method of their preparation necessarily involves their sterilisation. The composition of Food No. 1, according to our analysis, was as follows: moisture, 3·25 per cent.; mineral matter, 1·60 per cent.; proteids, 6·80 per cent.; malt, sugar, and dextrin, 88·35 per cent. The composition of No. 2 Food (for infants and invalids) was as follows: moisture, 2·45 per cent.; mineral matter, 1·55 per cent.; proteid, 5·67 per cent.; malt, sugar, dextrin, and starch, 90·33 per cent. Food No. 1 is almost entirely soluble in water, while Food No. 2 is not quite as soluble, containing a small proportion of wheat flour, and is intended for infants aged eight months and upwards. The proportion of proteids in both foods is comparatively small which, however, is amply compensated for by the fac interesting example of hysterical word-deafness in a young girl who could hear all the noises going on around her but *could not understand the meaning of words* which were addressed to her. The lecturer impresses this fundamental notion—that there is no more one aphasia than there is one language, but that there are as many varieties of it as there are different modes of communicating ideas, and he points out that there are aphasias of transmission, or the mode by which we communicate our ideas to others, and aphasias of perception, or the mode in which we receive ideas of communication from others. Aphemia and agraphia belong to the first order and word-deafness is included in the second order. It is pointed out that aphasia is sometimes a consequence of uræmia, and it is shown how emotion may produce both deafness and blindness. In his concluding remarks we note that these hysterical aphasias habitually reflect that tendency to dissociation which is seen in other manifestations of like character, notably hysterical anæsthesias. As a rule hysterical aphasia assumes the clothing of hysterical mutism which is a pure motor aphasia, but it may take on the form of pure word-deafness or be associated with agraphia, and the duration of the disorder varies in one case or another, being long or short.

The other essays are equally characterised by minute analysis and learning, with due acknowledgment of the work done by others, and though the subjects are scientifically handled they are expressed in a very easy and readable form.

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*Syphilis and other Venereal Diseases.* By H. de Méric, M.R.C.S. Eng., Surgeon to the French Hospital, London. London: Baillière, Tindall, and Cox. 1901. Pp. 132. Price 5*s*.

This little volume may be considered a brief practical account of the diagnosis and treatment of syphilis and the other diseases which are allied to it etiologically. It is not, and does not claim to be, an exhaustive treatise on the subject, but its very brevity will commend it to many practitioners who would be disinclined to peruse a larger work. We have spoken of the volume as practical, and its practical character is that for which we would chiefly commend it. We may not in all cases agree with the views set forth by the author, but they are evidently founded on a large experience of these diseases.

In the chapter on the Diagnosis of the Primary Syphilitic Sore from a "Simple Venereal Sore" Mr. de Méric rightly points out that it is less dangerous to mistake a syphilitic for a soft chancre than a soft for a syphilitic sore. In the former case the anti-syphilitic treatment will be merely postponed, while in the latter many months of needless mercurial treatment will have been carried out. The author in his account of the treatment of gonorrhœa prefers the local treatment by injections to the administration of drugs by the mouth, though if the local treatment does not produce a very marked improvement in a week or 10 days he commences internal treatment.

A chapter is devoted to the Prophylaxis of Syphilis and an interesting account is given of attempts at prophylactic and curative "syphilisation"

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*Nursing; General, Medical, and Surgical, with an Appendix on Sick-room Cookery.* By Wilfred J. Hadley, M.D. Durh., F.R.C.P. Lond., F.R.C.S. Eng., Physician and Pathologist to the London Hospital; Lecturer to Nurses at the London Hospital Nursing School; Assistant Physician to the Chest Hospital, Victoria Park. London: J. and A. Churchill. 1902. Pp. 326. Price 3*s* 6*d*.

The modern English nurse has certainly very great advantages over her predecessors of some years ago. The training which she has to undergo is thorough and practical. There is a danger, however, of her becoming a mere machine, and to guard against such a possibility at most of the training schools for nurses lectures are given by medical *men, not only on elementary physiology* and anatomy, but also on such points in medicine and surgery as a nurse should know in order to take an intelligent interest in her work and to render her reports to the practitioner of substantial value. A "doctor" nurse is, of course, an objectionable being, and the lecturer has consequently to use great care and discrimination in dealing with his subject so as to say sufficient to guide the nurses without imbuing them with the idea that they can act for the practitioner in his absence. In the book now before us Dr. Hadley has been successful in steering the desired middle course, and nurses will find much that will be of great use to them in their daily duties. Occasionally, however, we consider that he has erred. For instance, his remarks on the Weir Mitchell treatment are quite inadequate, whilst we doubt whether a nurse should be entrusted with the difficult task of giving medicines through the nose by means of a catheter passed into the œsophagus. On the whole, however, we can recommend Dr. Hadley's book to those nurses who are desirous of maintaining, or adding to, their knowledge in the various branches of the nursing art.

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# Analytical Records

FROM

# THE LANCET LABORATORY.

### STERILISED MILK (SNIP BRAND).

("Vacca, Ltd.," Holland; London Agency, C. Dreyer and Co., Thames Chambers, Beer lane, E.C.)

An admitted drawback to milk sterilised by heat is the flavour of having been scalded which invariably results. Whatever method of sterilisation has been adopted for "vacca" milk it is certainly quite free from this "boiled" flavour. Its taste can hardly be distinguished from good, fresh raw milk. Yet, as our experiments have shown, the milk is quite sterile and keeps indefinitely in bottle. All attempts to produce decomposition or undesirable changes on exposing the milk for several days to the temperature of incubation failed. Further, the milk kept sweet for several days after the stopper of the bottle had been removed—a fact which might suggest the employment of an added antiseptic. But Dr. Klein has shown that when specimens of this milk were inoculated with bacillus coli it yielded "copious growth and typical changes." Cultivations made with the milk on agar plates and other nutrient media were found to be free from any growth after several days' incubation. In regard to the quality of the milk the following analysis of a sample submitted to us shows that it is well above the minimum limitations now prescribed by English law: total solids, 11·86 per cent.; fat, 3·20 per cent.; non-fatty solids, 8·66 per cent.; and mineral matter, 0·69 per cent. The following analysis made of a sample taken by ourselves independently from a stock just landed from Holland shows that the excellent quality of the milk is uniform: total solids, 12·38 per cent.; fat, 3·49 per cent.; non-fatty solids, 8·89 per cent.; and mineral matter, 0·68 per cent. As will be seen, it is a full-cream milk. The sterilising process is conducted in Holland under scientific supervision. Certain of the samples which we examined were quite a month old and the condition of them all was satisfactory, the most remarkable feature being the entire absence of "boiled" flavour. We could find no preservatives. The milk is retailed at 4*d*. per litre (that is, nearly an English quart). It is the first time that we have met with

THE LANCET.

*LONDON: SATURDAY, MARCH 8, 1902.*

## The Subjugation of Small-pox.

IT may be useful to review briefly the chief measures which are being taken in the metropolis to keep the prevailing epidemic of small-pox within bounds. It is now seven months since the disease was introduced, and what at first seemed likely to be a localised outbreak has spread over the whole of London, whence the disease has been imported into many outlying districts in the provinces. As regards London, at the present time, except in certain parts of the East-end, cases are but thinly distributed, but their existence demands unceasing vigilance lest any one of the invaded areas should become the centre of widespread contagion. The measures adopted to control this spread are based on principles which, with one important exception, are applicable to all infectious diseases, and in none do we meet with better illustration of the difficulties that have to be overcome to ensure success.

There is, in the first place, the difficulty arising from imperfect diagnosis. It is the "unrecognised" case which so often acts as the first spark in a wide conflagration; and in the case of small-pox the mild and greatly modified attacks common amongst the vaccinated may, and often do, pass unnoticed until the occurrence of secondary and more typical cases reveals their true nature. Secondly, there is the difficulty of securing the prompt removal of the sick from the neighbourhood of the healthy, followed by the thorough disinfection of the dwelling and its contents. That the contagium is given off very early in an attack is proved by scores of instances, and no doubt the degree of infectivity varies in different types of the disease. Indeed, infection may be transmitted from a patient prior to the definite appearance of the characteristic rash, and thus it not seldom happens that in spite of the removal of the patient at the earliest possible moment after notification some who have been in his company may already have become infected. This brings us to a third difficulty, one which is entailed in the adequate supervision of all who have been dwelling under the infected roof. It is not enough to have removed the patient, to have disinfected rooms and clothing, but all "contacts" must be carefully watched for a period of 14 days from the date of removal. It is impracticable and unnecessary for this to be done by quarantining these persons within the house or in a special building assigned for the purpose. That is an irksome and a costly measure quite unsuitable in large communities and only to be resorted to in exceptional circumstances. It is, too, a plan which has often broken down in practice, as, indeed, it did in the very town which claims the credit of having introduced this "system" of control. The futility of such quarantine has been shown in other diseases, but its replacement by the intelligent and continuous supervision of all who have been exposed to the chance of infection is both necessary and possible. The subject has been succinctly treated in a recent circular issued by the Local Government Board. After stating that quarantine is not needed "in districts in which sanitary matters are properly administered and vaccination and revaccination are efficiently carried out," it goes on to say that there is no material advantage to be gained by keeping the other inmates in the house after the removal of the patient. "They are not likely to infect other people, unless they themselves develop small-pox; and all that is required is to keep such persons under medical observation for a fortnight, and particularly to examine them carefully day by day towards the end of the second week from their exposure to infection, in order to ascertain whether any of them are developing small-pox. If none of them do so by the beginning of the third week from exposure, the revaccination (or vaccination) to which they were at once submitted on the occurrence of the first case in the invaded house should secure them from attack by the disease" At the same time the Board recognises that in some circumstances it may be wise to keep such persons confined to their houses under observation. We think, too, that it would be well if in every district there were places to which a "contact" who shows signs of febrile illness within the specified fortnight might be removed forthwith, until it be determined whether he is suffering from small-pox or not. There is also another difficulty which arises from the presence in our midst of the vast contingent of vagrants who fill the casual wards by night and roam through the streets by day. They may not only infect the workhouse, shelter, or common lodging-house, but may scatter germs abroad in their peregrinations. In times of epidemic every applicant for lodging in such places should be subjected to medical inspection. And there is, lastly, the difficulty of providing sufficient and safe accommodation for patients; so that every case may be isolated, whilst at the same time no risk may be run of the hospital becoming itself a focus for the dissemination of disease. On the latter point we would refer to the remarkable facts adduced in THE LANCET of Feb. 22nd (p 496) by Dr. J. C. THRESH and our comments thereon at p. 534, whilst from an article in our issue of March 1st (p. 612) it will be seen that in the matter of securing sufficient accommodation the Metropolitan Asylums Board is acting with praiseworthy foresight.

All these difficulties are being grappled with by vigorous efforts on the part of health authorities. Chicken-pox is made notifiable, in order that cases of doubtful nature may not pass unnoticed. The ambulance service has been extended and perfected to insure the removal of patients with the least possible delay. The plan of supervising "contacts" is being sedulously carried out, and those in charge of public shelters and lodging-houses are on the alert to detect suspicious applicants. It is a testing time for the health administration of London, and we believe that it is owing largely to the manner in which this organisation is framed and conducted that the present outbreak has so far been kept within comparatively small dimensions. We trust that by such continued vigilance the disease will be kept within manageable limits, but it would be too much to expect its early and entire cessation. The foci are too that they are to be used as adjuncts to diluted cow's milk. The foods consist largely of digested and transformed carbohydrate which is a valuable constituent so far as the needs of infant feeding are concerned. It is very correctly claimed that these foods are not complete in themselves, but that their addition to milk affords a diet lacking no physiological requirement.

### KETO METAL POLISH.

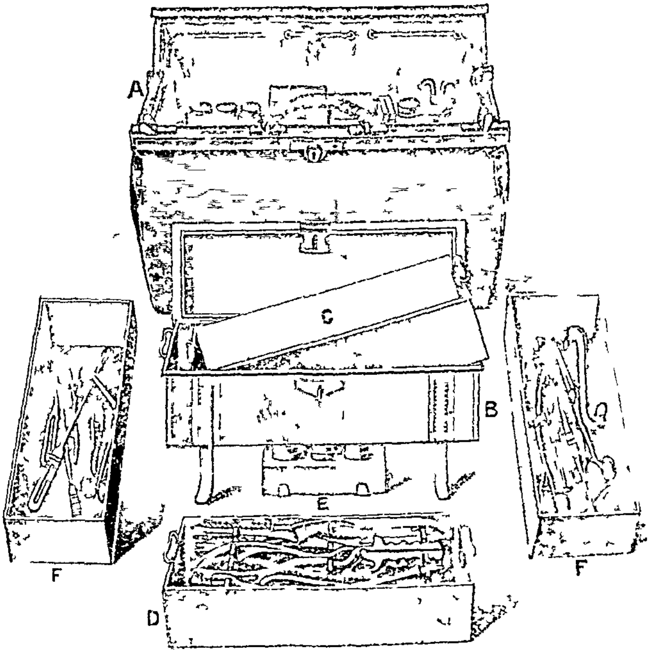
(THE KETO MANUFACTURING COMPANY, SMITHFIELD-STREET, LIVERPOOL.)

While, as we found, this preparation is an excellent metal polish it possesses no striking novelty in regard to composition. Moistened tobacco ash is one of the best metal polishes that we know. Keto somewhat resembles it in containing finely powdered chalk and an alkaline carbonate. It is a pink turbid fluid.

## New Inventions.

### A COMPLETE OBSTETRIC AND GYNÆCOLOGICAL OUTFIT.

I HAD long been impressed with the necessity of a complete outfit adequate to meet the needs of any obstetric or gynæcological emergency, but nothing in instrument makers' catalogues seemed to at all meet the requirements. The obstetric outfits usually described made no provision for those cases requiring abdominal section, whilst the provision for simpler cases appeared to be very inadequate. Yet the necessity of an adequate outfit is obvious. For instance, I was summoned to an obstetric case in which abdominal section was urgently indicated, but the telegram which I received gave me no indication of such a possibility and but for the fact that I brought with me the outfit to be described the patient would probably have died. In designing this my object was to be possessed of such an arrangement that, given any obstetric or gynæcological complication, I should at once be in a position to deal with it. The outfit has had a practical test extending over nearly 12 months and has stood the test very well. With the contents of this bag and without anything else I have performed various abdominal sections besides operations of a minor character. I append a description of the bag with illustration.



The outfit consists of a surgeon's kit-shape bag, strongly made in durable cow hide, opening square at the top, and fitted with removeable aseptic lining with a convenient series of pockets and adjustable loops for bottles, dilators, scalpel cases, chloroform apparatus, &c. (A). At the bottom of the bag are fitted a pair of aseptic metal trays (F, F), one fitting over the other and forming a box. Both of these trays when open become useful carbolising trays for instruments, &c., and when closed up are used for carrying instruments, dressings, &c. On the top of these trays is placed a specially designed portable combined steriliser and instrument case (B, C, D). B, the steriliser, is fitted with hinged lid and moveable legs. C is a deep inner tray fitting closely inside the steriliser B and used for carbolising the larger obstetric instruments after sterilising. D is the instrument frame with metal rack into which is conveniently fitted a complete set of obstetric instruments. This in turn fits closely inside the carbolising tray C. E is an improved double wick Schimmelbusch's safety spirit lamp. The bag as fitted is of course adapted to special needs, but the scheme is easily adaptable to individual requirements and I therefore describe it as I think it will be useful to others. Credit is due to Messrs. Allen and Hanburys for the way in which they have carried out the design.

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dead as a result of electric shock. The question of the mode of death by electric shock is not yet fully settled, but there is much to support the view that the heart is the most susceptible of the vital organs and that death from electric shock is very often death from arrest of the heart's beat. We are not yet in a position to say that this is the invariable rule in the fatal cases. In the non-fatal cases, where victims have been resuscitated after being apparently dead for half an hour or more, it is difficult to guess at all closely as to their actual condition. It is quite improbable that the human heart should be able to re-commence to beat if it has once been completely arrested for even 30 seconds, and if the condition were one of arrest of respiration it should be possible to feel the beating of the heart during the critical period which immediately follows the receipt of the shock. In one of the cases recorded by D'ARSONVAL and used as a basis for the rules laid down by him for treating a victim of electric shock in the same way as one apparently drowned the report states that the artificial respiration was not commenced until nearly half an hour had elapsed; and in that case it is difficult to believe that respiration had really been at a standstill for so long a time. Again, Mr. ASPINALL instances a patient who received a shock and was insensible but came round without assistance in 25 minutes. In another, who recovered after 45 minutes of artificial respiration, he tells us that the heart could not be felt and the breath did not cloud a mirror. Probably it is true that of those who receive shocks of great severity there are some in whom arrest of the heart is produced once and for all and that in these no known method of treatment is of any avail, while there are others who are not killed outright in this way but are left in a state of suspended vitality with heart and respiration almost arrested. From this state in time they may recover either without any assistance or with the assistance of artificial respiration. Artificial respiration should therefore always be made use of even if it be quite doubtful whether the condition of the patient is one at all resembling asphyxia.

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# Forsythe v. Law.

IT has seldom been our duty to comment on a more painful case than the one which lately formed the subject of investigation in the King's Bench Division of the High Court. The plaintiff, Miss FORSYTHE, a professional nurse, sued Dr. W. T. LAW for damages for alleged negligent and improper treatment, whereby her health had suffered and her ability to earn a livelihood had for a long period been at least seriously damaged. From the evidence it appeared that Miss FORSYTHE had been treated by Dr. LAW on and off since 1894. Unfortunately, the lady was the subject of many disquieting symptoms. Her heart was affected, she experienced febrile attacks with arthritic symptoms, and had a tendency to bronchial spasm which subsequently developed into a very acute form of asthma. Handicapped with this physical debility her constitution evidently was ill-suited to bear the strain incidental to the exacting duties of conducting a nursing home. Failing to relieve the spasmodic asthma by simpler remedies Dr. LAW resorted to the use of hypodermic injections of morphia. As time went on the patient unfortunately acquired the morphia habit. Discontinuance of the drug led to insomnia, which was met by the administration of chloral and other cerebral sedatives. The alleged malpraxis consisted partly of using the drugs in inordinate doses over a protracted period and partly in procuring them for Miss FORSYTHE and negligently placing them within her reach without let or hindrance.

So matters went on until through the interposition of third parties the patient passed into the professional care of other medical men, of whom Dr. J. KIRKLAND was one. This gentleman took a very decided view of Dr. LAW's treatment and a very active interest in Miss FORSYTHE'S welfare. He was perfectly justified in ordering the abrupt withdrawal of the morphia if he thought it proper to do so; although opinions are very much divided as to the best course to be adopted in such cases. As a matter of fact the reaction in the case of the plaintiff was dangerously severe, and Dr. KIRKLAND admitted in cross-examination that the patient came very near to death, collapse following the stopping of the morphia We think that the balance of evidence would hardly support his belief that it was not necessary to relieve insomnia. Professional judgment would scarcely subscribe to his unqualified impeachment of Dr. LAW whom he thought responsible for the lady's taking overdoses of chloral "because he must have known it." From the admissions in the witness-box it is certain that no one could imagine that Dr. KIRKLAND had not served Miss FORSYTHE zealously, though possibly indiscreetly, in so far as his professional brother, Dr. LAW, was concerned. We publish a letter in our columns this week from Dr. KIRKLAND, in which he pleads his proper professional regard for Dr. LAW; and while we are bound to believe his words we must also point out that we do not quite follow his reasoning. It was pleaded with unsurpassable force and eloquence by Sir EDWARD CLARKE, who must regret considerably having accepted the brief, that Dr. LAW had been guilty of gross misfeasance. There was something more in the indictment than a charge of mere negligence, since Dr. LAW was accused of having arranged "a mock consultation." His ability, attainments, and methods of action might have been called into question without a foul imputation being cast upon his honour. We endorse the statement by the jury that the action ought never to have been brought, and still more forcibly the stricture passed by Mr. Justice GRANTHAM on the unfairness of the way in which the plaintiff's case was conducted.

Miss FORSYTHE'S case differed in many respects from that of an ordinary patient. She was conversant with the action of the drugs that were prescribed for her and she must have known that taken in excess their influence would be extremely baneful. Dr. LAW acted somewhat unwisely, knowing the highly susceptible nature of Miss FORSYTHE, in procuring the medicines for her. In his own interest he should have fortified himself against the cruel fate which ultimately befel him. Nevertheless, it must be conceded that he was guilty of no dereliction of duty, for had he simply issued prescriptions for every dose in the most widely dispersed to be easily stamped out, and any day a wide extension might arise that would tax all London's sanitary resources.

Yet there is one measure applicable to small-pox, alone amongst common contagious diseases, which, if it could only be thoroughly enforced, would do more than anything else to check the progress of the scourge. By singular perverseness the legislature has placed the control of this measure in other hands than those responsible for the health of the community. In the absence of this powerful adjuvant the efforts of the sanitary service can only be partially successful. The risks of contagion may doubtless be diminished by sanitary improvements involving the better housing of the poor, the diminution of overcrowding, the enforcement of cleanliness, the freer supply of light, air, and water, and the right disposal of refuse, but none of these things, good as they are, go to the root of the matter. Every individual human being carries within himself the soil in which the germs of disease may be implanted. The soil must be made unfit for such noxious growth, and this, in essence, is what vaccination does. It is needful that vaccination should be efficiently performed, and repeated at intervals, and if this be done it is practically certain to avert the disease What more convincing evidence can be required of the truth of this assertion than that given by the facts recently published of the immunity of those persons employed at the hospitals of the Metropolitan Asylums Board, or, on a smaller scale, the experience of the nurses of the Stepney Infirmary. Yet there must be thousands of persons in London at this present time who have not availed themselves of this priceless prophylactic. Every person has it in his power to render himself safe from attack by small-pox. His neglect to take this step contributes to the persistence of the disease in the community. Therefore, to all the other difficulties in the way of those who are fighting the epidemic must be added this—perhaps the worst—because it is based on individual ignorance and negligence, and against stupidity even the gods strive in vain. The epidemic wave will pass in time, but very much can be done to check its career and to diminish its intensity by the general adoption of a practice of which the efficacy has been proved by the experience of all civilised nations during the century that has elapsed since its introduction.

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## Electric Shock.

Three papers of very considerable interest have just been read before the Institution of Electrical Engineers. They deal with the subject of electric shocks, and both the papers themselves and the discussion of them, which is to follow on March 13th, are likely to advance our knowledge of a somewhat difficult subject. Mr. Trotter's paper on Electric Shocks at 500 Volts is intended to correct the popular belief that accidental contacts with conductors at such a pressure are inevitably fatal. He showed by actual experiment during the meeting that he could endure the sensations produced by a brief contact with conductors at that pressure, and a millampère-meter arranged in the circuit gave readings ranging up to 30 milliampères as the current which traversed his body. The sensations, he said, were rather like those produced by touching a heated iron.

It is important to distinguish between the effects of brief accidental contacts with live conductors and those which might follow if the subject were so entangled as to be unable to escape from the position of serving as a conductor for a current at that pressure. 500 volts is a common voltage on circuits used for electric traction. On the Central London Railway the difference of potential between the middle line and the running rails is 500 volts, and the same difference of potential is maintained between the overhead wire and the rails of an electric tramway. In either of these systems, therefore, a passenger might accidentally come into contact with conductors having a difference of pressure of 500 volts, and would receive a shock which might feel very disagreeable, but the probabilities are that he would easily be able to extricate himself from the situation without suffering any material damage. A person falling off the platform at one of the "Tube" stations, for example, is not necessarily grilled alive, even if he should come into contact with the rails. A passenger on the outside of an electric tram-car would be better advised to sit still than to jump off headlong in the event of the overhead wire breaking and falling upon the car.

Mr. Trotter's paper and demonstration also emphasised the value of ordinary dry clothing as a protection against such pressures as 500 volts. Using a model section of the tract of the Central London Railway he not only stood upon the rails, but actually sat upon them and lay down upon them in sight of the assembled audience and the galvanometer indicated only a very few milliampères. The conclusions we may draw from his paper are, that it is a risky thing to take a deliberate hold of conductors having a potential difference of 500 volts, but that accidental contacts with them are only likely to give a nasty shock, and that ordinary users of electric railways or tram-lines are in no imminent danger of death from the electric currents

Mr. F. B Aspinall's paper, which we publish in this issue and which was read at the same meeting, raised many points of medical interest. He submitted to the medical and engineering professions nine very pertinent questions and then proceeded to elucidate them so far as he could from the facts which had come under his own notice. As the Institution of Electrical Engineers has very sensibly invited the attendance at the meeting of several medical men who are known to be interested in electrical matters it is quite likely that they may be able to add their counsels at the adjourned discussion. Mr. Aspinall suggests that the physiological condition at the time of the shock may be an important factor, and created some amusement by hazarding the suggestion that a man under the influence of alcohol was somewhat protected from fatal effects by his condition He also asked for information as to the importance of the path taken by the current through the body and for instructions how to resuscitate those apparently killed by electricity, and inquired for a simple and certain test by which to know whether a victim was dead or only in a state of suspended animation He mentioned several observations which led him to suspect that a person does not feel electric shocks when he is asleep, and he attached great value to D'Arsonval's method of treating by artificial respiration those who were apparently

These dealings accounted for three of the charges to which he pleaded guilty—namely, obtaining by false pretences the signing of the contract to sell the house and the obtaining of the horse and vehicle and of the £75. The two other matters which he also admitted at Liverpool were the theft of certain postal orders that fell into his hands when acting as locum-tenent, and bigamy, for incidentally in the course of his varied career he had been married once and had twice subsequently gone through the ceremony of marriage, his first wife being still alive. Before he was sentenced there were, moreover, other possible charges deposed to by London detectives, including the larceny of a horse and trap, the property also of a medical man, larceny of a silver flute and of electrical fittings, and an ingenious fraud, apparently the first of the whole series, perpetrated on certain financial agents and electrical experts. These he had deceived by an ingenious mechanical device into believing that a machine, which he claimed to have invented, was a new form of electrical generating apparatus, and they had accordingly formed a syndicate to develop the novelty and had paid him a salary as manager. Two other charges—the one of obtaining £50 by means of a worthless cheque, the other, larceny of a watch—were also mentioned. In connexion with the electrical fraud he had represented himself as formerly assistant house surgeon at St. Bartholomew's Hospital, and it was even stated that on one occasion he obtained, and for some months filled, the post of house surgeon at the Hope Hospital, Salford. It is not surprising that the cumulative sentences imposed upon him involve a fairly lengthy term of incarceration. The nature of the frauds, however, and the qualifications which enabled this remarkable scoundrel to perpetrate them may serve as a useful warning to members of the medical profession, and, so far as the circumstances are applicable, to other professional men as well. We presume that Burrows had testimonials of some kind that he could exhibit, and, as we have said, he could point to his assumed name in the Medical Register. To some extent, no doubt, he could also refer to persons for whom he had done work and whom he had in their turn deceived as to his qualifications. His career, however, would have been checked at many points had his victims taken the precaution properly to verify such references as would necessarily have involved his identity and his qualifications. We note, for example, that at one period he spoke of having a brother practising as a solicitor, but there does not seem to be a solicitor of the name mentioned in the Law List as in practice at the town he named. Again, a man seeking either the post of a locum-tenent or to purchase a practice cannot complain if he is asked to give references to medical practitioners or to the officials of the hospital at which he was trained. These, if followed up would, at all events, betray a flagrant impostor, even though testimonials and references may not always reveal the precise merits and demerits of the person who seeks to obtain a coveted position. It is, in any case, highly imprudent to reckon a total stranger to be honest merely because he is plausible, and to enter into business relations with him on the strength of his familiar use of the honoured names of persons of undoubted probity. The persons who, a man boasts, will be most happy to corroborate his own accounts of himself may, when properly approached, tell a very different tale from that predicted, and he who proffers them for the purpose cannot complain if he is taken at his word and application is made to them.

## THE DISTRIBUTION OF PLAGUE.

As regards The Mauritius a telegram from the Governor, received at the Colonial Office on Feb. 28th, states that for the week ending Feb. 27th there were 7 cases of bubonic plague, of which 3 proved fatal. As regards Egypt, during the week ending Feb. 23rd 8 cases and 5 deaths from plague have been reported from all Egypt. 5 cases and 4 deaths were reported from Tantah, 2 cases from Kom-el-Noor, a village near Mit-Gamr, and 1 case and 1 death from Alexandria. All these cases and deaths occurred among the native population. 3 of the deaths at Tantah occurred out of hospital.

## THE MIDWIVES BILL.

THE Midwives Bill which is now referred to the Grand Committee on Law has such important medical bearings that we need not apologise for constant recurrence to it. We wish to call attention to some of the points which were made by the various speakers in the debate on the second reading, whose speeches will be found fully reported in our present issue (see page 688). A careful perusal of these speeches must lead all medical men to the conclusion that the latest edition of the Midwives Bill has exactly the faults which its promoters at different times and in different ways declared that it has not. It tends to set up an inferior order of general practitioners and it is no great exaggeration to call it an infringement of the Medical Act. Lord Cecil Manners and Mr. de Tatton Egerton, respectively the proposer and seconder of the second reading, did not disguise this fact. The former spoke of the Bill as "putting the profession of midwifery on a par with the profession of medicine," and the latter approved of the absence of any regulation obliging midwives to take out an annual licence on the ground that "doctors did not have to take one out." Mr. Heywood Johnstone, speaking in a similar strain, considered that certified midwives would find it a humiliation to take out a yearly licence. Clearly all three speakers demand for the midwifery nurse the dignity of a professional status. They hold that because medical men, a highly educated body with a strict professional code and a recognised social position, are under no local control, the midwifery nurse should be equally exempt. Sir John Batty Tuke moved the rejection of the Bill in a sound speech. While he agreed with Lord Cecil Manners that the opposition to previous Midwives Bills had been due to difference of opinion on the precise legislation required rather than to disapproval of the general principles of the measures, he found that the present Bill did not go far enough to be practical. A Bill which does not penalise the work of the uncertified midwives seems to us to leave the parturient poor at the mercy of exactly those Gamps whose calling it was supposed to be the object of the Bill to suppress. Sir John Tuke's criticism of the Bill for the omission of the penal clause, which was contained in the 1900 version of the measure, elicited from Mr. Heywood Johnstone the somewhat remarkable statement that he had been informed in high quarters that it would be hopeless to attempt to carry the measure if it were encumbered with such a cause. The words are remarkable, not because there is anything unlikely in the statement that they contain—on the contrary, they have all the stamp of accuracy—but because they were uttered by Mr. Heywood Johnstone. For Mr. Heywood Johnstone is the gentleman who quoted this penal clause to us as a satisfactory reply to certain of our criticisms of the previous measure. Dr. Farquharson spoke in favour of the Bill in terms which proved it to be a long time since he took his medical degree. He seems to be unfamiliar with the needs of the present curriculum of medical education and with existing professional feeling. This is fatal to the value of any views he may hold, for, as Sir Walter Foster pointed out later, the subject of the Midwives Bill is one that has been growing steadily in complexity for the last 40 years. We hope that the Grand Committee on Law will perceive that Dr. Farquharson's opinion cannot be taken as representing medical feeling. In orthodox manner there was nothing whatever to prevent the patient—a professional nurse—from obtaining an unlimited supply of the drugs. Moreover, it was shown that during a considerable portion of the time that Miss FORSYTHE was under his care she was being tended by a sister nurse who would naturally be expected to exert a restraining influence. Had Dr. LAW rendered his services over a term of years for gain and profit—which is not customary when the patient is a nurse—there might have been more room for criticism, but what are the facts? He gave freely of his time, his skill, and his kind-heartedness for no other reward than the satisfaction of feeling that he was discharging a charitable office with the hope of alleviating human suffering. He acted the good Samaritan—not wisely, perhaps, but too well—and what was his reward? Scorn and contumely were heaped upon him by some who were and are to be pitied and by others who deserve severest blame. He will have the consolation which his merits deserve, given unstintedly by his professional brethren and by a generous and just public opinion. His legal and moral acquittal was complete.

## Annotations.

"Ne quid nimis."

### THE LONDON WATER BILL.

THE debate on the London Water Bill did not reach a very high level, and not one of the speakers apparently realised the importance of the matter from the point of view of the interests of the people of London. Mr. Long contented himself with formally moving the second reading of the Bill. In this he was wise. Mr. Buxton accused the Government of trying to get away as far as possible from the principle of direct representation in the election of the Water Board and lauded the County Council; but Sir John Dorington, one of the members of the Llandaff Commission, pointed out that the London County Council was out of court because it did not govern the district which was to be supplied with water, but only a part of it; that, moreover, the outside authorities strongly objected to be placed under the administration of the London County Council; and, finally, that severance of the supply in bulk (as proposed by the latter authority as an alternative scheme) had been clearly shown to be impracticable. These matters are familiar to our readers, but they appeared to be new to the House of Commons. Sir John Dorington criticised the Government proposal to create a Board of such an enormous size. He very rightly emphasised the point that in the case of purchase it would be much better if the administration of the Water Board could begin its work piece by piece. This is a most important point. If the Board were elected truly to represent the water consumers, and had the option of purchasing the businesses instead of being compelled to do so, the chief objections of fair-minded people to the present Bill would disappear. Mr. Boulnois and Colonel Lockwood, both water-company directors, made speeches calculated to enhance the value of the undertakings. They could do no less. Mr. Mellor, who was a member of the Llandaff Commission, criticised the unwieldiness of the proposed Water Board and appeared to think that if a purchase of the undertakings were made under the provisions of the Lands Clauses Act all would go well and that everyone would be satisfied—the London County Council, the representatives of the water companies, and even "the London ratepayer whose interests ought to be considered in so important a matter as this." The London ratepayers should be grateful to Mr. Mellor for his kind thought. At any rate, he does not, as everyone else in this difficult question seems to do, ignore the fact that the people who have to pay the bill and drink the water deserve consideration. But if the ratepayers knew all the facts we cannot believe that they would agree with Mr. Mellor. On the contrary, they would see that they can hardly do otherwise than lose heavily in a financial way should they be bluffed or cajoled into allowing the Government Bill to pass, especially with the improvements of Mr. Mellor and the water company directors incorporated. Sir John Maple criticised the Bill from a financial standpoint, and evidently did not consider that the Water Board as constituted under the Bill would include proper persons to fix the price to be paid for the companies' undertakings. Mr. Asquith declared for the London County Council as *par excellence* the proper water authority for London. Therefore he condemned the Bill entirely. His speech, coming from an eminent jurist and an ex-Home Secretary, cannot fail to be damaging to the Bill, even though it does not convert many members of the House of Commons to his estimate of the London County Council's claims. Mr. Walter Long with refreshing complacency decided that the Government must have struck the fair middle path because the measure was so opposed at either extreme. On the one hand the Government was told that the measure would be a grievous burden to the ratepayers, and on the other hand the water companies were protesting their forlorn condition under its provisions. The Bill was then read a second time, and after further debate was referred to a Joint Committee of both Houses.

### A SUCCESSFUL IMPOSTOR.

CHARLES WILLIAM BURROWS, who was sentenced by Mr. Justice Bucknill to seven years' penal servitude at the Liverpool assizes, seems to have had a surprisingly prosperous career during the last few years, and as he was able to make members of the medical profession his especial victims the history of his crimes is worth recounting in our columns. He was at one time apprentice to a chemist in Tottenham Court-road, and as such he is stated to have had charge of branch establishments. Making friends with medical students he attended lectures, apparently posing as a medical student himself, and in this character he acquired some knowledge of surgery. For a period after this he lived by his wits and otherwise, now playing in a theatrical orchestra, now travelling with a theatrical company, and now introducing to Brighton audiences a bullet-proof coat. In 1898 he seems first to have thought of turning his medical and surgical experience to advantage by purchasing a practice, and his subsequent actions were ascribed by his counsel at his trial to his failure to gratify this ambition, when a medical man who had promised to advance the necessary money declined to complete the transaction on discovering that the prospective borrower was not qualified to practise. In spite, however, of the drawback of impecuniosity he nearly won success by ingenuity. He assumed the name of Mr. James Joseph O'Donnell which appears in the Medical Register and had, it seems, no difficulty in obtaining temporary employment as a locum-tenent at Wigan. While there he learnt that a medical practitioner at Hindley wanted to sell his practice, and no doubt the fact of his being at the moment locum-tenent to a medical man strengthened his hand for his next move. The gentleman to whom he introduced himself at Hindley agreed to sell him his house for £1600 and his practice for £750, and he obtained from a third person on the strength of this transaction £75 in cash, to be expended on the purchase of furniture, as well as a horse and carriage from the vendor of the practice.

during growth by injudicious education, and was subjected during later life to hard stresses and struggles. It especially seemed certain that when the strangest and most inexplicable symptom of melancholia arose and persisted—viz., the tendency or impulse to suicide—that "such reversal of the love of life was the sure seal of nature that the death of the individual so affected was the right thing for the race." Even in the milder forms of melancholia the cerebral depression was followed by changes in bodily nutrition and metabolism. The gastric juice became defective in digestive power; the temperature, the pulse, and the arterial pressure were changed; the peristaltic action of the bowels was enfeebled; constipation set in; and secondary changes in the contents of the alimentary canal were brought about which led to toxæmia. The urinary and skin secretions were also changed, and after a time the patient began to waste and to lose weight. Such secondary toxæmic conditions completed the vicious circle of pathological processes, but the primary and immanent condition was "a hereditary brain weakness and instability without which toxæmia would not cause melancholia or adolescent insanity with its typical dementia—these together being by far the most numerous and the most characteristic of the psychoses." Dr. F. W. Mott's theory that the brain substance formed by its dissolution poisons which further destroyed it, seemed to need far more proof than he had given. Antitoxins were being investigated and used in the treatment of certain toxæmic insanities. Such methods were commendable, but they should be guided above all things by the fact that in very many cases it was the primary cortical disturbance which had caused the digestive troubles, the constipation, the urinary disturbances, and the excess of toxins and bacteria in the bowel as indicated both by the presence of leucocytosis and by the chemical study of the urine. So that while feeding and the administration of strychnine, iron and quinine, paraldehyde and alcohol, together with rest from work and worry, were the primary therapeutic necessities, the administration of calomel and salol as laxatives and intestinal disinfectants, and of diuretics and diaphoretics to promote secretion, was also indicated. On the other hand, there could be little doubt that toxæmic conditions played the chief part in general paralysis, puerperal insanity, and alcoholic insanity, and probably also in some forms of epileptic insanity. Most of the cases of climacteric insanity and the less acute cases of senile insanity did not exhibit during life or after death any proveable toxæmic symptoms, and finally there were examples of a common sort in which a solitary-living old maid or bachelor became melancholic and morbidly suspicious, and sometimes developed auditory hallucinations; all these mental symptoms resulted apparently from mere want of social stimulus to the brain cortex, just as a child became dumb through getting deaf, without any suggestion of toxic poisoning. Mental disease was, in short, too complex to fit any one theory.

## THE DEBATE ON THE ARMY ESTIMATES.

The House of Commons went into Committee on the Army Estimates on Tuesday last. Mr. Brodrick, in a speech which occupied two hours in its delivery, made his annual statement in reference to the army, and subsequently a debate took place on the concentration camps. Mr. Brodrick had an extremely difficult and complicated subject to deal with, but it cannot be denied that he handled it with marked ability, arranging and expounding his details with great clearness. Whatever may be the results of his proposals generally they are, at any rate, conceived on large and bold lines. As regards the changes which Mr. Brodrick seeks to introduce, his proposals for increasing the pay of the soldier, for doing away with the present vexatious and irritating system of stoppages, and for the establishment of more elastic and suitable terms of service with the colours and in the reserve, will, we think, commend themselves to the common sense of the community. Mr. Brodrick, while frankly admitting mistakes and shortcomings to have taken place, had, of course, a good deal that was very effective to say in vindication of his own department in the conduct of the present war. But it is to his remarks on the reforms intended to be introduced into the Medical Services and to the increased establishment of an Army Nursing Service that our readers will naturally turn with most interest. It will be seen, however, that the War Minister has not added much to our knowledge in these respects. While most people will cordially concur in the objects which he has in view and will be ready to accept his assurance that "everything that the wide experience of civil practitioners can bring to bear on the new system has not been lost sight of in drawing up the scheme," we should have been glad if he had at the same time told us that he had also availed himself of "the wide experience" of some army medical officers, surely useful advisers in the case of drawing up a scheme expressly designed for an army medical service Mr. Brodrick evidently believes that the new scheme will prove satisfactory, and so far as he describes it we may share his belief, but his description does not go very far. We obviously want to know a good deal more than he has told us in his speech in order to form a definite opinion in regard to it and we must be content to await the appearance of the promised warrant before pronouncing one. We know, for example, nothing as yet of the intentions of the Indian Government in regard to the War Office scheme and it has to be borne in mind that a large number of medical officers are always serving in that country.

## SENTIMENTALITY'S CASUALTY LIST.

There is no surer test of a man's culture or of his degradation than his manner of evincing sentiment and the causes which move him to it. Every human creature is sentimental to a greater or less degree, but in proportion as he is high in the scale of self-control and of intellect so is a man not the slower, indeed, to be moved, but the more reluctant to show to others the depth of feeling aroused within himself. When joy is the emotion that sways him he may perhaps wish his fellows to participate in the good fortune, but when he is the prey of grief the refined man closes his lips and hugs his sorrow. It is the savage races whose funeral rites are the most elaborate and among ourselves it is with the uneducated that sorrow makes the greatest show. Undertakers have their greatest importance in poor quarters and "plumes" wag more largely in the Jago than they do in Mayfair. It is not that sorrow is more acutely felt in the one instance than in the other, but rather that one class of persons is accustomed to control, another to expose, its emotions. Moreover, the educated have learned to consider always the effect of their actions upon others, whereas the poor man who is stricken feels only that he is not doing justice to the cause of his sorrow unless he makes a demonstration of his emotion. Such practices are sufficiently to be regretted when they lead only to ill-afforded expense and to a reaction of drunken hilarity. When the unbridled display of ignorant sentiment has dangerous and actually fatal issues it is a blow indeed to our vaunted education. In Essex lately a child died from diphtheria. The little girl's schoolfellows were allowed to kiss the body as it lay in the coffin. Other deaths among the children soon followed. No more cruel sacrifice to unthinking sentimentality could possibly be imagined. We place by the side of this another all the circumstances of the promotion of this Bill we do not hold out much hope to our readers of obtaining the modifications in it that are, in our opinion, necessary. The medical profession have not been united upon the subject, and the more temperate and influential critics of the different measures that have been before Parliament have been hampered by the violent language of those who are opposed to all legislation. As a result medical opinion and the opinion of the General Medical Council have not weighed with the legislature as they should have done.

## THE ARMY MEDICAL DEPARTMENT.

As will be seen by our Parliamentary Intelligence Mr. Brodrick, in answer to a question put by Sir John Tuke on Friday, Feb. 28th, said that the warrant bearing on the re-construction of the Army Medical Department would be issued before the vote for that department was taken. In introducing the Army Estimates on March 4th Mr. Brodrick implied that a hostile motion bearing on the new scheme had been put down.

## DURATION OF LIFE IN EPILEPTICS.

In a recent *Thèse de Paris* (1902) by Dr. J. Carton an attempt is made to obtain definite conclusions regarding the duration of life in epileptics, a subject on which much vagueness of idea has prevailed hitherto. The chief causes tending to shorten the life of the epileptic are gastro-intestinal disorders, pulmonary tuberculosis and septic pneumonia following inhalation of food particles during a fit, and injuries sustained in fits. Dr. Carton collected information regarding the ages and causes of death of 419 epileptics at the following asylums—viz, Clermont, Maréville, and Bicêtre, the patients being idiots, imbeciles, or feeble-minded. The following table gives the percentages of deaths at different age-periods in the epileptics referred to:—

| Age period. | Percentage of deaths. | Age-period. | Percentage of deaths |
|---|---|---|---|
| 5 to 10 years | 11 9 | 25 to 30 years | 8 6 |
| 10 ,, 15 ,, | 14 3 | 30 ,, 35 ,, | 6 2 |
| 15 ,, 20 ,, | 22 4 | 35 ,, 40 ,, | 4 5 |
| 20 ,, 25 ,, | 9 6 | 40 ,, 45 ,, | 6 2 |

Above and below these ages there were but few deaths—in all 15 8 per cent. of the total. The average age at death was 25 years and two months as deduced from the above table. Taking, however, different asylums it appeared that while the average age at death was 35 years and nine months among the patients at Clermont it was 39 years and four months at Maréville, 37 years and eight months in the department of the Bicêtre Asylum under Dr. Chaslin, and 20 years and four months in the department of the same institution under Dr. Bourneville. The last section included the largest number of patients of the general total, and the average age at death when all patients were included was, as already stated, 25 years and two months. A comparison of this with the age at death of other patients in the same institutions showed that the average age at death amongst the latter was 50 years, so that the shortness of life of the epileptic seemed to be clearly established. Among the chief causes of death the following were ascertained, as well as the proportions of deaths attributable to each cause: asphyxia, 1·2 per cent.; fracture of the skull by falling in a fit, 0·9 per cent.; pulmonary congestion, 7· per cent.; bodily malnutrition. 10 7 per cent.; pneumonia and broncho-pneumonia, 11·9 per cent . pulmonary tuberculosis 16 7 per cent.; and severe and prolonged fits, 31·5 per cent. The remaining deaths were due to other causes. It thus appears that while nearly one-third of the epileptic patients died from severe or prolonged convulsions, 35·6 per cent., or slightly more than one-third, died from pulmonary troubles, such as tuberculosis or pneumonia, while only a small proportion of deaths (2·1 per cent.) was due to asphyxia or to injuries sustained in a fit.

## SMALL-POX IN LONDON.

The returns of small-pox for the past week are as follows: on Saturday and Sunday, March 1st and 2nd, 63 fresh cases were notified and removed; on Monday, March 3rd, there were 90 fresh cases; on Tuesday, the 4th, there were 70 fresh cases; and on Wednesday, the 5th, there were 56 fresh cases.

## "DR. BELL" AND THE POST-OFFICE.

The issue of our contemporary *Truth* for Feb. 27th contains a statement to the effect that the editor of that journal has been indirectly responsible for the conviction of a blackguard named William Reid who was sentenced at the Lewes Assizes to six months' hard labour for sending filthy little books and other goods to a schoolboy. The master of the boy sent the contents of Reid's packet to the editor of *Truth* who forwarded them to the police authorities at Scotland Yard, with the result which we have recorded above. Now, if the police can act in this manner in the case of William Reid—the offence was apparently that of sending filthy literature through the post and the fact that such wares were sent to a minor had nothing to do with the case—why can they not do the same in the case of the scoundrel who calls himself Dr. Bell, who also sends dirty pamphlets through the post? On Jan. 28th, 1896, Dr. Bell, whose name was said to be Henry Walters, was fined at Marlborough-street Police-court in the sum of £20 and six guineas costs for using the titles "M.D." and "Doctor" without being a duly qualified medical man[1] Bell still continues to call himself "Dr." and to send out his abominable trash, or, at any rate, he was doing so last month. Will the police authorities take the matter up or will they not? If not, will Lord Londonderry think about it? We shall be happy to send his lordship half a dozen copies or so of Bell's pamphlet, together with sundry letters which have reached us from indignant correspondents.

## AUTO-INTOXICATION AS A FACTOR IN THE PRODUCTION OF CEREBRAL AND MENTAL DISORDER.

The toxæmic theory of disease has lately assumed a considerable degree of prominence in regard to insanity and cerebral disorders generally. In a contribution to the *Scottish Medical and Surgical Journal* for February Dr. T. S Clouston of Edinburgh deals with melancholia and the toxæmic theory of insanity. "The more one sees of mental disease in its typical varieties," says Dr. Clouston, "the stronger becomes our conviction that hereditary brain weakness is the prime factor in its causation" The argument as developed by Dr. Clouston was that by the application of the knowledge which we possessed many morbid brain conditions might, if treated early, be prevented from developing into actual insanity. Such measures to counteract mental disease ought to begin from birth Diet, environment, education, attention to infantile nervous ailments, choice of occupations, special training in habits of self-control, avoidance of alcoholic excess and sexual errors, and suitable choice of mates, were among the measures recommended as capable of being adopted in order to avert threatened mental breakdown in a predisposed subject. Emotional over-sensitiveness predisposed to melancholia, especially if such a condition was inherited from parents, was fostered indeed, may anti vaccinationists think with shame on those exquisite lines :—

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[1] The Lancet, Feb. 1st, 1896, p 310.

> "Continuo auditæ voces, vagitus et ingens
> Infantumque animæ flentes ......
> Quos dulcis vitæ exsortes, et ab ubere raptos,
> Abstulit atra dies, et funere mersit acerbo."

The leaflet goes on to give hard facts and figures which should convince anybody who is not in the bond of invincible ignorance. We congratulate Mr. Wilson on his efforts to spread knowledge on the subject of small-pox and how to avoid it.

## THE VENTILATION OF THE HOUSES OF PARLIAMENT AND INFLUENZA.

THE bad ventilation of the Houses of Parliament is notorious, not because the system adopted is necessarily wrong in principle, but because, however perfect the means of changing the air may be, it is difficult to draw upon a fresh and healthy supply. The environment of the building is a grave obstacle to all attempts to provide the legislative chambers with healthy air. The conditions outside the Houses are such as probably to favour the multiplication of organisms whenever they abound. The river Thames is practically in contact with the south walls of the Houses of Parliament, acting as a cold-water jacket upon the air within, whatever steps may be taken to purify it. The air is thus constantly undergoing changes which render it unhealthy and take out that healthy property characteristic of a fresh breeze. There is something in the vitalising influence of fresh air which neither physiology nor chemistry can satisfactorily explain. It is, at any rate, pretty certain that, if perfectly pure air, obtained by mixing pure chemically derived oxygen and nitrogen in the proportion contained in the atmosphere, could be prepared on the large scale, it would not meet the needs of healthy physiological requirement in the same way as fresh natural air does. Artificially heated air is frequently described as "stuffy" and the French physiologists describe such air as "*devitalisé*"—a not inappropriate word. Foul air or unfresh air saps the power of the body to resist disease and hence the prevalence of disease, and especially respiratory disease, such as influenza, amongst those who habitually attend more or less crowded places or places where the air lacks its natural freshening effects. Thus senators in Parliament, judges in the courts, and the clerks in banks and insurance offices show a large percentage of epidemic influenza. In reply to questions this week in the House of Commons on the prevalence of influenza in the assembly no hope was held out that the condition of ventilation could be improved.

## MEDICAL OFFICER OF HEALTH AND PUBLIC ANALYST.

WE expressed before now the opinion very definitely that municipal bodies are not well advised in combining the appointments of medical officer of health and public analyst. Such a combination for obvious reasons cannot be for the public advantage. Nowadays the science and practice of public hygiene are quite sufficient in themselves to occupy all the time of a medical officer who discharges his duties efficiently, in which case he is prevented from giving that systematic attention to laboratory work which is essential to the performance of the duties of the public analyst. The duties of a medical officer of health are quite exacting enough in regard to sanitation without the additional burden of having to undertake the analysis of some hundreds of samples of foods and drugs per annum. This has already proved to be the case in some of the municipal boroughs where one man formerly occupied the two posts, and where now the medical officer and the public analyst are two independent men, acting in coöperation. The same situation has just been arrived at by the Health Committee of the Birmingham City Council, which has reported that the duties attached to the office of medical officer of health require Dr. Alfred Hill's undivided attention. Dr. Hill himself pointed out to the committee that the work of the joint appointments of medical officer of health and public analyst is too much for one man and asked to be relieved from the duties of the latter office. The committee was sensible enough to concur in this opinion and it decided to appoint a public analyst at a salary of £350 per annum, the medical officer's salary, considering that he devotes the whole of his time to the service of the corporation, being permitted to remain as it was when he held both posts. Other municipal bodies will find that they will be compelled to adopt a similar course.

## STREET LETTERING AND LOCAL AUTHORITIES.

THE new broom is understood to sweep clean and certainly there are reasons why it should be able to do so. Yet it not infrequently fails to justify its thorough-going character. Even the especial broom which has been placed in the hands of borough councils might be better employed for the removal of sundry public inconveniences than it has been. For the present we will mention only one such. The wayfarer on our streets is usually in search of some particular house. By day he should succeed, even if a stranger, in finding a labeled corner which will serve him as a guide. The surer help of local informants is also available. After a time he arrives at his destination. The door is probably numbered, but above it as often as not is a sheet of plate-glass, either plain or fancifully uninstructive. He does not notice all this at the time But how does he fare if he has to make the same journey for the first time after dark? The streets are deserted, the scarce policeman is not near, and the lettered angle, clearly enough read in sunlight, is little better than a Coptic text in the mellowed light of a street lamp several yards distant. On that lamp there is no inscription. It is only with the joint assistance of patience, ingenuity, and fortune that he reaches the street he is making for, and happy is he then if he quickly finds his number on doorways glazed with blank nothing or with romantic names or floral devices. This is the ordinary lot. The medical practitioner who wanders forth at the call of duty in the small hours of the morning has even less light upon his quest unless he have a messenger to lead him, which he has not always Surely the public and he may reasonably ask local authorities to help them in this matter. We admit that these have done something, but much remains to be done, and the work is not such that any great outlay should be required to complete it. We would have every street and corner labeled with bold and bright enamelled lettering (as not a few fortunately are), every corner lamp similarly inscribed upon the glass (as a limited number are), and the glass plate over every house-door plainly numbered. If this plan were carried out, and by order, what comparative convenience and facility would result and what needless waste of time would be prevented.

## LIVERPOOL UNIVERSITY: A MUNIFICENT GIFT FOR MEDICAL RESEARCH.

THE sum of £25,000 has been given by Mr. William Johnston, shipowner, of Liverpool, for furthering the university movement in that city. The money will be devoted, in accordance with the wishes of the donor, to promote research in pathology and physiology. The £25,000 are divided as follows: £10,000 are allocated to found a chair of chemical biology; £6000 at 5 per cent. interest are allocated permanently to endow three Research Fellowships of £100 a year each. Of these Fellowships one is to be held by a medical graduate of a colonial university, a second by a graduate of medicine of the United States, instance where sentiment certainly cannot be blamed, but where ignorance is the factor in common with the above example. This case is *à propos* inasmuch as it illustrates well one of the dangers arising from the uninstructed midwife. A young married woman died one week after her confinement. She had been attended "as casual nurse by a Mrs. Greenroyd who in addition to this duty performed work as a charwoman at a house where there was scarlet fever. The fever was in this way communicated to the lying-in woman who died two days after from a very malignant form of scarlet fever." The coroner, it is satisfactory to read, allowed the body to be viewed through a window, the coffin containing it having been unscrewed and placed on chairs for the purpose. The action of the mothers of the children who died from diphtheria, and the action of the coroner, afford a striking contrast between the cruelty of ignorance and the kindness of science. The coroner protects his jury, a body of men with a bare business relationship to himself; the sentimental mothers bid to an infectious death children for whose safety probably they would have been willing to make any sacrifice. From the poor girl who jumps into the river because she is unloved to the small-pox victim who will not have "matter from an animal put into him" misguided sentiment in one way and another claims a long list of victims.

## SCOTTISH POOR-LAW MEDICAL OFFICERS.

WE have on many previous occasions commented upon the grievances to which the Scottish Poor-law medical officer is exposed. But we have rarely come across an exhibition of more spiteful malignity than the proceedings of the Parish Council of Clyne at a meeting held at Brora on Feb. 11th and reported in the *Northern Times* of Feb. 13th. After the opening of the meeting had been much disturbed by sundry rowdy malcontents and the venue had been changed from the council chamber to the Temperance Hall, a letter was read from Peter Sutherland lodging complaints against Dr. G. Nicoll, medical officer of the parish of Clyne. Mr. Sutherland having remarked that he was not a pauper, the chairman stated that the council had no right to interfere with a practitioner's private practice. At this obvious truism there were "booing and groans, and shouts of 'whose duty is it if not the Council's?'" Mr. Sutherland's letter was then read and the charge was as follows. On Dec. 21st, 1901, his child was ill. Dr. Nicoll was called and he examined the child. He also came on Dec. 27th and 28th. By the evening of Saturday, the 28th, the child was seriously ill and Dr. Nicoll was sent for but could not be found. He eventually came on Sunday evening. In the meantime another practitioner, Dr. Simpson, had been telegraphed for, but did not arrive until just as Dr. Nicoll was leaving. The child had diphtheria. Mr. Sutherland wound up his plaint by saying: "I am a poor man. My child is dead and I will have to pay for Dr. Nicoll, and I will have to pay Dr. Simpson about £1 besides. As you are responsible for Dr. Nicoll and I could not find him and therefore had to call Dr. Simpson I hold you responsible for Dr. Simpson's account." Mr. Melville said that it was very hard that the people of Clyne had to send to other parishes for a doctor when they required one. Mr. Hamilton followed in the same strain. The chairman having advised Dr. Nicoll to resign the matter *dropped*. A public meeting then followed at which Mr Hamilton spoke. He is reported as speaking thus: "The doctor must resign. It is too bad for us to have doctors coming from other parishes. ...... It is the ratepayers that pay his salary and not the parish council, and I consider that it is the council's duty to see that the people get justice." Finally, the meeting decided that the parish council should within 14 days ask Dr. Nicoll to resign at once or within three days of his receiving notice. We take this opportunity of remarking that a "parish doctor," or, to give him his right title, a "medical officer to a parish under the Poor-law," is not, like the parish pump or the parish church or the parish stocks, able to be made use of by anyone simply because he or she happens to be a parishioner. A parish medical officer is a duly-qualified gentleman elected by a board of guardians to look after at a certain salary the sick paupers within the limits of the parish. The Melvilles and Hamiltons of Clyne seem to think that the parish medical officer is bound to go to anyone in the parish who may send for him, presumably with no further fee than his salary for looking after paupers. We are glad to see that Mr. Sutherland acknowledged his indebtedness to Dr. Nicoll; but he had no right to intrude his private dispute with his medical man upon the parish council, neither had the parish council any business to consider the matter, and why the Hamiltons and Melvilles should poke their noses in we fail to see. If Mr. Sutherland feels neglected, his course is to bring an action for malpraxis.

## THE ANNUAL DEBATE AT THE CHELSEA CLINICAL SOCIETY.

TWO special meetings of this society will be held in the Jenner Institute of Preventive Medicine, Chelsea-gardens, Grosvenor-road, S.W., on Tuesday, March 11th, and Tuesday, March 18th, 1902, at 8.30 P.M. The subject for debate is Cancer, its Nature, Origin, and General Principles of Treatment, and the following gentlemen are announced as intending to take part in the discussion. On March 11th Dr. J. F. Payne (who will open the debate) will be followed by Dr. John F. W. Tatham, Professor R. T. Hewlett, Dr. G. T. Beatson, and Dr. J. Galloway, while a paper will be read by Dr. H. R. Gaylord (New York) on Cancer in Swine, with lantern slides. On March 18th Sir William Mitchell Banks will open the debate and will be followed by Mr. H. G. Plimmer, Mr. A. Pearce Gould, Mr. A. W. Mayo Robson, and Mr. A. Marmaduke Sheild. A communication from Professor Adami of Montreal will be read and Dr. A. Barry Blacker will demonstrate the present position of treatment by means of x rays and ultra-violet rays and show the apparatus. Any member of the medical profession will be welcome to the debates on presentation of his card.

## THE RELATION OF THE CHURCH TO SANITARY REFORM.

SOME time ago we adjured the clergy to preach vaccination and revaccination and we are glad to know that our advice fell on heeding ears. The Rev. Harry Wilson, who is well known as an earnest and energetic parish priest in a very poor part of London, tells us that he preached on the subjects we mentioned and he adds: "I only wish I could get as much obvious result from my ordinary sermons as came from this one, as I am glad to say that the great majority of our people have been revaccinated." Mr. Wilson has had the *substance of his sermon reprinted as a* four-page leaflet, a copy of which he has sent us. Over 8000 copies of it have been sold and the matter is excellent. Perhaps the commencement might be called sensational, but nowadays sensationalism, if the facts stated are true, is necessary to catch the understanding of the average man or woman. *Here* are the words: "In the town of Gloucester there is a beautiful cemetery and in one corner of the cemetery there are the graves of no less than 280 little children, all under 10 years of age, all of whom died seven years ago when a terrible attack of small pox visited that town. Of these 280 children who died of small-pox 279 were unvaccinated and only one was vaccinated." Well, depend on the form of the stone as on the general irritability of the patient, and especially on irritability of the bladder. Thus you will sometimes in performing the operation find a stone excessively pointed, where the patient complains of but trifling symptoms; and on the other hand, when the stone is perfectly smooth, the patient suffers extreme pain. The pain, therefore, depends more on the irritability of the bladder and the constitution of the patient, than on the form or surface of the stone; *cæteris paribus*, however, rough stones will give the greatest degree of pain.

There are four different kinds of calculi, when chemically examined. A very nice examination may lead to further discoveries on this subject; but at present we are only acquainted with four species. The first is the uric acid, which is a common, but not the most common form of calculus. The second is the triple phosphate, or ammoniaco magnesian phosphate; the third species is the mulberry, or oxalate of lime, an excellent specimen of which occurred the other day in the boy at the other hospital. The other species was lately discovered by Dr. Wollaston, a most admirable chemist, and one of the first philosophers of the age, who developes every subject to which he applies his active and powerful mind, with an extraordinary degree of minuteness and accuracy. In examining the different calculi he discovered the species which I am now mentioning, to which he gave the name of the cystic oxide. With respect to the uric acid, it is distinguished by concentric lamellæ, and when cut has the colour and appearance of wood. (The learned Professor exhibited a specimen to the class.) It is soluble in alkalis, and alkaline medicines are therefore commonly recommended for this kind of stone.

# THE DEBATE ON THE MIDWIVES BILL.

## A FULL REPORT OF THE SPEECHES.

In The Lancet of March 1st we gave a brief outline of the debate on the Midwives Bill which took place in the House of Commons on Feb. 26th. We give now a detailed report of the speeches as the matter is of paramount importance to the medical profession, and have commented elsewhere upon the different views expressed.

Lord Cecil Manners moved the second reading of the Bill. He explained that the fortune of the ballot had made him responsible this session for the introduction of the measure, and while he believed thoroughly in the merits and general principles of the Bill he did not claim to have made an exhaustive study of the questions involved. This was a subject which had frequently come before the attention of Parliament. In 1878 a Bill was introduced and since then almost every year there had been a Bill. In 1892 a Select Committee reported to the effect that no woman should be allowed to call herself a midwife or to practise as a midwife except under suitable regulation, and again in 1893 it reported to the same effect. In 1900 a Bill drafted on the lines of these reports passed the second reading by a majority of 90 votes, and was successfully carried through the Grand Committee, but unfortunately it was too late in the session when it reached the report stage. The hon. Member then quoted resolutions of the General Medical Council and the Royal College of Physicians of London with a view to showing that there was a consensus of opinion among medical men in favour of legislation with regard to midwives. He ventured to say that the opposition which the Bill had hitherto met was more owing to the fact that experts differed as to the precise legislative action that should be taken than to any feeling that legislation was unnecessary. The hon. Member then proceeded to describe the existing state of things, the incompetence of many midwives, and the dangers to which women and their offspring were exposed in consequence of that incompetence. This country, he said, was the only civilised country, certainly the only country in Europe, where there was not some sort of registration and regulation of midwives. There were about 450,000 cases of childbirth in England each year which were attended by midwives alone, and most of these women were absolutely untrained and incompetent. The first object of the Bill was to secure proper training and the method by which it was proposed to secure it was the appointment of a central board of seven members, of whom four would be registered medical practitioners. This board would frame regulations for the training of midwives and their admission to registration, and for restricting their practice within proper limits. Certificates would be granted which would enable persons seeking the services of midwives to discriminate between trained and untrained women. In this respect the Bill followed closely the Medical Act of 1858 which laid it down that it was expedient that persons requiring medical aid should be enabled to distinguish the qualified from the unqualified medical practitioner. This Bill, in fact, put the profession of midwifery on a par with the professions of medicine and dentistry and veterinary surgery. He thought it would be unfair not to put the profession of midwifery on a par with these professions. The local supervision would be entrusted to the county council with power of delegation to the district councils, and would be secured by a system of notification similar to that under the Infant Life Protection Act, which he thought would be sufficient to ensure the identity of the woman and to trace her qualifications and character. He assured the House that when the Bill reached the committee stage its promoters would gladly welcome any suggestions for its modification or improvement, and what he asked the House to do now was to affirm the principle that those who desired the assistance of these women should be enabled to distinguish between those who were competent to give it and those who were incompetent.

Mr. De Tatton Egerton seconded the motion. The efforts for legislation on this subject began, he said, not in 1878, but as far back as 1813, when the Society of Apothecaries of London endeavoured to get a Bill. In 1878 the General Medical Council considered the matter so important that in that year they promoted a section which had reference to the organisation of midwives. In order to carry their Bill the Council found it necessary to drop this section because it was feared that it might make some confusion between medical men and midwives. Since that time the subject had been very well threshed out in the country. Several Bills had been before Parliament in order to try to remedy what he could only call a disgrace to this country—that there was no restriction whatever upon either the use of the title "midwife" or the employment of unqualified women. In Austria this legislation dated back to 1810, in Belgium to 1818, in France to 1803, in the Netherlands to 1865, and in Norway and Sweden to 1810. He had not been able to get the dates for Russia or Prussia, but in both these countries the regulations with regard to midwives were very stringent indeed. The General Medical Council, which had been one of the principal opponents of this Bill when it had been brought forward during the last three or four years, had a Bill prepared of its own, but it had never thought fit to bring it forward for discussion in that House. It had taken up the position, he would hardly say of the dog in the manger, but while it had not brought in its own Bill it had done all it could on every occasion to wreck the Bill of those whom he had the honour to represent. The General Medical Council in its last attack, said that the midwife should be required to take out a fresh licence. The Bill proposed that she should be certified and that the sanitary authority of the district should see annually that she was residing in the district and was doing good work. The legislature did not ask that a medical man who went to reside in a district should take out a licence annually, and why, he asked, should this condition be imposed upon a midwife? The Council also objected to the proposed constitution of the Central Board; it wished to have the whole matter in its own hands; it seemed to forget that there were other interests in the country besides its own. According to the Bill, there would be on the Board a majority of medical practitioners registered under the General Medical Council, and this, he thought, was as much authority as the Council required and ought to have. The promoters of the Bill had during the past three or four years had various deputations to the Privy Council. They had been assisted by the Privy Council with advice, and the Bill now before the House was the result of a meeting that had been held in conjunction, not only with the Privy Council, but also with the Home Office and the Local Government Board. At the meetings of the Privy Council they had received the most generous support, not only from the obstetric medical men, but from the Women's National Liberal Association, the Incorporated Midwives Institute, the Women's Industrial Council, the Women's Liberal Federation, and representatives of the body of and a third by a research student in gynæcology. The remaining £9000 are to be spent in building a laboratory adjoining the Thompson-Yates Laboratories, to accommodate the Tropical School, the professors of chemical biology, experimental medicine, comparative pathology, and the serum research department.

## LEICESTER AND VACCINATION.

ON March 5th the Lord Chief Justice, Mr. Justice Darling, and Mr. Justice Channell gave judgment in the case of Moore *v.* Keyte. The case was an appeal from a conviction by the Leicester magistrates under the Vaccination Acts, the appellant having been prosecuted by the vaccination officer against the orders of the guardians. The most important question before the court was whether the vaccination officer had powers to prosecute without the consent, or against the wishes, of the guardians, and the *court unanimously held that he had such powers.*

SIR FRANCIS JEUNE, President of the Probate, Divorce, and Admiralty Division, and Mr. Justice Barnes have ordered the following notice to be put up in their courts: "If any person to whom an oath is administered desires to swear with uplifted hand in the form and manner in which an oath is usually administered in Scotland, he or she is permitted to do so. The following form of oath may be used—'I swear by *Almighty God that* I *will speak the truth, the* whole truth, and nothing but the truth.'" We trust that this excellent example will be followed by the other judges.

A MEETING will be held in the Governors' Hall of St. Thomas's Hospital on Tuesday, March 11th, at 4.30 P.M., Mr. J. G. Wainwright, J.P., the Treasurer of the hospital, in the chair, to consider the steps to be taken to raise a memorial to the late Sir William Mac Cormac, Bart., K.C.B., K.C.V.O., *and to commemorate* his *connexion* with *the* hospital and the medical school.

THE medical profession is asked to note that the permanent address of the *Odontological* Society of Great Britain is now 20, Hanover-square, London, W.

# Pharmacological Notes.

### DETERIORATION OF ALCOHOLIC SOLUTIONS OF PEPSIN.

EUG. THIBAULT[1] has studied the effect of alcohol on the activity of pepsin, varying the strength of the alcohol and the duration of the experiments. He finds that, provided the alcoholic strength is *below* 12.5 per cent., the solution shows no immediate loss of strength, but above this strength *the solution immediately undergoes deterioration.* The peptonising power of the solution is almost destroyed at the end of four months, whether the alcoholic strength be above or below 12.5 per cent. Hence it appears that pepsin should not be prescribed in the form of pepsin wine, as the ferment is destroyed to a greater or less extent according to the age of the liquid. It is pointed out that sugar and certain other substances present *in the wine have a* partial preservative effect.

### THE ACTION OF PEPSIN, TRYPSIN, AND PAPAIN.

G. R. Baldwin and P. A. Levene,[2] after studying the action of proteolytic ferments on toxins, find that the diphtheria and tetanus toxins are digested, and not simply neutralised, by pepsin, trypsin, and papain. *They* are thereby rendered inert. Tuberculin, a nucleo-proteid, is weakened in its *action by these digestive ferments; prolonged digestion with* trypsin, but not with pepsin, destroys its activity.

### VALUE OF UROTROPIN.

According to W. F. Lœbisch,[3] urotropin or hexamethylene tetramine is a good antiseptic, causes no bad symptoms, and lessens intestinal putrefaction. The ethereal sulphates of the urine are diminished.

### LECITHIN IN TUBERCULOSIS.

H. Claude and Aly Zaky[4] recommend lecithin as an adjuvant to other means of treating tuberculosis from its specific action on the elimination of phosphates in the urine and its beneficial action on nitrogenous metabolism.

### ACTION OF SUPRARENAL EXTRACT.

*John N Langley*[5] *finds that suprarenal extract* causes a brief but active secretion of the salivary and lacrymal glands. *This is not affected by degeneration of the post-*ganglionic fibres of the superior cervical ganglion or by small doses of atropine, but the secretion *is stopped by* large doses of atropine. The extract has no certain effect on the secretion of sweat, but increases the secretion of bile. It acts differently on different involuntary muscular organs, causing, for instance, inhibition of the bladder, stomach, and gall-bladder, and contraction of the anal sphincters, uterus, and blood-vessels. The theory that the extract acts on sympathetic nerve-endings breaks down in various instances.

### PHARMACOLOGICAL ACTION OF PURINE DERIVATIVES.

An *important investigation* has been *made* by Oswald Schmiedeberg[6] on the comparative pharmacological actions of some purine derivatives. Experiments were made with frogs and rabbits. The action of caffeine and theobromine is already known to be twofold—viz., nervous and muscular. The nervous action depends on the presence of nitrogen in the molecule, for it is exhibited also by ammonia and by ammonium salts. The muscular action is characteristic of the purine nucleus. Purine itself exhibits both actions, which are affected in degree by introduction of oxygen or alkyl groups. A large number of substances have been experimented with and their effects have been described.

# Looking Back.

FROM

## THE LANCET, *SUNDAY, MARCH* 7, 1824.

### LECTURE 39[1]

*Wednesday Evening, March 3d.*

A *few minutes after* 8 o'clock the Learned Professor entered the Theatre. Several pieces of orange peel lay strewed upon the table on which the preparations are placed. This, said the learned professor smiling, as he *took* up one of them, is, I presume, *one of the missiles!* We trust that this good natured rebuke will have more weight with the class than any formal argument, to show the folly of the puerile practice which prevails during the half hour preceding the Lecturer's entrance.

In the last evening's Lecture, gentlemen, I began to describe to you the subject of the formation of calculi, the different species of calculi, and the symptoms which attend them. I shall now proceed with this subject. The pain which a patient experiences from stone in the bladder is by no means in proportion to its bulk. It is not exactly in the inverse ratio to its *magnitude,* but *still it approaches that* inverse ratio. When a stone becomes excessively large, the patient generally loses the power of retaining his urine, and the distillation of urine from the bladder, prevents that contraction of it which *occasions so much pain to the patient* in discharging the last drops of it. Doctor FRANKLIN, the celebrated American philosopher, who died of this disease, suffered excessively for a number of years from it, but at last, when the stone acquired considerable magnitude, he experienced but little pain. The pain does not so much they all deplored. He did not think, however, that his hon. friend had quite fairly quoted the provisions of Clause 3, the effect of which was that any midwife who was now in practice must bring evidence satisfactory to the Board showing that she was not only a woman of good character but in *bonâ-fide* practice. His hon. friend omitted the *bonâ-fide* practice point, which was important.

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[1] Journal de Pharmacie et de Chimie, Feb. 15th, 1902, p. 161.

[2] Journal of Medical Research, 1901, vol. vi., p. 120.

[3] Chemisches Centralblatt, 1901, Band II., p. 7.5.

[4] Comptes Rendus de la Société de Biologie, 1901, tome liii., pp. 521 and 830

[5] Journal of Physiology, 1901, vol. xxvii., p. 237.

[6] Berichte, 1901, Band xxxiv., p. 2550

[1] Excerpt from report of this lecture delivered by Sir Astley Cooper in the Theatre of St. Thomas's Hospital.

Sir **John Tuke**: It was merely an accident on my part.

Dr. **Farquharson**, resuming, said that he took his stand on the broad general principle that it was high time something was done to remedy the present condition of affairs. Public opinion had been aroused and there had been evidence before two select committees that a great evil existed and ought to be remedied as soon as possible. They could not end the midwife, but it was reasonable that they should attempt to mend her. Every year 450,000 cases of female labour were attended by midwives. Many women preferred midwives. If he were a woman he would naturally prefer to be attended by a woman at a time when the softness and sympathy of a woman were so useful. It was perfectly well known, of course, that many midwives were ignorant and dirty, but he thought that, like medical students, they had suffered a little at the hand of comic writers, and if they were, in many instances, dirty, ignorant, and incompetent, then they must be educated and made less injurious and dangerous. He ventured to say that parturition was a purely mechanical process. In 99 cases out of 100 it was perfectly easy and natural and could be carried out without any difficulty whatever. He hoped that he would not offend the prejudices of any by saying that the reason why Edinburgh was always considered such a good school for midwifery was that the large size of the Scotch skull made the process of parturition more difficult than in England. Two or three months' training or 10 or 20 lessons would be quite enough to let a woman know how to deliver another woman in childbirth, and he was bound to say that with that training a midwife would know quite as much as did many medical men. When he took his degree in Edinburgh attendance at six labours was sufficient to qualify for midwifery, and if that was enough to give a man a knowledge of this particular branch of his practice, would not a woman who had probably attended 200 or 300 cases know as much as a man? He admitted that the Bill was not quite perfect, but it was a serious and an honest attempt to remove the evil. There would be a sufficiently good curriculum established by the Board, which was not at all a bad Board. It was not constituted by the General Medical Council, which had got quite enough to do with other things, but by the Privy Council, and it had to be accepted and supervised afterwards by the General Medical Council. It had been objected that the penal clauses were not introduced. That was a hopeless utopian dream. No House of Commons under the sun would ever pass provisions of that kind, and all that they could do was to give some kind of hall-mark which would enable the public to see who were qualified and who were not. He was glad that the honourable Member who moved the rejection of the Bill did not take the objection that the Bill would do harm to the medical profession. That was a line of argument which he repelled with indignation on the part of his profession. But it had been said that 95 per cent. of the medical practitioners were against it. Why? He hoped not on account of their own interests. What was the reason?

Sir **John Tuke**: The absence of the penal clauses.

Dr. **Farquharson** said that he was very glad to hear that, but, as he had already indicated, he did not think that any body of reasonable men would ever pass clauses which would do more than protect the public against the unauthorised practitioner. There was an argument put forward by Professor Horsley—namely, that the Bill would go far towards repealing the Medical Act by making midwives equal to those who were qualified by that Act—but he contended that anyone who used that argument could hardly have looked at the Bill, as the text made it quite clear that such a result could not take place.

Mr. **Griffith-Boscawen** supported the view that there should be a penal clause to prevent women who were not certified from practising.

Mr. **Eugene Wason** said that the promoters of the Bill would have liked to take the General Medical Council along with them, but as they had had to take their choice between the Government and the Council he thought that they had done well to secure the allegiance of the former.

Sir **Francis Powell** supported the second reading in the hope that the Bill would be strengthened in committee.

Mr. R. **Ambrose** said that he opposed the Bill because it created a distinct and inferior class of practitioners in midwifery over whom the General Medical Council could exercise no control, and because it contained no provision for qualified medical assistance in cases of difficulty.

Mr. W. **Lawrence** supported the Bill as a step in the right direction, and Mr. **Emmott** spoke in the same sense.

Colonel **Sadler** took the view that all that was wanted was trained nursing under medical supervision.

Mr. L. **White** gave general support to the Bill, while admitting that it must be considerably altered in committee.

Sir **Walter Foster** said that the subject was one that required deliberation on the part of men specially qualified to consider it, and it was a problem which even then would be very difficult of solution. He was, however, glad that the only thing which they differed about was the question of method, and in his opinion this Bill was not as good a Bill as those which had preceded it. It must be remembered that they were dealing with a subject which had been steadily growing in complexity during the past 40 years. No man was allowed to practise midwifery unless he had had five years' training and had obtained a diploma, so that if he (Sir Walter Foster) happened to be a general practitioner and wanted assistance in midwifery cases he could not get assistance from a pupil who had been five years in the medical schools and was perfectly qualified in every way except in having still to pass the final examination. He could not employ such a man to attend the simplest cases of labour. That was a very strong position for the law to take up, but it was the law as laid down in 1886. It was so strong that the General Medical Council had actually accused medical men of infamous conduct for employing men who were undoubtedly good at midwifery cases because these assistants were not qualified to go on the Medical Register. That attitude was taken, not in the interests of the medical profession, but entirely to save the public from the terrible diseases and suffering that they had experienced in the past at the hands of illegal and unqualified practitioners. The medical profession had been exceedingly zealous in maintaining a high standard of medical aid for the poorer classes; but if this Bill were passed in its present form all the structure that had been built up with great care in order to protect the public from the unqualified practitioner would fall to the ground. The Bill would not touch the worst cases—the cases of people in country districts and manufacturing towns who did not put out any brass sign but who had their own little connexions amongst people. The only people the Bill would touch were the certificated midwives who did at present undergo a certain amount of training, and the Bill would create practically a new class of practitioners. Although he was entirely in favour of something being done he could not vote for this Bill because it fell short of previous attempts. There would be no adequate supervision—it would be an enormous advantage to obtain licences from a local authority; they had not local control; there was no sensible medical control, for the General Medical Council was practically struck out of the Bill. Nor did he like the central authority. One of the representatives was to be from a body which was not known in his profession—namely, the Incorporated Midwives Institute. It was not strong enough for controlling tens of thousands of women all over the country. But he believed that the right course would be to refer the Bill to a select committee, because it was not a measure that could be discussed adequately in a full committee of the House or by a grand committee. The problem was too big to be in the hands of a private Member, it ought to be taken up by the Government; and in this connexion he suggested that the Home Secretary should consider a Bill for the registration of all nurses.

Mr. **Heywood Johnstone** said that the honourable gentleman who had just spoken had never done anything himself to help to solve the problem. It had been argued by some speakers that the Bill was defective in that instead of the licensing proposed in the Bill of 1900 a system of notification was inserted. The object was to provide for local supervision which they all believed to be important and necessary. Certain women had felt that it was a humiliation to take out a yearly licence, and therefore an effort had been made to meet the objection by substituting a much less harassing system—namely, that they should simply give notice of their intention of practising and of the fact that coroners. The evidence which the coroners had given them was of such a nature that if it could be printed and circulated among Members of the House it would convince the House of the absolute necessity of some such legislation as was now proposed.

Sir JOHN TUKE said that it was with a certain amount of regret that he moved the rejection of this Bill. It contained certain good points, but the Bill was so lacking in strength and purpose that he considered it to be really a useless measure. It was lacking in one essential and vital point, and on account of that he conceived it to be his duty to move its rejection. He supported the Bill of 1900 generally on the ground that, to his mind, it was an important measure bearing upon public health. He supported it notwithstanding the opposition of a section of the medical profession. The profession was by no means unanimous upon the question, but he thought as regards the present Bill he was not wrong in saying that 95 per cent. of the medical profession would oppose it on account of the omission of the penalty clause. The hon Member had spoken of the attitude of the General Medical Council as being that of the dog in the manger. That was not so. He spoke in 1900 in order to represent the views of the General Medical Council, which was as desirous as he was that a really good and efficient Bill should be presented to the House. He supported the Bill of 1900 on account of the strong belief held that it would confer very great benefits upon parturient women, but the measure now before the House did not contain the clause which rendered the Bill of 1900 an important measure of public health, and the omission of that clause rendered this Bill in his opinion inoperative, futile, and to a certain extent mischievous. It omitted the provision to prevent uncertified women from practising and to his mind this omission constituted a cardinal objection to the Bill. He opposed it on this ground, though of course he had other grounds of objection. It had been said that the great object of the Bill was to provide women in labour with suitable and safe attendance. There was no one more anxious than he that a measure securing this object should pass, but it could only be secured, not merely by providing for the education and superintendence of midwives, but by a measure preventing the practice of incompetent women. It was a matter of common knowledge that amongst the women who acted as midwives there were a considerable number who, by their ignorance, carelessness, filth, and dissipated habits, constituted a serious danger to the public. Through their evil ways puerperal fever was generated and communicated from case to case. That most dangerous form of insanity spoken of as puerperal insanity was often engendered and many hundreds and thousands of women suffered for years from the consequences of ill-directed labour and not a few cases of death to mother and child occurred. For evidence of this it was only necessary to refer to the verdicts found in coroners' courts. The Bill of 1900 was not only calculated to build up a new class of midwives who after receiving an elementary education in obstetrics would be placed as to their practice under regulation and supervision, but by a special clause it was calculated to suppress the existing dangerous class. The present Bill failed in this most important particular. It did not suppress the evil out of which the movement for the registration of midwives arose. Under the Bill of 1900 only certified women were allowed to use the name "midwife," and, what was of infinitely greater importance, uncertified women who habitually and for gain practised midwifery were made liable to a fine not exceeding £5. According to Clause 3 of this Bill any woman who within two years from the date of the Act coming into operation claimed to be certified would be so certified provided she held a certificate in midwifery from the Royal College of Physicians of Ireland or the Obstetrical Society of London or such other certificate as might be approved by the Central Midwives Board, or produced evidence satisfactory to the Board that at the passing of the Act she had been in *bonâ-fide* practice as a midwife and that she bore a good character. Thus any woman who now acted as a midwife could obtain certification upon producing evidence that she was a respectable woman and fulfilled certain conditions laid down by the Central Midwives Board. Surely this was a sufficient protection of vested interests. By this clause only ignorant, disreputable, or incompetent persons would be precluded from certification—the very class of persons out of whose irregularities the whole question had arisen. As the Bill stood this class of persons would be allowed to continue their work unchecked by any authority or by any form of supervision. It was quite true that they could not put a notice-board over their doors or a ticket into their windows intimating that they were midwives, but these were small disabilities which would have no effect in the way of checking their practice. In spite of this Bill they would continue to be a source of danger and of disease. It might be argued that already the number of incompetent women was diminishing, consequent upon the extended views upon nursing generally, but evidence obtainable from the great manufacturing centres, from the metropolis itself—evidence obtainable from district nurses, Queen's nurses, and others—showed that at the present moment the dangerous midwife was still a power in the land. He would like the House to consider whether the provisions of this Bill were likely to lessen the number of uncertified midwives. They might produce a class of fairly well-educated women, educated in the rudiments of obstetrics and the first principles of cleanliness; but before a woman could get on the register she came under the jurisdiction of the Central Midwives Board, one of whose functions was to regulate the course of training and conduct of examinations of candidates. This Board would admit to the roll any woman who had had a certain amount of training, which in his opinion would be an absolutely unappreciable benefit. According to Clause 8 the midwife was placed under the immediate supervision of the county or district council and she had to pay fees. All that she got in return was the right to call herself "midwife" and to sue for fees, while alongside of her was a woman who paid nothing and was free from all authority. There was power to strike a woman off the roll for misconduct, but what did that matter? she could still go on practising. He believed that the promoters of the Bill were sincerely sorry when under the pressure of certain permanent officials they withdrew the penal clause and thereby absolutely eviscerated the Bill. It was said that the penal clause would create a new class of offence. He denied that. There was the Apothecaries Act of 1815 which was not repealed and indeed was constantly put in force. There was the case of solicitors and auctioneers and traders, and, as an hon Member suggested, the case of the man who carried the gun. These were precedents; why not apply them to midwives? It would not be the creation of a new offence, but only the extension of an existing principle of law to a dangerous class. His own opinion was that the certified midwife would be in the minority. He had not argued the case from a professional point of view; he had done so from the point of view of a member of the general public. He held no brief for the medical profession. If he held a brief at all it was for the hundreds of thousands of women who either from necessity or choice were attended by midwives. He would gladly support this Bill, with, perhaps, some modifications, were the penal clause he had alluded to introduced, but as an old Parliamentary friend had said to him, "You can never make certain of anything in this House," and therefore he found it necessary to press his amendment. He did so on the ground that this was not a measure calculated to secure public health, that it was futile, and that it did not secure the advantage to lying in women which its promoters had in view.

Sir BARRINGTON SIMEON said that he had no professional knowledge of this subject, but he happened to own land, and as a land-owner he knew that if midwives were given a certain amount of authority in the eyes of poor people because they were called "certified" or "registered" there would be far more danger of illegal operations being performed on young girls in trouble and on married women who did not wish to increase their families. This was a point which he thought should be considered before Members voted for the second reading of this Bill. In his opinion the Bill would create a new class of midwife who would be employed as a substitute for the medical practitioner. He admitted that the present state of things was unsatisfactory, but his view was that this measure would not improve it. No Bill could be satisfactory which must create trouble between local medical men and midwives.

Dr. R. FARQUHARSON said that there had been no more effective speech made yet in favour of the Bill than that by Sir John Tuke who, although dissenting from certain of the propositions, had given a most plain and practical testimony as to the great evils which were going on throughout the country, and had thrown in his lot with those who desired to find some remedy for a condition of things which taken the greatest interest in the matter for many years. They all of them had the desire that this Bill should pass, although many of them thought that it did not go far enough. He hoped that the House would give the Bill a second reading and send it to a tribunal which would deal with it without delay and enable the measure to become law during the present session.

Mr. Caine asked the promoters to make clear whether the body mentioned in Clause 4 was the Incorporated Midwives Institute. He knew of no such institute; he had asked for information about it but he had got none. Indeed, he did not believe that any such institute was in existence.

Mr. Heywood Johnstone replied that it was a body which had been in useful existence for a considerable number of years. The House might be quite certain that it would not have got its charter of incorporation from the Privy Council, from which it would necessarily come, unless it were a responsible body and a body engaged in doing good work.

The amendment for the rejection of the Bill moved by Sir John Tuke was negatived without a division, and thereafter the motion for the second reading was agreed to, also without a division.

Mr. Heywood Johnstone moved that the Bill be referred to the Grand Committee on Law.

Sir Walter Foster moved as an amendment that it be referred to a select committee. He argued that this form of committee would give the Bill a more thorough examination than could be given to it by the Grand Committee.

Sir John Tuke seconded the amendment.

Mr. T. P. O'Connor, supporting the amendment, said that he had no thought of meeting the Bill in a spirit of malignant or obstructive criticism, because he approved its principle; but while that was so he remembered the proceedings in the Grand Committee before and he could not conceive a more uncompromising person than Mr. Heywood Johnstone during these proceedings. The hon. Member had got this Bill so much upon his mind that he regarded anyone who offered any criticism upon it as breaking some sacred or Divine law and he doubted whether on this occasion he would get very much consideration from the hon. Member in the Grand Committee. His own view was that it would not be against the passage of the Bill if it were referred to a select committee.

Mr. Heywood Johnstone said that he had served on many select committees, and not one of the Bills which had been considered by them had been placed on the statute-book. He therefore opposed the idea of a select committee in this case.

Mr. Griffith Boscawen spoke in favour of reference to the Grand Committee.

As in the former case, the amendment was not pressed to a division.

The Bill accordingly was referred to the Grand Committee on Law.

# THE METROPOLITAN WATER-SUPPLY.

## II.[1]

### The Lambeth Waterworks Company: Some Questions for the President of the Local Government Board.

The arrangements of the Lambeth Waterworks Company are unsatisfactory in more than one respect.

1. There is a deficiency of reservoir capacity.
2. The filtration area is insufficient.
3. Constant water service is not given to all those who have the right to demand it.

1. It is a matter of common knowledge that years ago the ordinary water of the Thames was used as a beverage. At the present time, however, it is not generally looked upon as suitable for that purpose. It is true that before the Llandaff Commission Professor Dewar, F.R.S., in giving evidence on behalf of the metropolitan water companies, said (Jan. 17th, 1899) that he would not object to drink unfiltered Thames water. But there are men who are employed to drink sewage effluents to prove their purity. It is not necessary to dwell on this matter. It is well that people should weigh the facts for themselves. At the present time the metropolitan water companies are not allowed to supply crude river water for human consumption. The chief means adopted for its purification are sedimentation and filtration. The Water Examiner in his last annual report (1900–1901) explained to the President of the Local Government Board the utility of storage reservoirs. It may be worth while to quote these remarks, which are to be found on page 247 of the Thirteenth Annual Report of the Local Government Board: "The fact that the impurity of the water in the rivers is so largely increased during periods of flood renders it of great importance that there should be sufficient provision of subsidence and storage reservoirs to enable the necessary daily supplies to be delivered during such periods, while keeping the intakes closed. Such provision is essential for securing uniformly effective filtration. The area of the available filters should also be sufficiently large to enable the necessary supply to be collected when the passage of the water through the material is sufficiently slow effectively to filter the worst water which circumstances may render it necessary to deal with." It is instructive to compare the relative reservoir capacity of the West Middlesex Waterworks Company with that of the Lambeth Company. In taking the West Middlesex Company as a standard of comparison it is not to be assumed that the arrangements of that company are perfect or that the water supplied by them is of ideal quality. It is not. Excellent water is supplied by the Kent Company. The customers of the New River Company have rarely cause to complain. Of the other companies the arrangements of the West Middlesex Company are the best. It happened that when the company not only paid its full statutory dividend and had also paid its back dividends, it was discovered by the directors that new works were required to ensure thorough efficiency. This discovery synchronised ("by some odd coincidence," as Lord Llandaff put it[2]) with the last payment of the back dividends. Improvements were then, in fact, effected in the company's works, and as far as the shareholders' pockets were concerned there was no reason why these should not be done. The undertaking indeed was brought to a state of comparative efficiency, although not to a state of such efficiency as to secure a supply of water equal in quality to that of the New River Company. The Lambeth Company has been less fortunate, as a business concern and the old works have remained much as they were. The table given below, which is compiled from the December report of the Water Examiner, shows the average daily amount of water supplied during the month, the estimated population served, the storage reservoir capacity, and the filtration areas of the West Middlesex Company and the Lambeth Company respectively.

| — | Daily average amount of water supplied in gallons. | Estimated population. | Storage reservoirs. | | Filter-beds, area in acres. |
|---|---|---|---|---|---|
| | | | Area in acres. | Capacity in gallons. | |
| West Middlesex ... ... | 20,565,429 | 650,754 | 117½ | 397,500,000 | 22¼ |
| Lambeth ... | 26,168,039 | 764,481 | 31 | 128,000,000 | 12¼ |

It is evident at a glance that although the amount of water which is distributed by the Lambeth Company is greater than that which is distributed by the West Middlesex Company, the reservoir capacity of the Lambeth Company is less than one-third of that of the West Middlesex Company. The figures, as given in the Water Examiner's report, show that whereas the West Middlesex Company has a storage capacity sufficient for the wants of its customers for a period of 18·7 days the Lambeth Company has sufficient for only 4·9 days. Enough has been said to show that the Lambeth Company is deficient in its reservoir capacity.

2. The filtration area is insufficient and in the case of the Lambeth Company the offence is the more serious because the storage reservoirs are deficient in capacity. Water which has undergone a prolonged process of sedimentation becomes comparatively pure, the filter-beds have therefore less work to do. When, therefore, a water company has a reservoir capacity insufficient to ensure a sedimentation of the impurities of the river water it becomes the more necessary that the filtration area shall be ample. It cannot be too strongly insisted upon that the smaller the sedimentation

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[1] Article I. appeared in The Lancet of March 1st, 1902, p. 614.

[2] Feb. 14th, 1899. Fifty-second sitting of the Llandaff Commission.

they were practising. There was nothing which impaired the power of local supervision which local authorities were given in the Bill of 1900. These authorities would still have the power of general supervision, of investigating charges of malpractice, negligence, or misconduct, and of supervision, if necessary, and they would be able to keep their finger on the women practising in their area, without being unduly harassing. The main objection taken to the Bill was that it did not contain the words rendering unqualified practice illegal. The Bill gave to the person who needed the services of a midwife the power of discriminating between the women who were qualified and those who were not qualified, but, unlike the Bill of 1900, it did not absolutely penalise unqualified practice. It was impracticable to do such a thing, and he hoped that he was committing no breach of confidence when he said that the promoters had had information from high quarters that it would be hopeless to attempt to carry any measure at all if they encumbered it with a clause penalising unqualified practice. He was quite aware of the views of the General Medical Council on this point, but the promoters realised, and the Council realised, that the point was contended for as a stepping-stone towards rendering the practice of unqualified medical men absolutely penal. That had been the Council's aim and desire for a long time. It might be a very wise object, but at the present time the promoters had to consider what they could get in the Bill, and if they got even this Bill in its existing state they would do much to solve the difficulty. They were treading a somewhat unknown path, and until they had had experience of the working of this particular measure it was extremely undesirable that they should lay down, say, a hard-and-fast rule for so many months' training. All these things were better provided for in the end by rules which could be modified as experience suggested. He believed that when they came to thresh out the details they would find that there were more points of agreement than of difference. In conclusion, he mentioned that he had received a number of instructive figures dealing with the deaths of women attended by trained midwives sent out from some of the large hospitals and institutions. Out of 13,712 cases attended the deaths were only 17—a death-rate of 1·23 per 1000 as compared with a general death-rate in maternity cases of 4 66 all over the country. No other argument was necessary to show the superiority of the trained over the untrained midwife.

Mr. T. P. O'CONNOR, after describing himself as not an opponent of the Bill, but a vigilant critic of it, said that he objected in principle to the multiplication of registered bodies and expressed the view that the cry of "something must be done" had often led to unwise legislation. His contention was that women must not be allowed powers of practising medicine under less severe guarantees and safeguards than were applied to men.

Sir SAVILE CROSSLEY approved the Bill as a measure calculated to do good among the poorer classes of the community.

Sir MICHAEL FOSTER said that childbirth was sometimes spoken of as a travail, and it might be likened to a journey through which one might go with the ordinary discomforts of travel. It was a journey fraught with the utmost peril to life. Those who could afford it were able to carry a medical adviser with them so that he could be there whenever an accident occurred. But the poor could not do that, and as he understood this Bill it was designed in the interest of the poor in order that they might carry with them on this perilous journey, not a medical man, but one who knew when a medical man should be sent for. If he understood the object of the Bill it was simply to arrange that the public might know that there were special nurses different from the ordinary trained nurses. The main qualifications of these special nurses were, first, to know when to send for a medical man; second, to be cleanly and to know what cleanliness meant; and thirdly, never to drink. His interpretation of the Bill was that it simply demanded this and he looked with terror on any proposal requiring two or three years' training in an obstetric school. In his opinion it was far better for the House to throw itself upon the good feeling and the knowledge of the people than to trust to the enforcement of penal clauses. When the people knew that Mrs. Gamp could be trusted and that Mrs. Harris could not be trusted, even if Mrs. Gamp charged a shilling more than Mrs. Harris, he ventured to say that Mrs. Gamp would prosper and Mrs. Harris would disappear because she would be starved out of existence.

Mr. JOHN BURNS said that he had consulted medica practitioners in his constituency of Battersea on thi subject as well as the sisterhood of nurses, and he ha found that they viewed this legislation with sympathet consideration and support. If Members had any fear th the Bill would lead to a lowering of the standard medical education or any laxity on the part of medical pra titioners they might dismiss the thought. They might leave that question entirely in the hands of the medical men who in such a matter were thoroughly well able to take care of themselves. He had a great admiration for medical men. The medical man was usually the very best man in the parish, he did more unpaid work than any professional man he knew and more for the poor. He did not believe that Parliament need have any fear about the standard of medical education being lowered, but he did believe that if they had qualified midwives as they had qualified nurses many children would be born into the world better able to fight its battles and many women would be spared suffering and death. In his opinion all the objections to the Bill were objections in details which would properly be discussed before a committee.

Mr. RITCHIE said that there seemed to be a general consensus of opinion in the House in favour of the second reading of the Bill. Indeed, the only speech that he had heard which attacked the Bill root and branch was the speech of Sir Walter Foster who desired the House to take refuge in that familiar mode of getting rid of a subject which anyone wished to see shelved—namely, to ask the House to have more inquiry into the matter before dealing with it The hon. Member really answered himself, because he told the House that there had been inquiry after inquiry upon Bill after Bill with regard to this subject and that Parliament had never got beyond inquiry. What was the reason why a principle which all were agreed upon had not yet got to the stage of effective legislation? It was because a certain number of gentlemen who were not opposed to a change in the law desired something much more than anything suggested in this Bill. More inquiry was wanted in order to make the Bill more drastic, more comprehensive, more complete. He ventured to say that these were the wrong lines altogether to go upon in this matter. They were all agreed that a great evil existed That great evil was the fact that no person requiring the attendance of someone to help during this time of peril knew whether the woman who was called in was qualified to meet the difficulties of the situation. This wa a modest Bill. It proposed to place at the service of every body who required assistance of this kind the knowledg which would enable them to judge whether or not the person they called in was, a person who might be trusted. He knew that there were some people who desired to go very much further and to say that the person who was called in must go through a very long course of training. That would mean that in a large number of towns and villages the poor would be deprived of all assistance of this kind. They would not be able to avail themselves of anything but the assistance of a medical man, which would be beyond the means of many, and besides the medical man might not be at call when wanted. Much more than expert knowledge was required at times such as these, and to pass a measure which would be so drastic as to prevent the poor being able to avail themselves of this assistance at the time of need would, in his opinion, be an unfortunate thing to do. There were matters of detail with regard to this Bill which might very well be considered in committee, but there were two perils which faced the House if it desired the Bill to pass. One peril was a select committee. It might be taken for granted that a select committee would, at any rate for the present session and probably for many sessions to come, be the grave of this Bill. There was another peril and that was the effort, well-meaning effort, to make the Bill very stringent. If an attempt was made to alter the Bill from the simple Bill which it was now to a complex Bill that again would prove the grave of the Bill. In this measure they had a simple remedy, with nothing heroic about it, for what everybody admitted to be a great evil Let them not refuse to take this because it did not go the whole length which some of them desired. It had been very carefully considered by his hon. friend who had devoted so much time and attention to it and by large numbers of ladies and gentlemen who had

In accordance with notice given it was moved by the PRESIDENT and seconded by Dr. WILLIAM JAQUES—

> That any medical man who shall knowingly meet in consultation any practitioner who is actively opposed to the union shall himself be considered as opposed to the union.

This motion was carried unanimously.

It was also resolved on the motion of the PRESIDENT, seconded by Mr. E. H. DAVIS—

> That in the opinion of the union the payments made by insurance companies for medical examinations are totally inadequate.

Considerable discussion on the subject then took place and it was resolved—

> That the subject of the payment of fees for examinations for life assurance be referred to the various local committees for consideration and report to the Council, and that after such reports have been received communication be opened with the Northumberland and Newcastle Medical Association with a view to concerted action in the counties of Durham and Northumberland.

It was ordered that copies of a table prepared by the secretaries of the fees at present paid by certain life assurance companies should be printed and supplied to the local committees.

Dr. MANN drew attention to the exorbitant rates of commission charged at some collieries for the collection of the fortnightly payments to the medical officers, and after some discussion, in which it appeared that the rate varied from 5 to 10 per cent., whilst at some collieries no commission at all was charged, the following resolution was passed:—

> That the attention of owners and managers of collieries and works in the county be drawn to the exorbitant rate of commission charged at some places for collecting doctors' subscriptions from workmen with a recommendation that where charged at all the rate should not exceed 5 per cent.

A discussion took place in reference to the difficulty experienced by practitioners in obtaining serum rapidly and suggestions were made that it should be supplied gratuitously, and on the motion of Dr. MANN, seconded by Mr. E. H. DAVIS, it was resolved—

> That taking into consideration the great danger to the public health and the difficulty of procuring serum rapidly sanitary authorities be urged to supply serum to medical practitioners gratis or at cost price at the discretion of the medical officer of health.

Dr. ARMSTRONG raised the question of the additional and important duties which had devolved on medical men in connexion with cases under the Workmen's Compensation Act, and drew special attention to the fact that as a rule no payment was made to the colliery surgeons for attending post-mortem examinations and consultations on behalf of the owners, and, on the motion of Mr. E. H. DAVIS, seconded by Dr. COX, it was resolved—

> That some representation be made to the Durham Coal Owners' Association and to the owners of collieries and works asking that a fee be paid to colliery surgeons for attending post-mortem examinations and consultations on their behalf.

A hearty vote of thanks to the President terminated a very interesting and successful meeting.

The members subsequently dined together at the Grand Hotel, Sunderland, the Mayor of Durham (Mr. R. T. Herring, J.P.) being one of the guests.

## VITAL STATISTICS.

### HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8455 births and 6633 deaths were registered during the week ending March 1st. The annual rate of mortality in these towns, which had been 20·6, 22·6, and 24·4 per 1000 in the three preceding weeks, declined again last week to 23·3 per 1000. In London the death-rate was 28·2 per 1000, while it averaged 21·1 per 1000 in the 75 other large towns. The lowest death-rates in the 76 towns were 10·6 in Aston Manor, 11·7 in Hornsey, 12·4 in Walsall, 12·6 in Leyton, 12·9 in Kings Norton, and 13·8 in Norwich; the highest rates were 27·3 in Great Yarmouth, 27·6 in Reading, 28·2 in London, 28·5 in St. Helens, 28·8 in Merthyr Tydfil, 29·3 in Hastings, and 29·4 in Plymouth. The 6633 deaths in these towns last week included 570 which were referred to the principal zymotic diseases, against 584, 525, and 581 in the three preceding weeks; of these 570 deaths 166 resulted from measles, 122 from whooping-cough, 90 from diphtheria, 84 from small-pox, 45 from scarlet fever, 34 from diarrhœa, and 29 from "fever" (principally enteric). No death from any of these diseases occurred in Hornsey, Bournemouth, Ipswich, Great Yarmouth, Burton-on-Trent, Handsworth, Birkenhead, Middlesbrough, or Sunderland; while the highest zymotic death-rates were recorded in Willesden, Tottenham, West Ham, Burnley, Huddersfield, and Stockton-on-Tees. The greatest mortality from measles occurred in Willesden, Tottenham, Brighton, Southampton, Northampton, Burnley, Huddersfield, and Rotherham; from scarlet fever in Wigan; from diphtheria in Willesden, Coventry, and West Hartlepool; from whooping-cough in Aston Manor, Wallasey, Liverpool, York, and Gateshead; and from "fever" in Devonport. 75 fatal cases of small-pox were recorded in London last week, seven in West Ham, one in Tottenham, and one in Swansea. The number of small-pox patients under treatment in the Metropolitan Asylums hospitals, which had been 1102, 1185, and 1321 at the end of the three preceding weeks, had declined again to 1309 on Saturday, March 1st; 379 new cases were admitted during the week, against 287, 390, and 502 in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital at the end of the week was 2307, against numbers decreasing from 3137 to 2413 on the nine preceding Saturdays; 215 new cases were admitted during the week, against 277, 260, and 219 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 486, 681, and 885 in the three preceding weeks, declined again last week to 733, but were 203 above the average. Influenza was stated to be the primary cause of 103 deaths in London last week, against 40, 51. and 107 in the three preceding weeks. The causes of 92, or 1·4 per cent., of the deaths in the 76 towns last week were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Leicester, Nottingham, Bolton, Bradford, and in 37 other smaller towns; the largest proportions of uncertified deaths were registered in Smethwick, Liverpool, St. Helens, Blackburn, Barrow-in-Furness, Sheffield, and Sunderland.

### HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 23·6 and 25·3 per 1000 in the two preceding weeks, declined again to 22·6 per 1000 during the week ending March 1st and was 0·7 below the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 17·3 in Paisley and 18·5 in Aberdeen to 24·2 in Greenock and 26·3 in Dundee. The 729 deaths in these towns included 23 which were referred to whooping-cough, 19 to measles, 13 to diarrhœa, 10 to small-pox, five to "fever," four to scarlet fever, and one to diphtheria. In all 75 deaths resulted from these principal zymotic diseases last week, against 66 and 81 in the two preceding weeks. These 75 deaths were equal to an annual rate of 2·3 per 1000, which was 0·3 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had been 20 in each of the two preceding weeks, rose last week to 23, of which seven occurred in Glasgow, seven in Aberdeen, five in Edinburgh, and three in Paisley. The deaths from measles, which had been 12 and 17 in the two preceding weeks, further increased to 19 last week, and included six in Glasgow, six in Dundee, three in Edinburgh, and two in Greenock. The fatal cases of diarrhœa, which had been 23, 16, and 22 in the three preceding weeks, declined again last week to 13, of which five were registered in Glasgow, four in Dundee, two in Aberdeen, and two in Paisley. The deaths from small-pox, which had been one, two, and seven in the three preceding weeks, further rose to 10 last week, and were all recorded in Glasgow. The fatal cases of "fever," which had been 10 and six in the two preceding weeks, further declined last week to five, of which two occurred in Glasgow, where the four deaths from scarlet fever were also registered. The deaths referred to diseases of the respiratory organs in these towns, which had been 173, 211, and 224 in the three preceding weeks, declined again last week to 214, but exceeded by 30 the number recorded in the corresponding period of last year. The causes of 24, or more than 3 per cent., of the deaths in these eight towns last week were not certified.

### HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 23·8, 25·7, and 33·3 per 1000 in the three preceding weeks, declined again to area is the larger the filtration area must be to ensure the removal of foreign matter. The Lambeth Company, as we have seen, is not only deficient as to its reservoir capacity, but the filtration area is very inadequate. Whereas the West Middlesex Company has a filtration area of 22¼ acres to treat something under 21,000,000 gallons of water daily, the Lambeth Company has only a filtration area of 12¼ acres in which to treat over 26,000,000 gallons daily. During the month of December, 1901, according to the monthly report of the Water Examiner, "the water of the Lambeth Company exhibited the deepest average tint of brown." The brown tint is observed by looking through the water contained in a two-foot glass tube; it represents foreign matter or dirt and is usually said to be chiefly of vegetable origin. The brownish tint which is to be observed in Thames flood water is familiar to most people. It is some of this matter which is distributed by those of the metropolitan companies which do not adequately treat the river water by the methods of sedimentation, or filtration, or sedimentation and filtration.

Dr. Thorpe, the analyst to the Local Government Board, reported that on Dec. 30th last the Lambeth Company's water was "very faintly opalescent," and that it "contained a considerable amount of organic impurity." Taking the average amount of organic impurity in a given volume of the Kent Company's water during the nine years ending December, 1876, as unity, the proportional amount contained in an equal volume of water supplied by the Lambeth Company on Dec. 9th last was 2·4—that is to say, nearly two and a half times greater. On Dec. 30th, 1901, the amount was 5·3—that is to say, more than five times the standard, and no less than double the amount contained in the water distributed by the company on Dec 9th. How is this to be accounted for? The answer is not doubtful. The problem may be solved in the light of what has been said and by a study of a table given in the Water Examiner's report for December, 1901 (page 4) Daily observations on the state of the Thames water are made by the engineer of the Chelsea Company and these records are given in tabular form. The facts are these: From Dec 1st to the 12th the state of the river water was good, on the 13th it was indifferent, from the 14th to the 17th it was bad, and on the 18th and again on the 25th it was indifferent. From the 26th to the 30th it was bad. It is evident that the present arrangements of the Lambeth Company in regard to sedimentation and filtration are so defective that in a period of flood the water distributed becomes brownish in colour and that the amount of organic carbon which it contained is more than doubled.

3 Constant service is not given to all those who have a right to demand it. In December, 1901, four of the metropolitan companies professed to give constant service to all their customers; and of the supplies given by the other companies, the Kent, the New River, and the Southwark and Vauxhall companies gave constant service to 95 9 per cent, 95 7 per cent, and 93 per cent. of their customers respectively. The Lambeth company gave constant service to only 77 5 of its clients

Has the attention of the President of the Local Government Board been called to the fact that it is of great importance that the metropolitan water companies should possess subsidence and storage reservoirs having a capacity sufficient to enable them to secure uniformly effective filtration?

Has the attention of the President of the Local Government Board been called to the fact that in December, 1901, during a period at which the Thames was in flood, the Lambeth Waterworks Company distributed water which was of brownish colour and which contained more than five times the amount of organic impurity of that of the "standard" adopted by the Water Examiner to the Local Government Board?

Has the President of the Local Government Board communicated with the Lambeth Company on this matter or taken any steps in regard to it? If so, with what results?

Is the President of the Local Government Board aware that less than 78 per cent. of the customers of the Lambeth Company have constant water service?

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NOTIFICATION OF CHICKEN-POX.—On Feb. 24th the Yeovil Rural District Council resolved that chicken-pox should be added to the list of notifiable diseases.—The Radstock (Somerset) Urban District Council arrived at a similar decision on Feb. 26th.

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# COUNTY OF DURHAM MEDICAL UNION.

THE half-yearly meeting of the members of this union was held in the Town Hall, Sunderland, on Feb. 11th last, Dr. EDWARD JEPSON (Durham), the President, being in the chair. There was a large attendance of members, amongst those present being Dr. James Murphy (Sunderland), the Vice-President; Dr. J. F. Armstrong (South Shields), Mr. J. Arthur (Wingate), Mr. A. W. Attwater (Whickham), Dr. J. Charles (Stanley), Dr. Alfred Cox (Gateshead), Dr. A. Holdsworth Davis (Sunderland), Mr. E. H. Davis (West Hartlepool), Mr. W. H. Davis (Low Fell), Dr. E. W. Diver (Shotley Bridge), Mr. W. Galloway (Low Fell), Mr. A. T. Harrison (Sherburn Colliery), Dr. W. Hay (Sunderland), Dr. John Hern (Darlington), Mr. K. O. Hill (Jarrow), Dr. R. S. Hubbersty (Sunderland), Mr. A. S. Jaques (Gateshead), Dr. William Jaques (Washington), Mr. A. E. Legat (Sunderland), Mr. J. W. Mackay (Pelaw), Dr. Charles F. G Mann (Washington), Dr. L. S. F. de R. Norman (Jarrow), Dr. N. F. Rowstron (Sunderland), Dr. A. Smith (Whickham), Dr. J. W. Smith (Ryton-on-Tyne), Mr. Robert Stuart (Durham), Dr. John Taylor (Chester-le-Street), Mr. D. F. Todd (Sunderland), and Mr. James Waterston (Sunderland).

The PRESIDENT opened the meeting by intimating the receipt of letters from several members who were unable to be present and then he referred to the fact that since the annual meeting the union had lost two of its members by death—namely, Dr. D. Wingate (Easington) and Dr. A. Reid (Blackhill), the latter under very painful circumstances. [Mr. J. ARTHUR of Wingate, interposing, mentioned that a third member, Dr. W. Nesbitt of Thornley, had recently died.] The President further stated that with a view to increase the membership every practitioner in the county had been invited to the present meeting, and he hoped that if any strangers should happen to be present they would feel that they were cordially welcome.

On the motion of the PRESIDENT, seconded by Dr. ARMSTRONG, votes of condolence with the families of Dr. Wingate, Dr. Reid, and Dr. Nesbitt were passed unanimously.

Dr. James Boyle (Fencehouses), Dr. W. G. Thompson (Sunderland), and Dr. W. G. T. Mecredy (Nettlesworth) were elected members.

The treasurer's statement to date showing a balance of £72 16*s.* 4*d* was submitted and adopted, and a balance of £52 18*s.* due to the secretaries was ordered to be paid.

A report of the Council was read and reports were made by representatives from the districts of Stanley, Chester-le-Street, Sunderland, Jarrow, Hartlepool, and Darlington. Some discussion then took place upon the motion adopting the reports of the Council and local committees, in the course of which Dr HERN stated that the Darlington practitioners had recently made a request to the friendly societies of that town for the payment of 4*s.* per member and 2*s.* for juveniles and asked for some guidance as to the steps which should be taken in the event of a refusal to agree to the demand. The feeling of the meeting was that each local district should deal with this question in the way and when it thought best, but that the minimum fee for adults must be 4*s.* per member, and many members were averse to any lower rate being accepted even for juveniles.

Dr. COX (Gateshead) made a report as to the meeting with the Direct Representatives on the General Medical Council held in Newcastle-upon-Tyne on Oct. 26th, 1901, which he thought would be productive of good, and a vote of thanks was accorded to him for his services in connexion with the matter.

After further discussion the reports were adopted, and it was resolved, on the motion of Dr. ARMSTRONG, seconded by Dr. MANN, that the report of the Council, which contained several interesting items, should be printed and circulated.

Reference having been made to the alleged employment of unqualified assistants by members it was resolved on the motion of Dr COX, seconded by Dr. MURPHY—

> That any member known to have in his employment an unqualified assistant be warned that the matter will be reported to the General Medical Council and that it will be the duty of the union in the interest of the profession to take the same steps as would be taken in the case of a non member.

prescribing poisonous and powerful drugs under any circumstances, especially in such huge doses and to a woman not responsible for her actions.

4 Mr. Bankes attempted, but most miserably failed, to connect me with an attempt to entrap Dr. Law into a consultation with the family solicitor. I need hardly do more than deny that; it is such an absurd allegation and so absolutely without foundation, and with the evidence before him a very unjustifiable thing for a man like Mr. Bankes to attempt

Dr. Law and I were perfectly friendly; our meeting was friendly, our parting was friendly. After the consultation I expressed to him when shaking hands a hope that all would be settled satisfactorily. Dr. Law himself asked me to accompany him to the house I did so. At the door of the house I was asked to come in to the interview. I did so. I took no part or interest in the interview; it was no business of mine. I did say Dr Law's prescriptions were, to my mind, very injudicious, but "fishy" is a word I never used I had no possible reason for being antagonistic to Dr. Law any more than I had for being the contrary to Miss Forsythe. The whole thing has been most distasteful and hateful to me, but, in my opinion, I could not act in any other way than I did. And I absolutely deny any and all the allegations made against me by Mr. Bankes. I am sorry to have written at such length, but I think this explanation necessary.

I am, Sirs, yours faithfully,

Ladbroke-square, W., March 1st, 1902. JAMES KIRKLAND.

## THE STUDY OF THE HISTORY OF MEDICINE.

*To the Editors of* THE LANCET.

SIRS,—In the *British Medical Journal* of Nov. 23rd, 1901, it was suggested by Dr. M. G. Biggs that a society should be formed for the study of medical history, and in the following issue Dr. D. C. Lloyd-Owen uttered a further plea for the inclusion of the subject in the medical curriculum.

Having allowed a considerable interval to elapse it became apparent upon inquiry that nothing further had been done in the matter, and since the acceptance by the Royal College of Physicians of London of the FitzPatrick endowment of a lectureship of medical history had excited a quite unusual amount of interest in the subject it seemed to me a mistake to allow such an opportunity to pass.

In this spirit I ventured to bring the suggestion to the notice of several of those whose names—by authorship or otherwise—have become associated with the subject, and the scheme has already met with the approbation and support of Dr. J. F Payne, Dr. W. H. Allchin, Professor A. Macalister, Mr. D'Arcy Power, Mr. Charles Williams, Dr. E. T. Withington, Dr Lloyd-Owen Dr. Arthur J. Hall, Dr. J. Stokes, Dr. Biggs, and Dr. A. H Robinson.

It has been objected by some that there are already so many societies that it is doubtful whether there is room for another; that their multiplication tends to starve existing ones; and that the subject might well be discussed in any of these. But in spite of the quarter whence these objections come I am by no means convinced of their soundness.

With reference to the first objection, I am hopeful of its being practically refuted by succeeding in the endeavour to form a society similar in its objects to that recently established in France—the study of the history of medicine and the allied sciences considered from the multiple point of view of the evolution of doctrines and institutions, biography, bibliography, and documentary research. *Are we always to* remain behind our continental neighbours in this speciality? National vanity alone should negative the objection, for if such a society can thrive in France, why not in England? In the second place, the fact remains that the subject is very rarely discussed in any of the existing societies and the reason is not far to seek. The number of those who take a real and lasting interest therein is comparatively small. In the provinces they are generally only to be found far apart from each other, and there, as in London, a paper upon some topic allied to medical history read at one of the societies' meetings is by no means sure of gaining the approbation, if the attendance, of members. For it must be generally conceded that the present apathy of the bulk of medical men with reference to the history of their profession constitutes a gross anomaly. There is no professorial chair of the subject in any of our universities; it is included neither in the schedules of education nor examination—even as an optional subject—at any of our medical schools; and there is no existing society which makes it a speciality.

Having already taken the initial steps towards the formation of such a society, I venture to place the scheme before the profession and to ask for further support.

I am, Sirs, yours faithfully,

GEORGE C. PEACHEY.

Brightwalton, Wantage, Feb. 17th, 1902.

## GREY HAIR AND EMOTIONAL STATES.

*To the Editors of* THE LANCET.

SIRS,—In his article on "Grey Hair and Emotional States," published in THE LANCET of March 1st, p. 583, Dr. Robert Jones refers to the connexion of grey hair with certain states of the nervous system. That such connexion exists there can be no doubt. We can, I think, speak more definitely and say that abnormal greyness is an infallible index of some defect in the nervous system—a defect which may range from comparative slight instability, manifesting itself as mere nervousness, to one so pronounced as to culminate in such grave disorders as angina pectoris and insanity. This statement is founded upon an examination of a large number of cases extending over several years, and it is because I am sure that it embodies a truth of considerable practical value to the physician that I am venturing to draw attention to it here.

But what, it will be asked, *is* abnormal greyness? We shall best answer this question by enumerating the characters of normal greyness. Between the normal and the abnormal there is, of course, no sharp dividing line—the one runs imperceptibly into the other—but, speaking generally, we may say that the chief features of normal greyness are: (1) it does not come on before, say, the age of 35 years; (2) it is symmetrical; (3) it begins in certain regions, preferentially the temples (so named on account of this very fact) spreading thence; (4) the blanching progresses gradually; (5) the blanching on the scalp does not proceed decidedly in advance of that on the face.

We are now in a position to give the features of abnormal greyness: (1) Premature blanching of the hair is the most important sign of it, and the earlier the greyness appears the greater the abnormality—thus it is greater in one who turns grey in his twenties than in one who does not begin to go grey till in his thirties; (2) asymmetrical greyness is so well recognised to be due to defective nervous action that I need not further insist upon the fact; (3) greyness which does not begin in symmetrical foci spreading thence, but affects the whole scalp or beard equally in all its parts, is, unless it progresses slowly, generally abnormal; (4) rapid blanching is always abnormal; and (5) when the whole of the hair on the scalp is decidedly grey, while that on the face retains its colour completely, the condition is abnormal We may frequently observe this condition in men in their early thirties or early forties. I have never observed the exact converse of this, though it is quite common for men to grow more rapidly grey in the beard than in the scalp; this I do not regard as abnormal.

These, Sirs, are, in my opinion, the marks of abnormal greyness, and when any one of them is pronouncedly present we may infer the existence of nervous instability.

I am, Sirs, yours faithfully,

Wimpole-street, W., March 2nd, 1902. HARRY CAMPBELL.

*To the Editors of* THE LANCET.

SIRS,—Dr Robert Jones has drawn attention to this subject in an interesting paper in THE LANCET of March 1st. There are cases of localised blanching of the hair which illustrate the influence of nervous changes. I do not now refer to the white hairs sometimes found in long-standing cases of neuralgia, but to cases of whitening of the eyelashes and eyebrows in connexion with sympathetic ophthalmia and spontaneous irido-choroiditis. A number of these cases have now been recorded.[1] I saw one case of this kind in a girl, aged 15 years, who, when first seen, had been blind for four years from severe inflammation of the eyes unconnected with injury. The history was clear that the eyelashes and in part the eyebrows had become

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[1] See Transactions of the Ophthalmological Society, vol. xii., p. 29.

28·6 per 1000 during the week ending March 1st. During the past four weeks the death-rate has averaged 27·9 per 1000, the rates during the same period being 26·5 in London and 22·3 in Edinburgh. The 208 deaths of persons belonging to Dublin during the week under notice showed a decline of 34 from the number in the preceding week, and included 13 which were referred to the principal zymotic diseases, against 11 in each of the two preceding weeks; of these, five resulted from whooping-cough, three from "fever," three from diarrhœa, one from measles, and one from scarlet fever. These 13 deaths were equal to an annual rate of 1·8 per 1000, the zymotic death-rates during the same period being 2·9 in London and 1·6 in Edinburgh. The fatal cases of whooping-cough, which had been two, three, and two in the three preceding weeks, rose again last week to five; the deaths referred to "fever," which had been two, two, and three in the three preceding weeks, were again three last week, and the fatal cases of diarrhœa, which had been two in each of the two preceding weeks, increased last week to three. The 208 deaths in Dublin last week included 35 of children under one year of age and 66 of persons aged upwards of 60 years; the deaths both of infants and of elderly persons showed a slight decline from the respective numbers recorded in the preceding week. Two inquest cases and five deaths from violence were registered; and 65, or nearly one-third, of the deaths occurred in public institutions. The causes of 12, or nearly 6 per cent., of the deaths in Dublin last week were not certified.

## THE SERVICES.

### ROYAL NAVY MEDICAL SERVICE

Staff Surgeon William George Kynaston Barnes has been promoted to the rank of Fleet Surgeon in His Majesty's Fleet. Dated Feb. 27th, 1902.

The undermentioned Surgeons have been promoted to the rank of Staff Surgeon in His Majesty's Fleet:—Frederick William Parker, Philip Nicholas Randall, George Goss Borrett, Walter Henry Skinner Stalkartt, George Alexander Stuart Bell, and John Ambrose Keogh. Dated Feb. 21st, 1902.

Staff Surgeon H. Meikle has been appointed for service at R.N. Rendezvous, Spring-gardens.

### IMPERIAL YEOMANRY (IN SOUTH AFRICA).

The Imperial Yeomanry Depôt: Captain E. T. Vint, Medical Officer, is granted the temporary rank of Major, Dated Jan. 1st, 1902.

### ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel George Arthur Hughes, D.S.O., is granted the local rank of Colonel whilst acting as Principal Medical Officer at Hong-Kong. Dated Oct. 12th, 1900.

### ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Major W. S. Cheyne to be Surgeon-Lieutenant-Colonel. Dated March 5th, 1902. Surgeon-Lieutenant J. P. Brown to be Surgeon-Captain. Dated March 5th, 1902.

### IMPERIAL YEOMANRY.

North Somerset: The undermentioned officer resigns his commission:—Surgeon-Lieutenant J. G. D. Kerr. Dated March 5th, 1902.

### VOLUNTEER CORPS

*Rifle:* 1st Volunteer Battalion the Northumberland Fusiliers: James Graham Miller to be Surgeon-Lieutenant. 4th Volunteer Battalion the King's (Liverpool Regiment): Lieutenant Edward Lucas Hughes resigns his commission and is appointed Surgeon-Lieutenant. 3rd Volunteer Battalion the Prince of Wales's Own (West Yorkshire Regiment): Surgeon-Lieutenant R. G. Hann to be Surgeon-Captain. 2nd Volunteer Battalion the Prince of Wales's (North Staffordshire Regiment): Surgeon-Lieutenant F. N. Cookson resigns his commission; Edward Churchill Stock to be Surgeon-Lieutenant. 2nd Tower Hamlets: Surgeon-Lieutenant E. T. McDonnell to be Surgeon-Captain.

### VOLUNTEER INFANTRY BRIGADE.

*Staffordshire: Surgeon-Captain* C. A. *MacMunn*, 3rd Volunteer Battalion the South Staffordshire Regiment, to be Brigade-Surgeon-Lieutenant-Colonel on appointment as Senior Medical Officer to the Brigade.

### SOUTH AFRICAN WAR NOTES.

Surgeon-Captain George Davidson Laing, attached to the 5th Battalion the Imperial Yeomanry, was slightly wounded in the right leg during the action with Colonel Von Donop's column.

The following officers have been discharged from hospital to duty:—Major G. T. H. Thomas, R.A.M.C., Major C. J. Holmes, R.A.M.C., Captain W. T. Mould, R.A.M.C., and Civil Surgeons Ilott, Bell, Jensen, Brown, and Fleming.

Major C. W. R. Healey, R.A.M.C., and Lieutenant L. E. L. Parker, R.A.M.C., are on passage home.

## Correspondence.

"Audi alteram partem."

## FORSYTHE *v.* LAW.

*To the Editors of* THE LANCET.

SIRS,—*In the recent trial Forsythe v.* Law certain allegations were made against me, which, if true, would rightly expose me to disapproval, especially among my professional brethren. May I, therefore, point out certain things which were *stated, or insinuated,* and which *were quite without* foundation and absolutely untrue.

1. The plaintiff was in a dying condition when she came under my care. There was and could be no doubt that huge doses of morphia and especially chloral had been taken by or administered to her at that time. This was admitted by Dr. W. T. Law. It was also admitted that she had very grave heart disease and these *drugs* had produced a very serious condition of health. She had had an extra large dose of chloral just before I saw her, and on arrival at 62, Ladbroke-grove, this began to take effect to an alarming extent and she required very great care. This was successfully treated and then began the effects of withdrawal of the opium. I was quite prepared for emergencies, they did arise as I had anticipated and were successfully combated. *The one great danger was, however,* due to the condition of her heart, rendered more dangerous by the exhibition of chloral. I was supported in my treatment by Dr. George *H.* Savage, the eminent specialist, who, I think, is in a better position than any other man to know whether or not I was correct. He did not alter one single detail, but quite agreed that I was doing right in treating the case as I was. The allegation that *I was not* treating the case scientifically and successfully therefore falls to the ground. Dr. Law's own witnesses showed that.

2. It is asserted that *force was used to remove her* and that she was under restraint in what the judge, without a shred of justification, termed a madhouse. *No force was used whatever.* She came freely and without any undue persuasion. She was not under restraint, except that she was continuously watched and tended by a nurse. She was free to go out of the home if she wished to do so. The so-called madhouse was an ordinary medical and surgical nursing home. Dr. Law admits, and I agree, that she had certain suicidal tendencies due to the chloral; these we watched and they quickly passed off. She expressed gratitude to me for stopping the morphia on many occasions.

3. Mr. Bankes, K.C., asked the judge to note the word "we" in my answer, "We did not think it wise to let her be put into the witness-box." *He* was quite aware that "we" meant that another doctor and I had examined her and considered it unsafe for her to appear. I need not give that doctor's name; he may not wish it, but the certificate signed by him was put in. Mr. Bankes wished it to appear to the judge and jury as if I were a party to the trial; that I deny absolutely and he was not justified in making that allegation. At the very first I told Dr. Law to try to avoid the scandal *and exposure* which a trial would mean to him. I did so entirely in his interests. It was no business or interest of mine whether the trial came off or not, but I all along hoped it would not come off. I had nothing to do with it except in so far as I was called *upon to exam*ine and make notes on prescriptions submitted to me for that purpose. I was bound on oath to find fault with these. They were almost all without directions of any kind—a most dangerous and unprofessional way of

Of course, the Midwives Bill makes no provision for nursing. It never did. All it does is to "protect title" after registration and so it is on all fours with the Medical Acts. It is clear that Parliament will *never* protect medical, surgical, or midwifery practice so that in the end quackery (that is, unlicensed practice) will destroy the medical profession. It is not a pleasant prospect for those seeking to enter the ranks of legitimate medicine, and, with the exception of those entering the public services and of the holders of certain appointments, the rank and file have a poor look-out. Unqualified practice is rampant throughout the country, and I am at present taking charge of a practice in a northern county where two unqualified men in the relationship of principal and assistant do the leading practice. It is not an exceptional case, and I can imagine the disgust of the new midwife when she finds herself in keen competition with the ignorant and dirty Gamp. Indeed, her only hope of salvation is in becoming a drudge to the men who still cultivate cheap midwifery.

I am, Sirs, yours faithfully,

Liverpool, March 3rd, 1902. ALEXANDER McCOOK WEIR.

## THE DECAY OF AUSCULTATION AND THE USE OF THE BINAURAL STETHOSCOPE.

*To the Editors of* THE LANCET.

SIRS,—Dr. Charles W. Chapman's remarks in THE LANCET of March 1st, p. 618, on "The Decay of Auscultation and the Use of the Binaural Stethoscope" lead me to suggest another perhaps not very generally-recognised advantage peculiar to the binaural variety. I have found that if, while percussing the chest, the stethoscope be left hanging in the ears, with the chest-piece dangling close over the part struck, the notes produced are considerably, and in many cases very helpfully, amplified. The true path of the sound is not readily recognised by the ears, and it is only when one stops up the stethoscope end that one is forced to the right conclusion.

I am, Sirs, yours faithfully,

Cheltenham, March 3rd, 1902. EDGAR G. TREVITHICK.

## THE DISSEMINATION OF KNOWLEDGE CONCERNING VACCINATION.

*To the Editors of* THE LANCET.

SIRS,—The suggestion of Dr. Herbert W. G. Macleod in THE LANCET of March 1st, p. 618, on "The Dissemination of Knowledge concerning Vaccination," is an excellent one, but he appears to be unaware of the fact that something is already being done in this matter. I may, however, remark that it is not very easy to obtain audiences for lectures on such a subject as vaccination, even at a time when it is so prominently before the public as it is at present, except in one of two ways—either by putting up a lecturer to decry vaccination, as the Anti-vaccination League so frequently does, when those who arrange the lecture will also take some trouble to collect an audience, or by giving pro-vaccination lectures through the agency of organisations which are in touch with the class of people one wants especially to reach. Such agencies are mothers' meetings and the systematic lectures on health given by the lady teachers under the various county councils. Ever since its foundation the Jenner Society has been in increasing relations with both sets of these agencies and has given them all the assistance in its power in the way of suggestions, literature, diagrams, &c., and I doubt whether there is any more effective way of carrying on this form of educational work. I may add that the society has a series of lantern slides which it lends out for such gatherings and which have been found very useful. If Dr. Macleod were to see the large correspondence on this subject alone with which the Jenner Society has to deal he would find that the ground is not so unoccupied as he appears to think. Still, there is plenty of room for more effort, and I have done my best to invite the coöperation in it of medical officers of health, as Dr. Macleod suggests, who, when a favourable opportunity occurs for doing so, are in a position to give valuable help in this matter.

There is another direction of a cognate kind in which the Jenner Society has found considerable scope for activity, and that is in connexion with the numerous public lectures, debates, and discussions on the vaccination question which have during the last five or six years, and just no more than ever, been taking place in all parts of the country. My experience in the correspondence with which I have ha to deal in this matter has shown me that the supporters of vaccination are generally at much disadvantage when compared with their anti-vaccinationist opponents from a want of appreciation of what I may call the controversial perspective of their subject. The anti-vaccinationist attack has been organised by men who are keen enough to see what are the most effective points that they can make, and even where those who undertake the attack have no real knowledge of their subject they can repeat the "patter" which is provided for them in a way which puts their less adroit antagonist often at considerable disadvantage; in fact, it is the story o our experience in South Africa over again in another form. Boer "slimness" is more than a match for British "frontal attacks" until the Britisher learns from the tactics of his opponents that in this as in other matters *fas est ab hoste doceri.* To facilitate this desirable result the Jenner Society has provided a series of notes for lecturers and debaters on the subject of vaccination which I have reason to think have been found useful.

I am, Sirs, yours faithfully,

March 4th, 1902. FRANCIS T. BOND, M.D. Lond.,
Honorary Secretary, Jenner Society.

## ROYAL COLLEGE OF SURGEONS IN IRELAND.

*To the Editors of* THE LANCET.

SIRS,—I send you a few statistics concerning the passes and rejections of the Final Fellowship examinations of the above College as they may be instructive to those of your readers who have followed my correspondence in your journal under the heading of "A Dangerous Principle."

| Year. | Pass. | Reject. | Total candidates. |
|---|---|---|---|
| 1897... ... ... ... ... ... | 5 | 7 | 12 |
| 1898... ... ... ... ... ... | 18 | 5 | 23 |
| 1899... ... ... ... ... ... | 10 | 4 | 14 |
| 1900... ... ... ... ... ... | 35 | 0 | 35 |
| 1901 (up to February) ... | 18 | 1 | 19 * |

* One examination.

I can hardly expect that the President, Vice-President, and Council of the College will so far relax the reticence they have hitherto observed towards the letters of mine which appeared in THE LANCET, but should they do so an explanation as to whether the "Charter" witnesses were present at any Fellowship examination in 1900 would be of much interest.

It seems hardly possible to believe that of 35 candidates for Fellowship in a given year the average answering should be so rich in success as was the case in 1900, unless, indeed, there were some explanation which the ordinary practitioner had overlooked.

I am, Sirs, yours faithfully,

Dublin, Feb. 24th, 1902. S. WESLEY WILSON.

## ACUTE SUFFOCATIVE PULMONARY ŒDEMA.

*To the Editors of* THE LANCET.

SIRS,—I am obliged to Dr. Auld for his reference to Laennec. In preparing my lecture on "Acute Suffocative Pulmonary Œdema"[1] I did not, unfortunately, think of consulting the writings of the famous French physician, although I might easily have done so, as both the original and the translation are on my book-shelves. However, had I come across the paragraph quoted by Dr. Auld it would not have interested me in this connexion, as I cannot see that it has any except the most general bearing upon the affection with which I was dealing. The quotation in Dr. Auld's letter, with the exception of the italics in the last sentence of it and two words "when" and "but" in the middle of it, is to be found in Forbes's Translation, fourth edition, 1834, p. 81.

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[1] THE LANCET, Jan. 11th, 1902, p. 73.

white after the eye trouble had set in. These cases are certainly rare and it has been stated that the whiteness of the eyelashes is a mere coincidence. This I do not believe and I think that the neurotic origin of the blanching in these cases is supported by evidence derived from comparative pathology. Mr Beddard in his book on "Animal Coloration" writes (pp 19-20): "There is certainly evidence that coloration has some relation to the distribution of the underlying nerves. Mr Allen has stated that the white marks on the head of the tiger correspond to the area of distribution of the infra-orbital nerves. The nerves terminate in or near the skin, and it is clear that there must be some connexion between nerve-supply and coloration from the fact that in a hedgehog whose spines were white the nerves in connexion with the muscles for contraction of the skin were greatly diseased. There are plenty of other pathological facts of a like nature."

Another question follows—What nerves are implicated when blanching of the hair occurs? Do they belong to the sympathetic or to the cerebro-spinal system? In favour of the former we have Pouchet's experiments quoted by Professor Semper in his book "Animal Life," p. 96 "These experiments proved that the changes already observed by Lord Lister (then Mr Lister), and alluded to by Dr Jones, were brought about through the agencies of the optic and the sympathetic nerves I fully agree with Dr. Jones that "the influence of nervous changes upon the hair has not been fully worked out"

I am, Sirs, yours faithfully,
E DONALDSON.

Londonderry, March 3rd 1902

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## THE UNIVERSITY OF DURHAM AND THE MEDICAL CURRICULUM.

*To the Editors of* THE LANCET.

SIRS,—In your account of the proceedings of the recent special session of the General Medical Council you quote from the Confidential Report of the Special Committee on the Curriculum (February, 1902). I beg to inform you that Paragraph VI of the Recommendations of the Committee, viz. "That the University of Durham, by recognising all the courses of study which are recognised by all the licensing bodies in Schedule A of the Medical Act, 1858, accepts many courses of study in the subjects of physics, chemistry, and biology which have been recognised by the Conjoint Board of England, but have not been approved by the Medical Council," &c., was drawn up on imperfect information, and that for the last five years the University of Durham has only accepted instruction in chemistry, physics, and biology received at the following institutions—(*a*) The recognised medical schools in Great Britain and Ireland; (*b*) the Durham College of Science, Newcastle-upon-Tyne, and the other university colleges in the kingdom. The report of the committee was therefore amended, before being presented to and adopted by the Council, by Paragraph VI of the Recommendations of the Committee being completely withdrawn and the University of Durham placed on the list of the examining bodies which conformed to the General Medical Council's requirements

I am, Sirs, yours faithfully,
GEORGE HARE PHILIPSON,
Representative of the University of Durham on the General Medical Council.

March 3rd, 1902

⁂ Sir George Philipson will see that although we published the Recommendations of the Special Committee as they were originally drawn up we also stated that the reference to the University of Durham was deleted.—ED L

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## "WHAT'S WHAT?"

*To the Editors of* THE LANCET.

SIRS,—I regret to trouble you again concerning "What's What" and the references to London medical men in its Appendix, but your article on "Publicity for Medical Men in the Lay Press" in THE LANCET of March 1st, p. 604, and the correspondence which you publish between Sir Anderson Critchett and myself at p 618 in the same number leave me no alternative.

First, I beg to inform you that the letter which I wrote to Sir Anderson Critchett was intended to be private, that I gave him no authority to publish it, and that I consider his doing so (without any permission from or notice to myself) to be simply unjustifiable.

Next, Sirs, I beg to inform you that whatever paragraphs may or may not be withdrawn from the future editions of "What's What" you are mistaken in saying that I have already withdrawn those which have been lately in question. What alteration I may make in the future remains to be seen. At present my action is purely confined to the expression of regret that any words of mine should have caused personal annoyance to those members of the medical profession to whom they refer and a specific promise to certain gentlemen that I will omit their names from any future edition. I do not in the least admit or consider that I have written anything to which exception could reasonably be taken or that there is a single word in the paragraphs in question for which any apology is necessary. The whole point of the matter lies in the fact that advertisement is so common nowadays that professional men are morbidly sensitive to even the breath of a suspicion that they can be guilty thereof, and that, as I have realised, from the letters written to me by them, the extent of this morbid sensitiveness, I have thought it courteous and desirable to inform them that I am sorry that it should have been aroused by my action.

To return, Sirs, to your article I hope that you will allow me to deny, in the strongest manner, that I desired "to do some persons a good turn by lauding them at large." I desired nothing of the kind I had not the remotest idea of doing these persons—these surgeons and doctors—a good turn by lauding them Not one of them is a personal friend, several of them I have never seen, and my only connexion with them has been that which I stated, when I said that I had had actual experience (either in my own person or in those of relations and intimate friends) of their capacity and skill.

I should have wished, Sirs, to answer the subsequent arguments in your article, which deal with the main point at issue—the only one with which the public has any real concern, but to do so would be to occupy your space to a greater extent than you would probably desire or permit; and I will therefore publish my reply in another medium. I think that there will be no difficulty in showing that the balance of advantage to the public lies in publicity and not in secrecy, that the only persons who have anything to fear from the former are the incompetent and fraudulent; and that both the medical man and his clients have everything to gain by being brought into direct communication with one another At present you will observe that, by your own admission, the medical and *quasi*-medical men who are recommended to the public are the less desirable members of the profession, a fact which in itself goes far to prove the desirability of some alteration.

With apologies for the length of this letter, the last with which I propose to trouble you,

I am, Sirs, yours faithfully,
HARRY QUILTER.

Manchester-square, W., March 4th, 1902

⁂ We do not see how Sir Anderson Critchett could guess that Mr Quilter meant his letter to be private, nor can we understand why Mr. Quilter should resent its publication, especially in view of the publication by other medical men of his correspondence with them.—ED. L.

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## THE MIDWIVES BILL.

*To the Editors of* THE LANCET.

SIRS,—Referring to your leading article on "The Midwive Bill" in THE LANCET of March 1st, p. 606, there wa only one way to avoid the errors which you deplo and that was by introducing a "nursing Bill" at the commencement of the session, and I need not remind your readers that the whole of the candidates for Direct Representation on the General Medical Council last autumn pledged themselves to do so, and I need hardly say that they have failed to do so The material for such a Bill was in their hands and Parliament must have given it their attention, but there being nothing before the House but the Registration Bill it was naturally taken for granted that the Bill in question had the general approval of the profession Nor need the General Medical Council complain. The Council was warned both before and at the date of the election that "the Privy Council would make short work of their recommendations," and so it has happened, and in the new Midwives Board the Council will have a powerful rival. That is why I did my best to impress this fact on the candidates.

Of course, the Midwives Bill makes no provision for nursing. It never did. All it does is to "protect title" after registration and so it is on all fours with the Medical Acts. It is clear that Parliament will *never* protect medical, surgical, or midwifery practice so that in the end quackery (that is, unlicensed practice) will destroy the medical profession. It is not a pleasant prospect for those seeking to enter the ranks of legitimate medicine, and, with the exception of those entering the public services and of the holders of certain appointments, the rank and file have a poor look-out. Unqualified practice is rampant throughout the country, and I am at present taking charge of a practice in a northern county where two unqualified men in the relationship of principal and assistant do the leading practice. It is not an exceptional case, and I can imagine the disgust of the new midwife when she finds herself in keen competition with the ignorant and dirty Gamp Indeed, her only hope of salvation is in becoming a drudge to the men who still cultivate cheap midwifery

I am, Sirs, yours faithfully,
Liverpool, March 3rd, 1902 ALEXANDER McCOOK WEIR.

have during the last five or six years, and just now more than ever, been taking place in all parts of the country. My experience in the correspondence with which I have had to deal in this matter has shown me that the supporters of vaccination are generally at much disadvantage when compared with their anti-vaccinationist opponents from a want of appreciation of what I may call the controversial perspective of their subject The anti-vaccinationist attack has been
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attacks" until the Britisher learns from
opponents that in this as in other matt
*doceri.* To facilitate this desirable res
has provided a series of notes for lec
the subject of vaccination which I

Now I am convinced that the affection described by Laennec in his paragraph on "acute suffocative catarrh of adults and children" is not the affection which I endeavoured to describe in my clinical lecture. It may be frankly admitted that all acute suffocative affections of the lungs, as Dr. Auld indicates at the end of his letter, present certain general resemblances to one another, but this by no means implies that they are the same either in degree or in kind. If Laennec's description be compared with that in my lecture important differences will be found which, to my mind at least, conclusively prove that the two accounts do not refer to the same affection.

Laennec is dealing with an acute suffocative catarrh "*affecting the whole, or a very large portion, of the mucous* membrane of the lungs", I am dealing with acute suffocative pulmonary œdema. The duration of the catarrh "is from 24 to 48 hours, or at most some days." The duration of the suffocative œdema in my cases was on an average about six hours. In suffocative catarrh, at the end of 24 or 48 hours, or at most some days, "either the patient dies, or expectoration commences and puts an end to the suffocation, and the disorder then follows the progress of a simple acute catarrh." In suffocative œdema "almost simultaneously with the onset of the dyspnœa—a most important diagnostic point—expectoration of a perfectly white, finely frothy, watery sputum begins." In acute suffocative catarrh "while the suffocation lasts there is little cough" (I use here the words in my copy of Forbes's translation, which are a little different from those in the quotation), "and the expectoration, if any, is altogether pituitous or fluid." In acute suffocative pulmonary œdema "the frothy fluid seems to flow up the trachea and is expelled with a 'hawk,' as if clearing the throat, but *there is* no cough in the ordinary sense of the word."

The affection described by Laennec is a matter of days; that described in my lecture is a matter of hours. In my first case there was no cough or spit either before or after the suffocative attack had passed off, which it did in about six hours; the suffocation and the profuse expectoration were cotemporaneous and both ceased together. These are differences as *to the essential nature of the two affections* which, to my mind, no degree of general resemblance can reconcile, and which convince me that I have not mistaken cases of acute suffocative catarrh for acute suffocative pulmonary œdema.

I am, Sirs, yours faithfully,
Glasgow, Feb 24th, 1902. JOHN LINDSAY STEVEN.

## THE PREVENTION OF WATER-BORNE DISEASES IN THE ARMY.

*To the Editors of* THE LANCET.

SIRS,—On reading your leading article on the above subject in THE LANCET of Nov 30th, 1901, p. 1507, I was reminded of the hugely beneficial effects of the cream separator in prolonging the keeping time of butter. This machine must separate not only cream and milk but also cream and germs. It seems permissible, therefore, to wonder whether some adaptation of the centrifugal principle might not prove efficient as regards water and germs. Such an apparatus would probably be less cumbersome and more rapid in its action than any yet proposed—given only its efficiency.

I am, Sirs, yours faithfully,
Hamilton, Victoria. R. W. HUGHSTON, M.B Melb.

## A METHOD BY WHICH DEPOSITION OF MOISTURE ON THE LARYNGEAL MIRROR MAY BE PREVENTED WITHOUT THE AID OF HEAT.

*To the Editors of* THE LANCET.

SIRS,—I have no knowledge of the "crayon anti-buée" to which Dr. Walker Downie referred in THE LANCET of March 1st, p 589, but the desirable result of preventing the deposition of moisture on a laryngeal mirror may readily be brought about by rubbing the mirror with a piece of damp soap. The smeared surface thus produced is polished by rubbing off the film of soap with a soft cloth. A mirror so prepared will not become clouded if breathed upon for some time (over an hour provided the tongue does not touch it)—a point of some value if a lengthy examination has to be made. The fewer instruments with which a practitioner has to be provided nowadays the better, and as soap is always at hand the simplicity of the process has much to recommend it. Why soap should have this effect I do not pretend to explain, nor do I know who was the first to apply it for the purpose mentioned.

I am, Sirs, yours faithfully,
March 4th, 1902. ETONENSIS.

## ISOLATION HOSPITALS AND WELL-TO-DO PATIENTS.

*To the Editors of* THE LANCET.

SIRS,—Will you please tell your readers accurately and fully what would happen if anyone in what are called the "upper classes" catches small-pox? I myself, through the accident of birth and industrious sires belong to the class who toil not, and I have no idea, nor has my medical attendant, whether in the event of my catching small-pox I shall be able to enjoy the illness at home, or whether I shall be hauled out of bed and carted by force to a Metropolitan Asylums Board small pox hospital. Nor if allowed to remain at home do I know who will be allowed to attend me or what precautions will be enforced to prevent the spread of the infection. No doubt I ought to know, but I find that nobody seems to know. If you are good enough to reply will you also tell us what would happen if the same state of things occurred *outside the limits of the Metropolitan Asylums* Board's area. No object in giving my name, so allow me to sign myself—

Yours faithfully,
March 2nd, 1902. SILVER-SPOON.

⁂ To a certain extent our correspondent's question has been answered in a leading article which appeared in THE LANCET of Feb. 1st, 1902, discussing isolation accommodation. A member of the upper classes catching small-pox will be well advised to do as the medical officer of health advises. A sensible medical officer of health would never insist upon the removal of a patient to an isolation hospital who could be effectively isolated in his own house and properly attended by his own medical man. Outside the jurisdiction of the Metropolitan Asylums Board the circumstances would be altered by the fact that there might be no isolation hospital. If there were one, the medical officer of health to the urban or rural authority would be the best person to advise whether an individual case should be nursed at home or not. We may add that our correspondent is too modest, for if his sires had not placed him on the top shelf he would soon have got there by himself.—ED L.

## AN INDIAN MEDICAL STUDENT'S GRIEVANCE.

*To the Editors of* THE LANCET.

SIRS,—I have for some time been seeing a notice put up on one of our university boards about the "West African Medical Staff" services. I did not pay much attention to that till I have seen THE LANCET of last week (Feb 8th). In that under the heading "The West African Medical Staff" I notice that among other qualifications a European parentage is necessary for the candidature for the services. This excludes those who are, though British subjects, yet fortunately or unfortunately not born of European parents; this therefore excludes Indian medical students as well. Now do I wish to draw the attention of the British public, specially of those class of peoples who are of unbiased mind—I mean the members of the medical profession—to the injustice thus done to the Indian medical students of this country. Why should those of us who have come up to this country, been educated in the distinguished universities, studied, worked, been examined and passed together alongside the white men, I am at a loss to understand, be refused a right which our fellow students will enjoy? Shall I understand, then, that this is a distinction of colour and nothing else? It is all very good to extend a hand to accept a help from India in time of need. We do not grumble at it, we do not refuse it, though famine and pestilence have become our daily visitors. Everyone knows how assistance in various shape from Indian princes and Indian contingents was utilised in the present South African.

war. It is also known how the Indian soldiers upheld the British prestige in distant China. Is this the way, then, the Colonial Office intends to repay the services of India? This is surely not the means by which the British public can expect to gain the confidence of the Indians.

I am, Sirs, yours faithfully,
AN INDIAN
Feb. 17th, 1902. (a Member, University Edin.).

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# MAIDSTONE AFTER THE EPIDEMIC.

(BY OUR SPECIAL SANITARY COMMISSIONER.)

*A Comparison between the Sanitary Work done before and after the Typhoid Fever Epidemic of 1897: the Necessity of Better Sanitation Vindicated, while the Contamination of the Water-supply remains Problematical.*

MAIDSTONE suffered from so severe an epidemic of typhoid fever in 1897 that all sanitary measures taken in this town have become matters of more than local interest. Everyone must be anxious to know what is being done to prevent the recurrence of so terrible an epidemic. Indeed, Maidstone now constitutes an object-lesson for all students of hygiene. It will be remembered that Maidstone was considered an exceptionally healthy town. For the 10 years preceding the epidemic the average annual death-rate was 14·54 per 1000 on a population of 33,830, while the mean death-rate for England and Wales was 18·57 per 1000. The epidemic commenced in September, 1897, and by Jan. 1st in the following year 1786 cases had been notified in the town, 107 in the County Asylum, and 45 in the Maidstone Rural District. The epidemic, however, was at its height from Sept. 11th to Oct. 16th, and the three worst weeks were those ending on Sept 25th, Oct. 2nd, and Oct. 9th, when the number of cases notified for each were 544, 529, and 246 respectively. The average zymotic death rate for Maidstone had been 1·68 per 1000, but in 1897 the death-rate from the seven principal zymotic diseases rose in consequence of the epidemic of typhoid fever to 5·52 per 1000. The general impression prevailed at the time that the epidemic was caused by the contamination of the Farleigh water-supply, though the Eberth bacillus was never found in that water. The districts affected corresponded, however, with the distribution of that particular water-supply; but in the special reports and map published in THE LANCET at the time it was shown also that the districts were on high levels ranging from 100 feet upwards. Exceptionally and in one part of the town only the Farleigh water was distributed to houses built on levels as low as 40 feet; but here, strange to say, the epidemic did not follow the water-supply, though it prevailed near at hand, but in the houses that were on a higher level. This suggested that there were other causes than the water-supply and among these was the fact that the branch sewers went up to the higher levels and might act as ventilating shafts for the main collectors that were at the lowest level. These main collectors were not self-cleansing, a considerable number of the branch sewers were very badly built, while the domestic drainage was in a deplorable condition. Many of the closets had no flushing apparatus and were not properly connected with the street sewers. The subsoil was often polluted by broken and leaking drains. Further, though Maidstone is so small a town it had its slums and its poor living in badly ventilated, dirty, and overcrowded houses All these sanitary defects required as much attention as did the question of water-supply, though the tendency was to hold the water as being solely responsible for the disaster that had befallen the town. Indeed, I was politely informed at the time that my arguments, though ingenious, were quite at variance with the [illegible] of modern science and that the idea of considering hoid fever as a sewer fever was out of date. Still I sisted in comparing bad sanitation to the powder and a taminated water-supply to the spark that produced the plosion, and I urged that it was quite as important to study disposing causes as to investigate the more immediate son of the outbreak.

It is now satisfactory to note that these arguments, though rgetically repudiated, have nevertheless produced good cts. Theorists are welcome to continue to argue that the [illegible] and the water alone was to blame if at the same time they tacitly admit the contrary by energetically striving to improve the public sewers and the private drains. Moreover, I also urged that by so doing they would prevent other epidemics besides those due to typhoid fever, and this contention was confirmed by the fact that an epidemic of diphtheria followed closely upon that of typhoid fever. But the excessive prevalence of diphtheria has now ceased, and this at the very time that improved methods of ventilating the sewers were introduced. So that, in spite of the bacillus which we were told must have been in the water though it was never found there, something can still be said in favour of good drainage, as an effective means of preventing epidemic disease. Let us, therefore, now see what has been done in Maidstone in this respect since the great epidemic.

First and foremost there stood the financial difficulty, aggravated by the fact that the epidemic has cost the town council £17,496, notwithstanding the Mansion House Relief Fund which had raised the sum of £27,918. Nevertheless, and even before the sanitary inspectors could examine premises and serve notices, a great number of private householders took alarm, had their drains overhauled, and in many instances found it necessary to relay them, to add ventilating pipes, and to improve the closets. Many thousands of pounds were thus spent of which there can be no public record. The authorities, however, wisely determined not to trust to this laudable display of private enterprise, but they immediately after the epidemic was over commenced a systematic inspection of every house in the town. The drains in each case were tested if possible by the water test. Then four street sewer ventilating shafts, 35 feet high, were placed in connexion with the sewers in 1897, before the epidemic had quite ceased.

To show the wholesome effect which the epidemic has had in stimulating sanitary work I will take some of the more important items one by one. Thus, during 1896, the year before the epidemic, drains were reconstructed, or were provided where they did not exist, to 200 houses. In 1897 the authorities appear to have been too occupied with the epidemic to do very much work of this description, for the number of houses so treated amounted to only 156. On the other hand, the epidemic was no sooner over than great activity in this respect is recorded, for new drains were provided to 476 houses in 1898, to 416 houses in 1899, and to 303 houses in 1900. The number of drains repaired and cleaned was 436 in the year before the epidemic, 340 during the year of the epidemic, and no less than 2050 in the year after the epidemic. In 1899 drains were repaired and cleaned in 681 houses and in 1900 in 574 houses. The water-closets that were repaired and cleansed in 1896 numbered 300 and in 1897, 250, but for the three years following the epidemic these figures rose to 798, 572, and 525. 40 new water-closets were constructed in 1896 and 20 in 1897. Then for the three years following the epidemic these figures were increased to 84, 84, and 105 respectively. One of the grievances especially complained of was that a great many water-closets were not provided with water, but could only be flushed by hand, the inhabitants having to pour water from pails or jugs down their closets. In 1896 flushing apparatus was affixed to 346 water-closets, and this was done in 284 cases during the year of the epidemic. Here, again, we have a notable illustration of the practical effect produced by the typhoid scare, for in the following year a flushing apparatus was provided to 911 closets, in 1899 to 823 closets, and finally in 1900 to 644 closets. Only three old drains were trapped and ventilated from the sewer in 1896 and six in 1897. But in 1898 this was done in 31 instances, though only in one case during 1899 and in 26 cases in 1900. The gullies in the yards were also in a very defective condition and in 1893 trapped stoneware gullies were substituted for old and defective brick or bell traps in 233 cases This was done in 180 cases in 1897. Then, after the epidemic, this grievance is also taken actively in hand and in 1898 no less than 620 stoneware gullies are provided. The next year 629 more are laid and 389 in 1900. All these items may be grouped under the heading of "Domestic hygiene." Coming now to the point where the sanitation of the private dwelling merges into that of the street or public sewer, the new glazed drainage pipes laid in 1896 amounted in all to 4625 feet in length and to precisely the same length in 1897. But the difference for the year following upon the epidemic is very characteristic, for the total length of new hardware drain pipes laid amounted to 18,427 feet. Nor is this all. Where the drain-pipes run under houses and especial risks are incurred cast-iron pipes are now used, and 1387 feet of this sort o

Now I am convinced that the affection described by Laennec in his paragraph on "acute suffocative catarrh of adults and children" is not the affection which I endeavoured to describe in my clinical lecture. It may be frankly admitted that all acute suffocative affections of the lungs, as Dr. Auld indicates at the end of his letter, present certain general resemblances to one another, but this by no means implies that they are the same either in degree or in kind. If Laennec's description be compared with that in my lecture important differences will be found which, to my mind at least, conclusively prove that the two accounts do not refer to the same affection

Laennec is dealing with an acute suffocative catarrh "affecting the whole, or a very large portion, of the mucous membrane of the lungs"; I am dealing with acute suffocative pulmonary œdema. The duration of the catarrh "is from 24 to 48 hours, or at most some days." The duration of the suffocative œdema in my cases was on an average about six hours. In suffocative catarrh, at the end of 24 or 48 hours, or at most some days, "either the patient dies, or expectoration commences and puts an end to the suffocation, and the disorder then follows the progress of a simple acute catarrh." In suffocative œdema "almost simultaneously with the onset of the dyspnœa—a most important diagnostic point—expectoration of a perfectly white, finely frothy, watery sputum begins." In acute suffocative catarrh "while the suffocation lasts there is little cough" (I use here the words in my copy of Forbes's translation, which are a little different from those in the quotation), "and the expectoration, if any, is altogether pituitous or fluid." In acute suffocative pulmonary œdema "the frothy fluid seems to flow up the trachea and is expelled with a 'hawk,' as if clearing the throat, but there is no cough in the ordinary sense of the word."

The affection described by Laennec is a matter of days; that described in my lecture is a matter of hours. In my first case there was no cough or spit either before or after the suffocative attack had passed off, which it did in about six hours; the suffocation and the profuse expectoration were cotemporaneous and both ceased together. These are differences as to the essential nature of the two affections which, to my mind, no degree of general resemblance can reconcile, and which convince me that I have not mistaken cases of acute suffocative catarrh for acute suffocative pulmonary œdema.

I am, Sirs, yours faithfully,
JOHN LINDSAY STEVEN.

Glasgow, Feb. 24th, 1902.

## THE PREVENTION OF WATER-BORNE DISEASES IN THE ARMY.

*To the Editors of* THE LANCET.

SIRS,—On reading your leading article on the above subject in THE LANCET of Nov 30th, 1901, p. 1507, I was reminded of the hugely beneficial effects of the cream separator in prolonging the keeping time of butter. This machine must separate not only cream and milk but also cream and germs. It seems permissible, therefore, to wonder whether some adaptation of the centrifugal principle might not prove efficient as regards water and germs. Such an apparatus would probably be less cumbersome and more rapid in its action than any yet proposed—given only its efficiency.

I am, Sirs, yours faithfully,
R. W. HUGHSTON, M.B. Melb.

Hamilton, Victoria.

## A METHOD BY WHICH DEPOSITION OF MOISTURE ON THE LARYNGEAL MIRROR MAY BE PREVENTED WITHOUT THE AID OF HEAT.

*To the Editors of* THE LANCET.

SIRS,—I have no knowledge of the "crayon anti-buée" to which Dr. Walker Downie referred in THE LANCET of March 1st, p 589, but the desirable result of preventing the deposition of moisture on a laryngeal mirror may readily be brought about by rubbing the mirror with a piece of damp soap. The smeared surface thus produced is polished by rubbing off the film of soap with a soft cloth. A mirror so prepared will not become clouded if breathed upon for some time (over an hour provided the tongue does not touch it)—a point of some value if a lengthy examination has to be made. The fewer instruments with which a practitioner has to be provided nowadays the better, and as soap is always at hand the simplicity of the process has much to recommend it. Why soap should have this effect I do not pretend to explain, nor do I know who was the first to apply it for the purpose mentioned.

I am, Sirs, yours faithfully,
ETONENSIS.

March 4th, 1902.

## ISOLATION HOSPITALS AND WELL-TO-DO PATIENTS.

*To the Editors of* THE LANCET.

SIRS,—Will you please tell your readers accurately and fully what would happen if anyone in what are called the "upper classes" catches small-pox! I myself, through the accident of birth and industrious sires belong to the class who toil not, and I have no idea, nor has my medical attendant, whether in the event of my catching small-pox I shall be able to enjoy the illness at home, or whether I shall be hauled out of bed and carted by force to a Metropolitan Asylums Board small-pox hospital. Nor if allowed to remain at home do I know who will be allowed to attend me or what precautions will be enforced to prevent the spread of the infection No doubt I ought to know, but I find that nobody seems to know. If you are good enough to reply will you also tell us what would happen if the same state of things occurred outside the limits of the Metropolitan Asylums Board's area. No object in giving my name, so allow me to sign myself—

Yours faithfully,
SILVER-SPOON.

March 2nd, 1902

*** To a certain extent our correspondent's question has been answered in a leading article which appeared in THE LANCET of Feb. 1st, 1902, discussing isolation accommodation. A member of the upper classes catching small-pox will be well advised to do as the medical officer of health advises. A sensible medical officer of health would never insist upon the removal of a patient to an isolation hospital who could be effectively isolated in his own house and properly attended by his own medical man. Outside the jurisdiction of the Metropolitan Asylums Board the circumstances would be altered by the fact that there might be no isolation hospital. If there were one, the medical officer of health to the urban or rural authority would be the best person to advise whether an individual case should be nursed at home or not. We may add that our correspondent is too modest, for if his sires had not placed him on the top shelf he would soon have got there by himself.—ED. L

## AN INDIAN MEDICAL STUDENT'S GRIEVANCE.

*To the Editors of* THE LANCET.

SIRS,—I have for some time been seeing a notice put up on one of our university boards about the "West African Medical Staff" services. I did not pay much attention to that till I have seen THE LANCET of last week (Feb. 8th). In that under the heading "The West African Medical Staff" I notice that among other qualifications a European parentage is necessary for the candidature for the services. This excludes those who are, though British subjects, yet fortunately or unfortunately not born of European parents; this therefore excludes Indian medical students as well. Now do I wish to draw the attention of the British public, specially of those class of peoples who are of unbiased mind—I mean the members of the medical profession—to the injustice thus done to the Indian medical students of this country Why should those of us who have come up to this country, been educated in the distinguished universities, studied, worked, been examined and passed together alongside the white men, I am at a loss to understand, be refused a right which our fellow students will enjoy! Shall I understand, then, that this is a distinction of colour and nothing else! It is all very good to extend a hand to accept a help from India in time of need. We do not grumble at it, we do not refuse it, though famine and pestilence have become our daily visitors. Everyone knows how assistance in various shape from Indian princes and Indian contingents was utilised in the present South African

Provinces, 1182; the Punjab, 4102; Mysore State, 587; Hyderabad State, 195; and Kashmir, 371. The latest returns for Bombay city and for Calcutta show that the outbreaks in these two cities are rapidly developing. The disease is still very virulent in Karachi, Poona, and Bangalore. The evidence with regard to inoculation is very conflicting. In the Punjab plague is raging where inoculation was extensively carried out last year, while, on the other hand, at Poona there were 6681 inoculations last year with the occurrence of only 11 cases and seven deaths amongst the inoculated. After all what are 7000 inoculations in a population of nearly 100,000? This week over 12,000 deaths have been recorded and yet only 10,706 doses of vaccine were sent out from Bombay. Inoculation is pushed in a few places, but is absolutely neglected in others.

The Victoria Memorial Scholarship Fund for training native women as midwives has been a great success. Over six lakhs of rupees have been raised and the fund is now closed. It has been decided that each locality shall profit by its own subscriptions, and the committee is re-allotting the interest from local contributions for the purpose of training midwives in the various districts. Already in Hyderabad a class has been started, and in Mysore, Rajputana, Gwalior, Travancore, Hulwa, Gondal, and Chamba young *dais* (nurses) have come forward to be trained in the female hospitals of those States.

The committee of the Indian Famine Relief Fund recently met in Calcutta and resolved to close the fund and to make over the balance (some six and a half lakhs of rupees) to the Indian Peoples' Fund.

The final census report for Assam shows the population to be 6,126,343—an increase since the last census of 11·8 per cent. One or two districts, however, were enumerated for the first time. Of the above population 725,844 persons are described as foreigners—that is to say, they were born out of Assam. This shows, at any rate, that the immigration is considerable

A great controversy has recently been raging in Calcutta concerning the Christian cemetery. More ground is urgently required and the health officer and others have advocated a fresh cemetery in the suburbs. Considerable opposition, however, has been made to this, chiefly by the Church parties, who desire an extension of the existing grounds. Apart from sentiment there can hardly be two opinions upon the undesirability of cemeteries in the heart of a city. It is unfortunate, also, that in a city like Calcutta a properly-constructed crematorium has not been provided The Hindus burn their dead as soon as possible after death, generally within a few hours, and the exigencies of the climate compel Mahomedans and Christians to bury their dead very speedily. There is a growing feeling amongst the Christian community that cremation is the preferable method for disposal of the dead. As these matters come under the administration of the municipality I consider the erection of a crematorium to be one of the reforms which ought to be undertaken without further delay.

Feb. 8th.

## LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

*The Stanley Hospital.*

THE committee's report for 1901 showed that 1105 persons had been treated as in-patients, with a total number of attendances of 57,218, or a daily average of 156. As many as 387 persons were brought to the hospital by the ambulance. Throughout the whole year the resources of the charity had been taxed to the utmost. All the available beds had been continuously occupied, and the staff had more than ever felt how limited the accommodation for in-patients was and how great was the necessity for opening the whole hospital; but the committee, under the pressure of the present large debt, had felt quite unable to face the extra annual expenditure that would be incurred by opening the closed wing. The new out-patient department had been found to work very satisfactorily, notwithstanding the fact that the out-patient and casualty work had been exceedingly heavy. Owing to the dearth of young medical men caused by so many having gone to the seat of war in South Africa the committee found it impossible to obtain at former salaries suitable candidates for vacancies on the resident staff. It was consequently placed in a position of difficulty, from which it was extricated by the generosity of Mr. C. J. Williamson, who promised to give £30 a year for five years to augment the salaries of the house surgeons. The expenditure for the year amounted to £5381, and the income, apart from the ex-Lord Mayor's hospital century fund (£948 12*s.*), was £3663, a decrease of £400 on the year 1900. Although an increase of £228 had been received from the Hospital Sunday and Saturday Fund and an increase of £77 in annual subscriptions, there was a falling-off of £610 in donations. In the matter of legacies the hospital had been again unfortunate, for out of all the handsome amounts distributed from this source it had received absolutely nothing during the past year, and only £50 in 1900. It seemed as if there were many who do not recognise the fact that the Stanley Hospital is one of the general hospitals of Liverpool and that it ministered to the necessities of a large and poor district otherwise unsupplied with gratuitous medical and surgical assistance. Starting the year with a debit balance of £4268, the ordinary expenditure had exceeded the ordinary income by £1736, against which £948 12*s.* had been received from the "Century Fund," leaving a debit balance of £5039. The committee urgently appeals to the charitably disposed for immediate help.

*The Small-pox Epidemic: Vigilant Precautions in Liverpool.*

The number of small-pox patients under treatment in the city hospitals remains at 44, no fresh cases being reported. A number of people, however, have been isolated for special observation In order to be on the safe side the medical officer of health has, since the commencement of the outbreak, exercised the utmost vigilance to prevent a spread of the disease, and it may be taken as a fact that only about 25 per cent. of the persons isolated actually develop small-pox; but the precautions are so exact that a person who betrays the slightest suspicious symptoms is isolated for a period. Stations have been opened in some parts of the city for the performance of free public revaccinations, and it is a gratifying fact to record that the "conscientious objector" is a comparatively *rara avis* in this city.

*The Bootle Borough Hospital.*

The fifty-ninth annual report of this hospital for 1901 states that a slight outbreak of fever in the early months of the year interfered to some extent with the work of the in-patient department and necessitated the partial closing of the wards for cleaning and re-painting. The opportunity thus offered was taken advantage of to repaint the entire building, to instal the electric light, to re-furnish the operating theatre, and to effect necessary alterations and improvements in the nurses' and servants' dormitories. The laundry plant had been renewed during the year. The accounts showed that after all the expenditure had been met the hospital debit balance was only £147. The committee recorded with deep regret the death of Mr. R. J. Sprakeling who for more than 30 years had been associated with the medical staff.

March 4th.

## WALES AND WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

*Cardiff Infirmary.*

IN spite of the exceptional efforts made by the ex-Mayor of Cardiff during his year of office and of others to place the finances of the Cardiff Infirmary upon a sound footing the managers have not yet succeeded in securing a sufficient income to meet the annual expenses The expenditure during 1901 was £1815 more than the income received. There is no doubt that if the Cardiff working-men would only support the infirmary to the same extent that similar institutions are supported by their comrades in other large towns, such as Newport or Bristol, there would be ample means at the disposal of the managing committee. There were treated during last year 1663 in-patients and 14,282 out-patients by the staff of the infirmary.

*Small-pox Hospitals.*

A great deal of activity is being displayed in the provision of small-pox hospitals. The Mayor of Tenby has contributed £100 towards the cost of a temporary hospital for the borough, and the Portishead Golf Club has offered to the Portishead Urban District Council the pavilion of the club for use as an isolation hospital. The Whitchurch (Salop) piping were also laid in the course of the year Nor did the work stop here In 1899 almost equal activity was shown, as 17 410 feet of new glazed pipe drainage and 500 feet of cast iron pipes were laid Finally, in 1900 the new glazed pipe drains laid measured 13 793 feet and the cast iron pipes 523 feet If the seven items mentioned above and qualified as domestic hygiene are grouped together they amount for the two years 1896 and 1897 in all to 2794 sanitary improvements effected If, on the other hand, the same items are taken for the two years following upon the typhoid fever epidemic it will be found that 7776 similar improvements have been carried out Nor is this all, for though the figures for the third year show some falling off, they still remain very much higher than those that preceded the epidemic Then again when dealing with the connexion of houses with sewers and the sewers themselves it will be seen that in the years 1896 and 1897 there were in all 9250 feet of new glazed pipes laid, while during the following two years new pipes to the length of 37,714 feet were employed and this includes 1887 feet of cast iron pipes which constitute an extra precaution not generally applied before the epidemic These figures speak well for the activity of the Maidstone sanitary authorities and show that they have taken the lesson of the epidemic to heart But if the epidemic was caused exclusively by the contamination of the water supply, why take all this trouble to improve the domestic and public drainage? House-owners and public authorities are not prone to incur a large expenditure just on the off chance that it may be of some little use It is evident that in spite of all that was said to the contrary the warning given in these columns that the contamination of the water supply was probably not the only cause of the epidemic has been more generally heeded than was publicly admitted

During the year that followed the typhoid fever epidemic there were but 35 cases of this disease notified resulting in two deaths On the other hand, there were 240 cases of diphtheria This exceeded the highest previous record which amounted to the 211 cases that had occurred the previous year thus adding the stress of a minor epidemic of diphtheria to the terrible distress caused by the 1786 cases of typhoid fever Nevertheless the death rate for the year 1898 only amounted to 12 82 per 1000 which, however if compensation is allowed for age and sex constituted a mean death rate for Maidstone of 14 3 per 1000 and this latter figure may be compared with the mean death rate of 17 6 recorded for England and Wales during the same year The mortality from diphtheria at Maidstone was not high It was equal to 12 9 per cent of the cases

Before the typhoid fever epidemic the authorities had objected to the expense of frequent analyses of the water supply Their attitude was very different after the epidemic The Cossington supply was analysed 52 times that of the Boarley 53 times the Ewell 17 times and the Mid Kent 52 times during the year 1898 The Farleigh supply was absolutely suppressed and the Ewell water was only delivered for a time in the Barming district. Mixed waters were analysed on 21 occasions and of 13 samples from private wells 12 bore evidence of organic pollution Thus it will be seen that there is no longer any stinting so as to save expense in water analyses Mr M A Adams, who was then medical officer of health and public analyst reported that speaking generally, the quality of the public waters had been good In regard to the supplies from the chalk that of Boarley was excellent and that of Cossington was not so good The Ewell is a steady good, green sand water, but apt to contain too many nitrates and phosphoric acid The Mid Kent water also came from the greensand but was much softer and sometimes it did not contain a trace of nitrogen or ammonia. There was however a difficulty in getting a sufficient quantity as the season had been exceptionally dry During the same year the sanitary authorities reported as to the condition of unhealthy areas It was found that the average annual death rate during the previous 10 years among the inhabitants of Upper B nny s Yard amounted to 25 2 per 1000 This was nearly double that of the town taken as a whole and therefore forcibly suggested faulty local conditions. 39 out of 52 inhabitants never reached the age of manhood The deaths from diseases of the respiratory organs were in the proportion of 38 5 per cent of the total of deaths The houses in this yard are back to back and are very damp and squalid

During the year 1899 the epidemic of diphtheria continued and there were 213 cases resulting in 27 deaths There were also 21 cases of typhoid fever and the average death rate was 15 5 per 1000 of the total population Nevertheless the average death rate from the seven principal zymotic diseases only amounted to 1 16 per 1000 though the annual average for the previous 20 years was equal to 1 783 per 1000 Further reports were given by the medical officer of health on the housing question Eight houses in Kingman's Yard were described as being in a wretched state with damp, dangerous walls and staircases and windows that were too small Two closets were improperly placed and two others were full to overflowing There were 33 persons living here near to stagnant filthy accumulations of house refuse, with defective pavement in the yards and one out of three gullies blocked This property was described in the report as being unfit for human habitation In Dunn's Yard there were 10 houses with no water supply to the closets and with insufficient space and ventilation The cubic space of the rooms in Thomas's Yard averaged 650 feet The walls were crumbling away and the cubic space per inhabitant varied from 77 6 cubic feet 99 4 and 103 3 to 458 8 and 544 4 Had the rooms been properly apportioned there might have been 300 cubic feet per bed in three out of the six houses measured The windows were only two feet six inches square and there was no through ventilation in four of the houses In Temple Court there were 15 houses many of them back to back and all unsuited for human habitation

In November, 1899 Mr Adams retired and Dr Charles Pye Oliver succeeded him as medical officer of health Dr Oliver in his report for the year 1900 states that though the average annual death rate for East Maidstone equalled 16 8 per 1000 during the previous 10 years it rose to 18 1 for the year 1900 Taking both East and West Maidstone the death rate for the entire town was 15 81 per 1000 as compared with 18 3 per 1000 for the United Kingdom There were 28 cases of typhoid fever during the year and 150 cases of diphtheria The death rate from the seven principal zymotic diseases fell to 0 77 per 1000 During the course of the year some improvements were effected in regard to the insanitary condition of some of the poor quarters mentioned above and the overcrowding was abated But it must be confessed that so far as the housing problem is concerned no bold effort has been made to grapple with the difficulty A little tinkering may be noticed here and there It is the better class property that has been vastly improved by house to house inspection, followed by the reconstruction or repairs of the domestic drainage in every part of the town

*(To be continued )*

## NOTES FROM INDIA

(FROM OUR SPECIAL CORRESPONDENT )

*Plague Officers and the Indian Medical Service —The Plague Epidemic —The Victoria Memorial Scholarship Fund for Training Native Midwives —The Famine Relief Fund —The Census for Assam —The Cemetery Question in Calcutta*

THE following medical officers who have rendered good service in connexion with plague have been selected for admission to the Indian Medical Service Commissions have been offered to Dr Walsh Dr Horton, Dr Lewis, Dr Gloster and Dr Justice and nominations for commissions have been made to Dr Beach Dr Hunt, Dr Hayden, Dr Muat Dr Smith Dr Hills Dr Starkey Dr Sanderlands Dr Knapp-Barrow Dr Jameson and Dr Murray They will all be graded immediately below the batch of Indian Medical Service officers who next arrive from Netley These officers have been recommended by the respective Governments under which they have served and they were of the requisite age when they commenced their plague duties It will be only fair if appointments are offered to other plague officers who have done well but who are not otherwise eligible for the Indian Medical Service

Again a further increase is reported in the mortality from plague Throughout India there were 12,192 deaths last week as against 11 445 for the previous seven days and only 3415 for the corresponding week of last year Bombay city, the Punjab the North West Province and Bengal show great increase the published figures being —Bombay city, 408 deaths the Presidency 3822 Karachi 44, Madras Presidency 574 Calcutta, 82, Bengal 822, North West and on fittings in the library department and for an annual sum of £1500 for general and special library purposes. 3. They also agree to make application to the trust for a grant of £2500 in the coming year to be expended on equipment. The additions under this head are more immediately required in the laboratories and museums in natural physiology, chemistry, botany, zoology, geology, anatomy, physiology, pathology, and in clinical medicine and surgery and their special branches. 4. The court also regards it as important that provision should be made for the institution of research and other scholarships, chiefly in the faculties of science and medicine, and accordingly resolves to recommend to the Carnegie Trust that a sum of £1000 should be placed at the disposal of the court for that purpose for the forthcoming year. This sum would fall to be gradually increased in future years, but it may be expected that the requirements under this and paragraph 3, constituting together provision for the encouragement of scientific research and now stated at £3500, will not be materially altered. 5. It also agrees to submit an application to the trust for an annual grant of £4000 towards the maintenance and extension of the teaching and research work of the laboratories in the departments of physics, chemistry, botany, zoology, geology, anatomy, physiology, materia medica, pathology, public health, surgery, midwifery, tropical diseases, agriculture, and engineering, and towards the payment of the salaries of the demonstrators and assistants whose services will be required to meet the contemplated extension in the work of teaching and research. 6 The court is further of opinion that the following existing lectureships should be erected into professorships—viz., the lectureships in (1) French, (2) German, (3) applied mathematics, (4) ophthalmology, and (5) mental diseases. The court suggests that the trustees might annually set aside sums to be applied for the eventual endowment of new chairs. 7. The court is very desirous of instituting certain new lectureships in science, medicine, and commercial education, each of them for the tenure of five years, indicated in the relative ordinance of the Universities Commissioners; and it ventures, as in the case of the suggested new chairs (paragraph 7) to ask the trustees for information as to the manner in which they are prepared to aid in the establishment of such new lectureships. The above claims advanced by the court therefore involve the capital sum of £45,000 under paragraphs 1, 2, and 3, and permanent annual grants to the extent of £9000 under paragraphs 2, 3, 4, and 5 With [illegible]d to paragraphs 6 and 7 the court awaits the decision of [illegible]xecutive committee as to the amounts which it may [illegible]ble to advance towards these objects. The court would [illegible]k that if the capital sums above specified are granted [illegible]e executive committee the court will be prepared on the [illegible]ry of their period of payment to submit to the committee [illegible]oposals for grants for a further extension of the buildings [illegible] the University and for other academic purposes. The [illegible]urt then makes a statement with regard to the number [illegible] students for whom instruction has to be provided and the amount at present voted by the court from the University chest towards that purpose. The average annual number of matriculated students for the last five years has been 2812 The average number of students annually during the same period in the faculties of science and medicine has been 1550 The matriculated students for the present year are 111 more than during the corresponding period of last year. The grants provided by the University for the financial year 1900–1901 were as follows:—

| | |
|---|---|
| Stipends of lecturers ... ... ... .. ... ... ... ... | £3061 |
| Stipends of assistants ... ... ... ... ... ... ... ... | 6866 |
| Laboratories and class expenses .. ... .. .. .. ... | 2806 |
| Museums ... ... ... ... ... ... .. ... ... ... ... | 409 |
| Library... ... ... ... ... ... ... .. ... ... ... ... | 2662 |
| | £15,795 |

The University has practically no surplus income from which additions to those grants can be made for the purpose of extending the teaching in the existing departments or for the introduction of new subjects of study. The court regards the section of the trust under which application is made as intended to confer an enormous benefit on the universities of Scotland by providing means for their continuous development and it expresses the hope that the executive committee will be able to contribute to the University of Edinburgh a share of the income proportional to the numbers of the students and teachers and to the requirements of the subjects of study.

### *Aberdeen University.*

The senatus of this University met at King's College on March 1st and decided that the graduation ceremony should take place on Thursday, April 10th. In connexion with the subject of honorary degrees the senatus resolved to offer the degree of LL.D. to Sir Thomas Barlow, Bart., M.D., F.R.C.P., B.Sc. Lond., K.C.V.O., physician to the King's Household.

### *The late Mr. R. J. Cheves, M.B., Ch.B. Aberd.*

Much regret has been expressed in Aberdeen and district at the death of Dr. Cheves of Longside, who contracted pleurisy whilst visiting his patients and succumbed after confinement to the house for a few days. He was 25 years of age.

March 4th.

## IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

### *Small-pox in Dublin.*

AT the monthly meeting of the Corporation of Dublin on March 3rd a report was received from the Public Health Committee giving a detailed account of the recent outbreak of small-pox and of the precautions taken to prevent the spread of the disease. The report added that the three patients were convalescent and that in the belief of the committee all danger of a spread of the disease had passed. A deputation attended from the City Hospital for Diseases of the Skin in support of an application made by that body for a grant of £150 a year from the corporation funds. The matter was referred to the Finance Committee.

### *Health of Belfast.*

At the monthly meeting of the Belfast City Council held on March 3rd it was reported that between Jan. 19th and Feb. 15th there had been notified 180 cases of zymotic disease—viz., 52 cases of typhoid fever, 44 of simple continued fever, 35 of erysipelas, 17 of diphtheria, 15 of membranous croup, 14 of scarlet fever, two of puerperal fever, and one of typhus fever. In the four weeks ended Feb. 15th there were 790 births registered in Belfast and 573 deaths, making a natural increase of 217. There were 41 deaths from zymotic disease, 86 from phthisis, and 183 from other diseases of the respiratory organs, making a total of 269 from the two latter causes. The annual death-rate from all causes was 20·8. On the whole the state of health of the city of Belfast continues fairly good and it is gratifying to be able to report that notwithstanding the prevalence of small-pox in London, Glasgow, and Liverpool, no case of this disease has so far been notified in Belfast.

### *County Down Infirmary.*

From the report of this institution from Jan. 1st to Dec. 31st, 1901, I find that the total expenditure for the year was £1619 1*s.* There were 462 patients admitted, which with those remaining from the previous year, 38, made 500 in all. The average number of beds occupied daily was 35, and the average cost of each patient was 2*s.* 5⅝*d.* per diem. The number of extern cases was 513. After the payment of all accounts a balance to credit of £247 5*s.* 4*d.* remained.

### *The Irish Poor-law Medical Service.*

The Council of the Irish Medical Association has brought under the notice of the senates and councils of the universities, medical colleges, and schools, the present condition of the Irish Poor-law medical service, in the hope that those intrusted with the provision of medical education may be induced to exert their influence to improve and reform this important public service in the interests of many of their present and future graduates and diplomates of medicine and surgery. The association begs the authorities of the Royal Colleges of Physicians and Surgeons and the Universities of Ireland to use their united influence to deter young professional men from entering this service until a minimum rate of remuneration has been fixed upon for Poor-law medical appointments, the salary in each case to be proportionate to the area of the district, and a reasonable one considering the onerous duties of the office. The average salary paid to dispensary medical officers represents a small fraction under £100 per annum, out of which he must pay all expenses necessary to the

District Council has decided, upon the recommendation of the medical officer of health, Mr. M. Gepp, to erect tents for the purpose of isolating any cases of small-pox which may occur in the district.

### *Dog Muzzling.*

The Board of Agriculture has issued an order requiring the muzzling of dogs in the boroughs of Cardigan and Carmarthen and in portions of the counties of Cardigan and Carmarthen and in the whole of the county of Pembroke.

### *Royal West of England Sanatorium.*

The annual report of the Royal West of England Sanatorium at Weston-super-Mare states that 1144 men and 981 women were admitted to the institution during 1901, that 990 of the total number were discharged recovered, and that 672 left in much improved health. The expenditure for the year amounted to £3506 and the receipts to £80 less than this sum.

### *Beri-beri or Arsenical Poisoning?*

At the last meeting of the West of England and South Wales Branch of the Incorporated Society of Medical Officers of Health Dr. Edward Walford, medical officer of health of Cardiff, read notes upon four cases of beri-beri which had recently occurred among European sailors who had arrived at the port of Cardiff. They left Rangoon on Sept. 12th, 1901, and 10 weeks later the first man was attacked, the three others falling ill in another three weeks, and upon arriving at Cardiff four weeks afterwards all four men were found to have typical symptoms of beri-beri. They were removed as soon as possible to the Seamen's Hospital and they all recovered. Specimens of hair were examined at the Cardiff Public Health Laboratory by Mr. Sugden, the assistant chemist and bacteriologist, and traces of arsenic were found in the hair taken from each patient. Acting upon the presumption that the disease was due to a micro-organism which after lying dormant had regained vitality in the heated atmosphere of the forecastle Dr. Walford considered that the patients suffering from the disease should be at once removed from the poisonous apartment which they were inhabiting, and that there should be a complete disinfection of all surfaces and articles which might retain infection, and he quoted Dr. Patrick Manson's opinion that "when patients are removed from endemic spots they at once begin to improve and may be out of danger in a few days, whilst those who remain in the endemic area most probably go from bad to worse and very likely die."

### *Health Reports.*

In his annual report for the Stroud Rural District the medical officer of health, Dr. J. M Martin, states that the birth-rate during 1901 was 20 6 per 1000 and the death-rate 13 per 1000. The population of the district was 27,770 Among the 666 rural districts in England and Wales only 17 have a larger population. It is satisfactory to find that regulations under the Dairies, Cowsheds, and Milkshops Order and By-laws with respect to nuisances and new buildings, which have been under consideration by the district council for two years, are now only awaiting confirmation by the Local Government Board.—The death-rate in the borough of Aberavon in Glamorganshire, which has a population of 7553 persons, was 15 5 per 1000 in 1901.—The birth-rate in the Yeovil Rural District, where there is a population of 17,537 persons, was 23·3 per 1000 during 1901 and the death-rate was 14 3 per 1000.—Mr. A. R. Nicholls, the medical officer of health of the Langport Rural District, in his annual report, states that many of the occupied cottages in his district are barely fit for habitation, the ground floors being in some instances of trodden earth. The birth-rate in 1901 was 25 5 per 1000 and the death-rate was 19·1 per 1000.

### *Treatment of Imbeciles.*

At a conference of the Somerset Poor-law and Rural District Councils' Association held at Taunton on Feb. 25th a discussion took place with reference to the separate accommodation of imbeciles and idiots. No definite resolution was come to upon the subject but the opinion of the conference appeared to be that such persons should not be treated in a lunatic asylum. It was suggested that they might be gathered from several unions into one institution which would not have to be built up to the requirements of the Commissioners in Lunacy, and the Langport Workhouse, which has accommodation for 300 inmates but is now only occupied by 50, was spoken of as one which might be adapted for such a purpose.

### *Hospital Sunday in Bristol.*

It has been decided to distribute £1400 among the Bristol hospitals from the Lord Mayor's Hospital Sunday Fund. The collections amounted this year to nearly £1600.

### *The New Workhouse Dietary.*

The average weekly cost per head of the inmates in the workhouse of the Wells Union for the half year ending Dec. 31st, 1901, was 2*s.* 9¾*d.*, and for the corresponding period of 1900, before the new dietary scale was adopted, the average cost was 2*s.* 10½*d.* The workhouse accommodates 300 inmates.

### *Proposed Repeal of the Conscientious Objector Clause.*

The Malvern Urban District Council has passed a resolution in favour of the repeal of Section 2 of the Vaccination Act, 1898, and has issued a circular letter to other district councils urging the adoption of a similar resolution. When this letter was discussed by the Chipping Sodbury Rural District Council the medical officer of health (Dr. Francis T. Bond) strongly urged the council not to acquiesce in the suggestion of the Malvern council, for he was of opinion that the section (which relates to the conscientious objector) was a very wise one in the interests of vaccination and had done practically no harm but a very distinct amount of good, for it had removed the possibility of a certain limited section of the community posing as martyrs. He declared that the actual number of exemptions under the section did not come to more than 5 per cent. of the children born in the country and they were obtained mostly in large centres where the agitation against vaccination had been most active.

### *Plymouth Borough Asylum.*

At Plymouth, on Feb. 26th, Colonel W. L. Coke, the Local Government Board inspector, held an inquiry into the application of the Plymouth Corporation for power to borrow £40,000 for the extension of the borough asylum at Blackadon. It was stated that an enlargement of the institution was urgently required, for although the asylum was erected to provide accommodation for 200 patients as a matter of fact there were 280 patients at present. The proposed extension will enable the authorities to provide accommodation for 406 patients.

March 3rd.

## SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

### *University of Edinburgh and the Carnegie Trust.*

THE University Court of the University of Edinburgh has now laid before the Carnegie Trust a statement regarding the more urgent needs of the University. This document commences by explaining that in order to assist the court in preparing the statement the senatus had been requested to offer suggestions as to the direction in which University extension was most required. The various faculties had accordingly considered their wants and had reported to the senatus which, in its turn, had sent in a report on the whole subject to the court. A representation on the subject had also been received from the General Council of the University. The statement then gives an account of the various legacies and donations which had been received by the University during recent years. These in the aggregate amount to £91,000, this sum not including numerous endowments destined to the founding of bursaries, scholarships, and fellowships. Notwithstanding all that has been done recently the University is still in need of large additions to its buildings, to its teaching staff, and for educational appliances. The more urgent needs of the University are then given and may be stated briefly as follows: 1. The court concurs in the opinion that the most urgent need of the University is a building for natural philosophy and engineering and agrees to ask the Carnegie trustees to set aside £8000 annually for five years as a contribution towards the fund which the court proposes to raise for the purpose of purchasing ground for the future extension of the University buildings and in the first instance for the erection thereon of class-rooms and laboratories for the teaching of natural philosophy and engineering. 2. The court and senatus agree as to the importance of increasing the efficiency of the University library and resolve to apply to the Carnegie Trust for a grant of £500 a year for five years to be expended on structural alterations who had died under chloroform. In not even one was there any valvular lesion found. Three patients had hearts thickly overlaid with fat but without any muscular degeneration, while in only one case was there any definite fatty degeneration found. These results gave a certain amount of support to the contention of M. Huchard. Of 19 patients who died under chloroform 14 died before the operation had begun, four died during the operation, and one died after it was over. The elder Doyen had pointed out how often renal mischief was found in cases of death under chloroform. M. Brouardel, however did not consider that renal mischief was a contra-indication to the use of chloroform. Deaths of patients under chloroform could only be compared from a medico-legal point of view with those occurring from very slight shocks, especially to the laryngeal region, which had been known to cause death. Emotion, even that produced by touching the part about to be operated on, or the first incision, had caused death. Such deaths, therefore, ought not to be attributed to chloroform, even though the patient were under that drug at the time.

March 4th.

## BERLIN.

(FROM OUR OWN CORRESPONDENT.)

### *The late Professor Julius Wolff.*

DR. JULIUS WOLFF, professor of orthopædic surgery in the University of Berlin, died on Feb. 18th after a short illness, the cause of death being apoplexy. He was born in 1836 in Märkisch-Friedland, West Prussia, and after completing the medical curriculum at Berlin University he took his degree in 1860 and in the following year became qualified to practise. He commenced professional life as a general practitioner in Berlin, devoting his leisure time to researches in anatomy and physiology. The histology of bone had a special interest for him, and in common with the late Professor von Meyer of Zürich he investigated the connexion between the trabeculæ and the growth of bone. Osteology was, in fact, the favourite study of his life, on which account in Berlin medical circles he was familiarly known as "Knochen-Wolff" (i.e., "Bones"). His intimate knowledge of osteology and the experience of military surgery which he gained in the wars of 1864 and 1866 led to his giving up general practice in order to devote himself to surgery, and he succeeded so well in this new field that although he had never been assistant to a surgical teacher he was nevertheless as early as 1868 appointed *privat-docent*, and in 1884 extraordinary professor of surgery, in Berlin University. Orthopædic surgery and plastic operations of various kinds, particularly those for hare-lip, were his specialty. On the founding of a chair of orthopædic surgery in 1890 Professor Wolff was appointed to it, and the Royal Orthopædic Clinic was formed by uniting his private clinic with the one belonging to the university. In 1892 his great work on "The Transformation of Bones" was published under the auspices, and at the expense, of the Royal Academy of Berlin.[1] Physically, Professor Wolff was a tall, strong-looking man; he was universally liked by his professional brethren and his death is much regretted.

### *A Boycotted Hospital.*

As a general rule the hospitals of Berlin and its environs are in a state of chronic overcrowding, but there is a notable exception in the case of the hospital at Lichterfelde. This nstitution has beds for 350 patients, but it seldom happens hat more than 200 of them are occupied, the explanation of his dearth of patients being that the hospital is boycotted oth by the medical men of the district and by the local ithorities on account of the peculiar methods of treatment d management which are in operation there. The chief edical officer of this hospital is Professor Schweninger, who ame a celebrity with the public as the medical attendant the late Prince Bismarck. Even in illness the prince was from being a tractable subject, but Dr. Schweninger's tural energy of character was equal to the occasion, d by the exercise of a kind of suggestion he succeeded in lieving the nervous troubles from which his patient ffered. The Iron Chancellor's gratitude took the form of rocuring for him an appointment as professor in Berlin niversity, despite the unanimous opposition of the edical faculty. The news that an important professorhip had been disposed of in such a way caused general astonishment and the incident gave rise to very ani debates in Parliament. Dr. Schweninger had never anything for the advancement of medical knowledge, the peculiar views which he held caused him to be rega by his medical brethren as being in some degree an outs He used to say, for instance, that modern medicine w failure; that students were nowadays trained in the scie of medicine whereas what the public required were trained in the art of medicine—men who knew how to c their patients. Exact diagnosis, he maintained, was necessary for the purpose of treatment; a medical man oug to be as much at home in the kitchen as in the laborator and he intended to found a new medical school, an Aerzt Schule where his principles would be taught to the student The Lichterfelde hospital, of which he was made chi physician, gave him an opportunity of treating hospita patients according to the system which he had hithert followed in his private practice, but the anticipated result were not realised; on the contrary, this new and lavishly fitted-up hospital has from the first been a source of trouble to the council of the district of Teltow to which it belongs. At an early period there was a general strike on the part of the nurses—perhaps a unique event in the history of hospitals; then Professor Schleich, the chief surgeon, resigned because Professor Schweninger wished to decide in every case whether a surgical operation was necessary or not, thereby placing the surgeon in the position of a mere operator. No other surgeon accepted the vacant post, the result being that fractures of the femur were treated by massage and that plaster bandages were applied to strangulated hernia, whilst cancer was never operated on at all, being, in Professor Schweninger's opinion, a constitutional disease. The most striking fact, however, was the enormous death-rate from diphtheria. In the other Berlin hospitals, where the serum treatment was used, the diphtheria mortality was from 12 to 13 per cent., but in the Lichterfelde hospital it was 64·7 per cent. This state of affairs soon attracted the attention of the medical profession and the authorities of the district. Dr. Rabnow, president of the medical association of Schöneberg, a town in the Teltow district, published a statement to the effect that the medical practitioners of that place declined to send patients to the Lichterfelde hospital; the municipal council of the town also declined to pay the annual sum of 50,000 marks (£2500) which had been its contribution to the hospital, and other places in the district took a similar course, so that financial difficulties arose. At the last meeting of the Teltow district council the Landrath (governor of the district) took an optimistic view, saying that in his opinion the charges made against Professor Schweninger were due to the hostile feeling of the medical profession and that on an inquiry being held by the medical officer of health of the district it was found that the hospital was in a good condition and that the patients had expressed their satisfaction with their general treatment. The leading journals, however, both medical and non-medical, controvert his statements and express disapproval of the system followed at the Lichterfelde hospital.

### *German Medical Congresses.*

The Congress of the German Surgical Society will meet from April 2nd to the 5th in Berlin under the presidency of Professor Kocher. The principal subjects of discussion will be the Dressing of Wounds on the Battlefield, introduced by Professor von Bruns of Tübingen; the Histogenesis of Carcinoma, by Professor Gussenbauer; the Treatment of Carcinoma of the Bowel, by Professor von Mikulicz; Operations for Subphrenic Abscess, by Professor Körte; Colopexy, by Professor von Eiselsberg; and Orthopædic Surgery, by Professor König.—The Congress of Internal Medicine will meet at Wiesbaden from April 15th to the 18th, Professor Naunyn in the chair. The official subjects of discussion are Photo-therapeutics and the Diagnosis and Treatment of Gastric Ulcer.

March 3rd.

## CONSTANTINOPLE.

(FROM OUR OWN CORRESPONDENT.)

### *Imperial Medical Society of Constantinople.*

FEBRUARY 15TH was the anniversary of the foundation of the Imperial Medical Society of Constantinople, of which Djemil Pasha is the newly-elected president. Djemil Pasha is a very skilful surgeon; he is one of the professors discharge of his duties, and rent, taxes, horse, vehicle, servants, &c., so that practically no portion of his salary is available for his support, for which he has to depend on the small emoluments arising from registration and vaccination fees, averaging about £30 per year, together with whatever private practice the district may afford him. It is noted that in Bragan District, Monaghan Union, the medical officer is paid a yearly salary of £29 19*s.* 2*d.* for attending a district of 12,388 statute acres and with a population of 1964 persons, and his vaccination fees were for one year 8*s.* The medical officer of Portstewart District, Coleraine Union, has a salary of £43 0*s.* 1*d.* for a district with a population of 2761 and an area of 9116 acres, and for the year ended March 1st, 1900, his vaccination fees were 10*s.* There is no promotion in the service, no holidays as of right, no increment of salary no matter how long or efficient the medical officer's service may have been, no recoupment of official expenses however epidemics or other local conditions may increase them, and there is no pension, unless, indeed, the medical officer should be successful in begging as a favour that which he should have as a right. Under such circumstances is it strange that there are deep and lasting discontent and dissatisfaction in the ranks of the Poor-law medical service officers, and that they are determined to make an effort to have these truly anomalous conditions of the service rectified? It is recommended (1) that £200 per annum be fixed as the minimum salary for any dispensary appointment, and £120 per annum for any workhouse appointment, unless held jointly, when £300 should be the amount for both; (2) that all medical salaries should be subject to a quinquennial increment, either based on the civil service scale or at a fixed percentage rate; (3) that a yearly holiday of one month as a right should be fixed, with well-defined rules as regards the appointment and payment of a substitute; and (4) that there should be superannuation on civil service scale as a right. It is hoped that a united effort will at last be made to improve the Poor-law medical service of Ireland.

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[1] This book, "Das Gesetz der Transformation der Knochen," was avourably reviewed in THE LANCET of July 15th, 1893, p. 140.

March 4th.

## PARIS.

(FROM OUR OWN CORRESPONDENT.)

### *The New Public Health Law.*

THE new law on public health to which I referred in my letter in THE LANCET of March 1st, p. 624, was published in the official journal on Feb. 15th, 1902, and will henceforth be known in legislation by that date. As everybody knows the law has been under consideration for some 20 years, and its provisions have been altered over and over again, for the various committees which had it under consideration were exposed to a cross-fire from hygienists on the one side and politicians on the other, the latter of whom desired to avoid imposing on their constituents sundry expenses which would make them unpopular and which would place their re-election in great doubt. To-day, although the definite text of the law is published, it is easy to foresee the various difficulties which will arise in its vigorous application when the various centres of population refuse to carry out the regulations. With a view to economy the law creates no new official and the mayors of every commune are constituted as sanitary officers; but these mayors are elected by the people. It will be the mayor's duty to publish various sanitary rules and regulations which will deal with (1) sundry precautions to be taken against infectious diseases, and especially with measures for disinfection; and (2) various regulations dealing with the sanitary condition of houses, of furnished lodgings, and other dwelling-houses, whatever be their nature, and especially with the questions of the supply of drinking-water and the removal of dust and other refuse. If any mayor has not published his code of sanitary regulations within one year from the date of the publication of the law, the prefect shall publish one himself; and it is easy to see that, in the majority of cases, this is what will happen, for the majority of mayors in the little country communes have not the slightest idea of drawing up sanitary regulations. If the mayor issues his regulations and the prefect does not pass them the latter official can modify them after having given notice to the departmental hygienic council. This amounts to saying that the Government has tried to avoid the responsibility of measures which might make it unpopular among country populations and has striven to throw all the responsibility upon the mayors. Nevertheless, the mayor, in his quality as chief of the municipal police, will have to see that the regulations published are carried out, whether they come from himself or from the prefect. It is certain, however, that no mayor will have any authority to impose upon his constituents hygienic measures which will annoy them in any way, such as the destruction of insanitary premises, compulsory disinfection, or a rate for "*canalisation*" for a supply of drinkable water. The law has provided for the case of a mayor being obviously incapable, whether from ignorance or from ill-will; and within three years from a definite statement to this effect by the departmental hygienic council, the prefect will be able *ex officio* to draw up sanitary measures such as he considers will be useful—that is to say, he will be able to act on his own responsibility or else do nothing at all if the deputy representing the *arrondissement* should belong to the Government majority and should not wish to annoy his constituents. The prefect, however, cannot enforce these measures without having first referred the question to the Minister of the Interior who will, in his turn, submit it to the Consultative Hygienic Committee of France which will proceed to order a committee of inquiry. With the consent of these two committees the prefect will be able to put the commune under the obligation of carrying out the necessary works. If within three months these works are not carried out a decree of the President of the Republic in Council will authorise the prefect to have the works carried out at the expense of the commune; but, in order to compel the commune to enter the expenses for these works in the communal budget there must be another special decree passed on the matter by the Chamber of Deputies and by the Senate. It is easy to see that this complicated procedure will very rarely be put in action, especially in communes the deputies of which belong to the Government majority. The communes represented by members of the minority will thus be the only ones likely to see the sanitary regulations rigorously applied to themselves, according to the principle which, as a matter of fact, dominates the whole of French politics—viz., that the application of the law is simply a form of political oppression. It is obvious that where the law is strictly carried out there will be a violation of the rights of private property. One peculiarity of this new law is that it provides for *bureaux d'hygiène* to assist the mayors; but only in communes of 20,000 inhabitants and over, although communes of 2000 inhabitants which possess a bathing establishment are also provided with such *bureaux.* Sanitary measures relating to houses are not applicable except in communes of 20,000 inhabitants and over. This distinction is foolish, for there are many localities of less than 20,000 inhabitants where the population is wholly industrial in which the application of the rules as to the populations of the large towns would be equally indispensable. The regulations concerning vaccination or revaccination will probably be properly carried out, for public opinion has for some time been prepared for such a measure. "*Canalisation*" for drinking-water and for the construction of sewers will probably be more difficult to carry out properly. The Academy of Medicine within the next six months will publish a list of notifiable infectious diseases which every medical man will be bound to notify. This obligatory notification, which has already been laid down by the law of 1892, concerning the practice of medicine has not, up to the present, been strictly observed, and it certainly will be none the more so when medical men see that the result of their notification will be compulsory disinfection. Compulsory disinfection will be pretty easy in the large towns, but in the little towns and in the country where the departmental service is charged with the duty of seeing the law carried out it is probable that the measures will meet with violent resistance due to prejudices which will take a long time to overthrow. In this matter, as in so many points, the question of education comes in

### *Chloroform Anæsthesia in Patients Affected with Morbus Cordis.*

A discussion was commenced on Feb. 11th at the Academy of Medicine on the question of administering chloroform to patients with morbus cordis. M. Huchard, who opened the discussion, was of opinion that chloroform was the safest anæsthetic in cases of morbus cordis. Anæsthesia ought to be brought about gradually, but it should be profound before the operation began. The anæsthetist should be skilled and it was most important that he should give his whole attention to his duties. M. Berger supported M. Huchard. M. Brouardel, who spoke late in the discussion, related the results of 25 post-mortem examinations made on the bodies

### *Surgeon-General of the Navy.*

Captain Pressley M. Rixey, medical director of the United States navy, formerly attendant physician of the late President McKinley, has been nominated as Surgeon-General of the navy by President Roosevelt, in ratification of the promise of his lamented predecessor. This promotion gives Dr. Rixey the rank of rear-admiral; he succeeds Rear-Admiral William K. Van Reypen, who is placed on the retired list with the rank and retired pay of a senior rear-admiral. Dr. Van Reypen has been in the service over 40 years.

### *The Health of Havana.*

Major Gorgas, chief sanitary officer of Havana, reports on the health of Havana as follows. The entire health of the city for the year just ended over the preceding years is wonderful. There has been a very large decrease in the number of deaths in almost all of the different diseases. This is especially true of yellow fever; there have been few cases in comparison with the record last year and the last three months of the present year were absolutely free from the disease. The cause of the decrease in yellow fever is undoubtedly due to the work on the theory that the mosquito is the transmitter of the disease. During the month of December there has been no yellow fever or small-pox.

### *The Prosecution of a Health Officer for the Examination of Prostitutes.*

The compulsory examination of prostitutes by officials has always been extremely unpopular in the United States. It appears, however, that the health officer of Cincinnati, Ohio, has been enforcing examinations as a public health measure and the result has been a suit brought against him by a tax-payer. The petition of the plaintiff stated that the defendants "have adopted and are enforcing a regulation requiring all known prostitutes in said city to submit to a personal examination once every week by the district physicians to determine whether they are affected with any venereal disease, and if found free therefrom each prostitute receives a certificate containing her personal description and the recital of the fact that she is free from disease, which certificate can only be obtained from the health officer and must be conspicuously displayed in the room of such prostitute; that these certificates are made out in triplicate, one for exhibition by the person examined, one for the health department, and one for the chief of police; that if any prostitute is found to be affected with venereal or other infectious disease she is not permitted to remain an inmate of such house of prostitution or assignation, but is sent to the city hospital or branch hospital of the city; and, finally, that said district physicians charge each prostitute the sum of 50 cents for each examination and certificate." The plaintiff prayed for a restraining order on the ground that such examinations and charges for the same were an abuse of the corporate power of the city of Cincinnati. In reply, the defence stated that it was known to the health authorities that in certain houses and in specified localities contagious and infectious diseases prevailed more than in other parts of the city, and that the public health of the city required periodical visits and careful inspections of such places, as well as the examination of those suspected of disease; these measures tended to prevent and to restrict disease. The suit was dismissed.

Feb. 18th.

## Obituary.

### SAMUEL ALEXANDER KENNY STRAHAN, M.D. R.U.I.

THE receipt of the news that Dr. S. A. K. Strahan had died in London on Feb. 21st caused widespread regret in Belfast. After studying at Queen's College, Belfast, where he had a most brilliant career, Dr. Strahan graduated M.D. at the Royal University of Ireland in 1879. Coming afterwards to England he devoted his attention to the special study of mental diseases, and for many years he was the senior medical officer of Berrywood Asylum. While there he contributed largely to the *Journal of Mental Science*, the
subseq
ter. About th years ago, his health fa
he resigned his post at Berrywood and took a voyage
the world to try to improve the condition of his heart.
spring he went to Africa and visited some of the mil
hospitals where, unfortunately, he developed malarial
and was obliged to come home and to reside in Brigh
There his health improved and he was just about to arra
for a voyage to Australia when he became suddenly ill
died in London on Feb. 21st. Dr. Strahan was a man
great ability and gifts and was deservedly popular, and
unexpected death is very much regretted. He came o
clever family. One of his brothers, the late Professor of L
at Queen's College, Belfast, is Mr. James Strahan, LL.
who practises as a barrister in London; another brother is
leading solicitor in Belfast; and another brother, who was
medical practice in Belfast, was the late Dr. John Straha
who wrote several admirable medical works. Dr. S. A. K
Strahan was buried in Belfast on Feb. 26th.

### JOHN HENRY ECCLES, M.R.C.S. ENG., L.S.A.

WE regret to have to record the death of Mr. J. H. Ecc
of Plymouth at the ripe age of 87 years. After passi
through his curriculum at St. Bartholomew's Hospi
he qualified in the year 1839 and subsequently settl
in Plymouth. He there continued in active pursuit of h
profession for over 40 years. Always a man of thoroug
earnestness of purpose, it was not long before he receive
appointments of a public character, and at the time o
his decease he was consulting surgeon to the Plymouth Royal Eye Infirmary. He had also held numerous and important offices in connexion with the town and port, particularly that of medical inspector of emigrants. His cheery nature and great kindliness of heart made him a friend of many and won the esteem of all. He was an intense lover of nature and was never tired of showing to relatives and friends the natural beauties of his county and especially the magnificent view of the Sound from the historical Hoe. He was twice married and leaves a widow and many descendants to feel their loss. Three of his sons by his first wife followed in his footsteps as medical men, one of whom, Dr. Symons Eccles, predeceased him. Four of his grandsons are also members of the same profession.

### JOHN JAMES TWEED, F.R.C.S. ENG., L.S.A.

MR. TWEED, whose death occurred at his residence in Upper Brook-street, Grosvenor-square, London, W., on Feb. 22nd, was the son of a well-known surgeon who practised at Bishop Stortford, in Essex, where Mr. Tweed was born in 1819. Part of his school education was received at University College, London, and he afterwards prosecuted his medical and surgical studies at University College Hospital, of which latter institution he was a life governor. He became a Member of the Royal College of Surgeons of England in 1842, and was elected a Fellow in 1864, thus he was actively engaged in his profession for the unusually long period of 60 years. Mr. Tweed was the oldest inhabitant of Upper Brook-street and was one of the most hard-working and deservedly respected of the members of his profession. He was a Fellow of the Obstetrical Society of London and had had a very large obstetric practice, to which he devoted the best years of his life. He was remarkably abstemious and temperate in all things, never brilliant, but patient and enduring. His old-fashioned courtliness of manner and his attention to all those by whom he was consulted won for him the affection of a very large number of patients ar
friends.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—Th
deaths of the following eminent foreign medical men ar
announced:—Dr. Eugenio Fazio, *privat-docent* of Hygiene i
the University of Naples.—Dr. Chedevergne, Professor of Clinical Medicine at Poitiers.—Dr. Arthur Geissler, Director of the Statistical Department of the Kingdom of Saxony.—Professor Coshevnikoff, Director of the Moscow Clinic for Mental and Nervous Diseases.—Dr. Gustav Siegmund, one of the best known practitioners of Berlin, at the age of 81 year
In his earlier years he contributed numerous papers to the medical journals on medical chemistry and experimental pathology.—Dr. Alfonso Masi, lecturer on Operative Medicine in the University of Buenos Ayres.

surgery in the Constantinople Medical School and is also brother in law of the Sheikhislam, who holds the highest position in the religious system of Islam next after the Sultan This is the first time that Djemil Pasha has filled the presidential chair but he was elected one of the vice presidents of the society a few years ago, and it is hoped that he may succeed in convincing those in authority that it is in such financial straits that doubts are entertained as to the possibility of carrying it on much longer The society's position was explained to the Sultan by Dr Spirido Mavrogeny Pasha (an obituary notice of whom appeared in THE LANCET of Feb 8th 1902 p 411) and His Majesty several times asked the opinion of the society on various medical subjects, but the Government grant at present made to it is nevertheless only one fifth of that which it received from Sultan Mahmoud on its foundation in the time of the Crimean war An important paper on Epidemics of Dysentery in Tunis was submitted to the society last year by Dr Remlinger, in the course of which he stated that at the end of the disease there was very often a kind of general anasarca or œdematous swelling of different parts of the body unaccompanied by albumin in the urine This phenomenon has, however, been already observed in the chronic diarrhœa of children, and Dr Zavitzianos of Constantinople has mentioned these symptoms in articles which he has published on cholera infantum Another communication made to the society related to the destruction of rats on shipboard by means of carbonic acid but the author, a chemist in Constantinople unfortunately made his experiments, not with rats on shipboard, but with white mice in a cage on land The Austrian Lloyd Shipping Company, which naturally has an interest in the destruction of rats has informed the International Sanitary Board that on the first opportunity it will give facilities for making experiments under proper conditions—namely, in a ship which contains rats and also has cargo on board The International Sanitary Board has published a regulation requiring all vessels that enter the port of Constantinople to produce a certificate from the authorities of the port of departure declaring that there are no rats on board dead or alive In the absence of such a certificate vessels must go to Cavak at the entrance of the Bosphorus near the Black Sea where they must unload and have the rats exterminated by means of burning coal and sulphur Vessels in fact, go there now and then and, according to the official reports, the rats on board are all destroyed

### *Landing of Live Animals in Egypt Prohibited*

It has been announced from Alexandria that cattle or other animals sent from European Turkey will not be allowed to enter Egypt but will have to be slaughtered in the lazaretto It is well known that there is no prevalence of epizootic disease in European Turkey, and this step can only be explained as a protectionist device to favour Egyptian cattle breeding

### *Medical Education in Teheran*

It is reported from Teheran that the Shah of Persia has invited the medical members of the International Sanitary Board of Teheran to consider the question of improving the state of medical education in that capital, where it seems that there is a medical school of some kind either actual or nominal

Feb 24th

## NEW YORK

(FROM OUR OWN CORRESPONDENT )

### *Men in the Navy have no Right to Refuse an Operation if it is not Serious*

THE Navy Department by Acting Secretary Darling holds that an enlisted man in the Navy or Marine Corps has no right to refuse to submit to a surgical operation if it is not serious, but declines to lay down any rules for cases involving the loss of a limb or in which a man's life would be endangered He recommends the exercise of persuasion and diplomacy on the patient in serious cases but in minor cases he decides that the man who refuses to be operated upon may be court martialled and punished Incidentally, the department has overruled Rear-Admiral Louis Kempff, junior squadron commander on the Asiatic Station who refused to let surgeons operate on an unwilling patient. The decision of the department extend only to the enlisted men , no ruling has been made in the case of an officer, although a precedent was established by Rear Admiral Robley D Evans, who drew a revolver on the surgeons who came to cut off his legs after he had been severely wounded in the battle of Fort Fisher Admiral Evans retained his legs and remained in the service, though quite lame The case just decided was that of a marine private serving on the monitor *Monadnock* in Chinese waters The surgeon of that ship wanted to remove a foreign growth which unfitted the man for duty, but the marine refused He was reported to Admiral Kempff, who sustained his stand Then an appeal was taken by the Navy Department. The Bureau of Medicine and Surgery expressed the opinion that most cases of this character could be adjusted by using tact and persuasion in trying to induce the patient to submit to an operation, but held that where a minor operation was required the patient should be obliged to submit or be punished, and the Acting Secretary upholds these views

### *The Protection of Presidents*

A Bill for the protection of the President of the United States, the Vice President, and others, provides that any person who shall within the limits of the United States or any place subject to its jurisdiction wilfully kill or cause the death of the President or Vice President, or any officer in line of succession or who shall wilfully cause the death of any sovereign or chief magistrate of any foreign country, shall be punished with death An attempt to commit either of the offences mentioned is also punishable by death The Bill also provides a punishment of 20 years' imprisonment for the person or persons found guilty of instigating advising, or counselling the killing of any of the persons named , and any person who shall wilfully and knowingly aid in the escape of any person guilty of the offences mentioned shall be deemed an accomplice and punished the same as if a principal Imprisonment of five years is provided for persons convicted of uttering words, spoken or published, which threaten to kill or to advise or to instigate anyone to kill the persons named The Secretary of War is authorised and directed to select a detail from the regular army to guard and protect the person of the President, ' without unnecessary display and to make special rules and regulations as to dress arms and equipment of such guard, and to publish only such of the rules and regulations as he may deem proper

### *New Management for Bellevue and Allied Hospitals*

Bellevue and the allied hospitals, Harlem, Gouverneur, and Fordham and the Emergency Hospital, on Feb 1st passed from the control of the charities department to that of the recently appointed board of trustees, under the provisions of the revised charter This same system of trustee management is now in force in private hospitals in this and other cities and also in the city hospitals of Boston and Cincinnati The private hospitals of New York have always been thus managed but it is only in Boston and Cincinnati that the city hospitals have had the benefit of the plan In both these cities the city hospital was incorporated by Act of Legislature between 35 and 40 years ago, to be maintained as an institution by itself, independently of all other institutions charitable or otherwise In both cases the hospitals are models of their kind and will bear comparison with the best private hospitals in any of our cities In Boston the trustees are appointed by the Mayor, subject to the approval of the City Council In Cincinnati one member is appointed by the Governor two by the Superior Court of Hamilton County, and two by the Court of Common Pleas of Hamilton County In both cases these appointments are made without regard to political considerations In other large cities, such as Philadelphia Chicago St Louis, and San Francisco on the other hand, the public or city hospitals are a part of the department of public charities, and their control and management change as in New York with each change of the city administration In each case the hospitals being a part of a city department are considered to belong to the party in control and form an important share in the distribution of party patronage

### *Congressional Legislation on Typhoid Fever Notification.*

The House Committee has reported favourably on the Typhoid Fever Bill which reads as follows —

Every physician attending or called in to visit or to examine any case of typhoid fever in the district of Columbia shall at once send to the health officer of the district a certificate in ink signed by him stating the name of the disease and the name age sex and colour of the person suffering therefrom and setting forth the street and number, or other means sufficiently designating the house room or other place in which the person can be found, together with [illegible]

THE offices of the London and Counties Medical Protection Society, Limited, have been removed from 12, New-court, Lincoln's Inn, to more commodious premises at 31, Craven-street, Charing-cross, W.C.

PRESENTATION TO A MEDICAL PRACTITIONER.—Mr. C J. Denny, M.R C S. Eng, L R.C.P Irel, on retiring from practice in Blackwater, has been presented (by his own request informally) with a cheque for £121 10*s.* subscribed by many patients and friends.

"THE CONSCIENTIOUS OBJECTOR."—At St. Columb (Cornwall) petty sessions on Feb 25th a man applied for a certificate of exemption from vaccination for his child on the grounds that he had a conscientious objection to the operation Five of the magistrates on the bench refused to sign the certificate; two, however, did so, holding that under the law they could not refuse, but they maintained that vaccination should be made compulsory.

HEALTH OF BATH RURAL DISTRICT.—Mr. C. Harper, the medical officer of health, in his annual report of the Bath Rural District, states that the population of the district is 27,764 and the area of the district 27,266 acres. During 1901 there were 327 deaths registered, corresponding to a death rate of 11 7 per 1000, as against 11·8 in 1900; 673 births were registered, equal to a birth-rate of 24·2 per 1000, compared with 24 3 in the previous year.

VACCINATION RETURNS.—The vaccination returns issued by the Barnstaple Board of Guardians for the first six months of 1901 state that in the Barnstaple district 207 births were registered, 163 successful vaccinations were performed, and 15 certificates of conscientious objection were granted, in the Ilfracombe district 188 births were registered, 141 successful vaccinations were performed, and 15 certificates of conscientious objection were granted; and in the Coombe Martin district 76 births were registered, 64 successful vaccinations were performed, and four certificates of conscientious objection were granted.

THE LATE DR T. R. LOMBE.—Dr. Thomas Robert Lombe died at his residence, Waldon Hill, Bemerton, Torquay, on Feb 23rd, in his 82nd year. Dr. Lombe received his medical education at St. Bartholomew's Hospital, taking the qualifications of M R C S Eng. and L.S A in 1843 and 1844 respectively He graduated as M D. of Aberdeen University in 1856 Dr Lombe had been for several years in practice at Torquay and was physician to the Erith House Institution for Invalid Ladies and consulting physician to the Western Hospital for Consumption. He took considerable interest in botany and his gardens at Bemerton contained many rare plants. The funeral, which took place on Feb 27th, was largely attended.

ROYAL LONDON OPHTHALMIC HOSPITAL.—The annual general meeting of the governors of this hospital was held on Feb 26th, in the board-room of the hospital Mr. H. P. Sturgis (chairman of the committee of management) presided and moved the adoption of the annual report. In doing so he stated that during the last year the institution had nearly 1900 in-patients and 31,200 new out-patients, which involved over 100,000 attendances He thought, therefore, that there could be very little doubt that the hospital was required. They were fortunate enough to have a grant made to them in January by King Edward's Hospital Fund to enable them to open 18 more beds Those beds were opened in January and were at once filled The grant would probably enable them to take in some 400 additional in-patients during the year There were 88 beds open at present, but still patients had to wait for several weeks before they could be admitted, except in cases of urgency, and he was confident that if they could open the 50 remaining beds they would be able to fill them to-morrow Referring to the efficiency of the hospital he pointed out that the institution had had strong testimony on this point from King Edward's Hospital Fund In the first place it had received a grant of £1250, which was the argest one received by any special hospital and the largest eceived by any hospital with the exception of two As to he financial position of the institution, he pointed out that iey required £5169 to clear the hospital from its debt on Dec. 31st last and also £8000 in further annual subscriptions r donations for the expenses of the current year He did ot see how it was possible to reduce the expenses, but he as certainly of opinion that such institutions ought to be relieved of the burden of rates. The report was unanimo adopted.

VACCINATION EXPENDITURE.—At a meeting of the St. Thomas (Exeter) Board of Guardians, held on F 28th, it was stated that the vaccination expenses for months amounted to £600

DEATH FROM ELECTRIC SHOCK.—On Feb. 28th at the Alhambra Theatre, Attercliffe, Sheffield, an electrician' labourer was amusing himself by swinging on an electric light bracket when it gave way and he received a fatal shock, a current of 200 volts passing through his body. At the inquest, which was held on March 3rd, the jury returned a verdict of "Accidental death."

HUNTERIAN SOCIETY.—The following gentlemen have been elected as officers of the society for the ensuing year:—President: Dr. A L Galabin. Vice-Presidents: Mr. H. J. Sequeira, Mr F. R Humphreys, Dr. W. Rawes, and Dr. W. A. Dingle. Treasurer: Dr. R. Hingston Fox. Trustees: Dr. H I. Fotherby and Mr. F. M. Corner. Honorary Librarian. Dr T. H. Arnold Chaplin. Orator: Mr. T H Openshaw. Secretaries: Mr. J. H. Targett and Dr. T Glover Lyon. Editorial Secretary: Dr. W. Rawes. Council Sir Hugh Beevor, Bart, M.D., Mr. J. S. E Cotman, Dr. A T. Davies, Dr. Fortesque Fox, Mr. A. W. Galloway, Dr. J Dundas Grant, Dr. E. W. Goodall, Dr. H V. Hickman, Mr J Kearney, Dr. J. W. Oliver, Dr. David Ross, and Dr J H Sequeira. Auditors: Mr. E. Gordon Brown, Mr. Hope Grant, Dr. G. Newton Pitt, and Dr. F. J. Smith.

THE ROYAL INSTITUTION.—Gold Mining in Klondyke formed the subject of the Friday evening discourse delivered in the Royal Institution on Feb. 28th by Professor Henry A Miers, who visited the district last August. An area of 20 miles square was occupied by the auriferous region, the streams in which radiated from a central mountain called the Dome Gold was obtained from gravel either in the bed of the valley or in the hill-side. In the latter situation it was reached by means of tunnels driven in horizontally In the valleys great difficulties arose from the fact that the gravel was covered by 10 or 15 feet of bog or peat, which was permanently frozen hard, and had to be thawed either by dropping hot stones into a hole, or by wood fires, or by steam heat. There was no crushing of gold-ore in Klondyke. Landscapes on view in the library of the institution contained references to extensive deposits of vanadium ores.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN.—A general court of the governors of this hospital was held on March 3rd at the Mansion House, when the Lord Mayor presided In moving the re-election of officers the Lord Mayor remarked that considerable extension of the site in the Waterloo-bridge-road had been rendered necessary by the increasing work of the hospital and additional land had been acquired in a great measure through the kindness and consideration of the Duchy of Cornwall and the influence and personal interest of the King. Last year the in-patients numbered 488, the out-patients 8044, and the operations 41 There were only 68 deaths during the year. The averag cost of each in-patient was £7 7*s.* 4*d.*, that of each be occupied £78, and that of each out-patient 2*s* 2*d.* £10,00 were required before the first half of the building operations could be carried out The motion having been adopted Mr. J T Richardson, the treasurer, said that a sum of £25,000 were required to make the building and extension scheme complete, and towards that amount about £9000 had been subscribed

# Parliamentary Intelligence.

## NOTES ON CURRENT TOPICS.

### *Royal Commission on Arsenical Poisoning.*

IN the Civil Service Estimates for the year ending March 31st, 1903, financial provision is made for another year's work on the part of the Royal Commission on Arsenical Poisoning. The provision is as follows—viz, salary of the secretary, £300; clerical assistance, £104, messenger, £27, typewriting, £50, travelling expenses of commissioners, staff, witnesses, &c, £300; shorthand writing, £200; postage, telegrams, &c., £100, and analysis of food samples and experiments, £600.

# Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL OLLEGES OF PHYSICIANS AND SURGEONS.—The following entlemen passed the First Examination of the Board in the bjects indicated at the January quarterly meeting of the xaminers:—

*Chemistry.*—Leonard Ernest Acomb, Middlesex Hospital; Gilbert Kennedy Awbery, King's College Hospital; Albert John Knowles Brayton, Owens College, Manchester, and University College, Liverpool; William Augustine Joseph Mingaye Briggs, Owens College, Manchester, and St. Thomas's Hospital; William Winsland Douglas Chilcott, Charing-cross Hospital; Robert Malcolm Coalbank, St Bartholomew's Hospital; George William Collinson, Yorkshire College, Leeds, and Halifax Technical School; George Herbert Curtis, Birkbeck Institute; Gurth Eager, King's College Hospital; Frans Gustaf Edholm, Birkbeck Institute; Lionel Gipps Hopkins Furber, Cambridge University, St. Bartholomew's Hospital, and Hartley College; William James Gifford Gayton, London Hospital, Howard Græme Gibson, Felsted School; Vivian Bartley Green-Armytage, University College, Bristol; Gerald Holroyde, Yorkshire College, Leeds; Thomas Jones Jenkins, University College, Cardiff; Valentine Goode Johnson, St. Mary's Hospital; Maurice Aloysius Kenny, Yorkshire College, Leeds; William Kenneth Kershaw, Owens College, Manchester, William Wilfred King, University College, Bristol, Albert Lawrence Loughborough, St Thomas's Hospital, Joseph Leopold Meynell, London Hospital; Alfred James Mundy, University College, Bristol; Edward Morgan, Frederick Morres, Charles Melton Ockwell, and Hubert Arnold Pallant, Guy's Hospital, David Phillips, St. Mary's Hospital; Frederic Eustace Leigh Phillips, London Hospital; Sri Krishna Raina, Allahabad University, Charing-cross and King's College Hospitals, and Birkbeck Institute, Harold Trenchard Rossiter, University College, Bristol and St. Thomas's Hospital; Harold Kenneth Salisbury, University College, Bristol; George Alan Simmons, St Thomas's Hospital, Frederick Smith, Firth College, Sheffield, Leslie Ernest Maule Smith, Charing-cross Hospital; Frank Harold Stephens St Mary's Hospital; Edmund James Fairfield Thomas, University College Bristol; Geoffrey Wacher, Guy's Hospital, John Grandisson Watkins, St. Bartholomew's Hospital, John Wells Whiteman, University College, Bristol; nd Albert Blagbrough Wolfenden, Yorkshire College, Leeds, and Halifax Municipal Technical School.

*Practical Pharmacy.*—Gilbert Kennedy Awbery, King's College Hospital, Frederick Barnes, Guy's Hospital; Hugh Frank Bodvel-Roberts, Cambridge University and St. Bartholomew's Hospital, Richard Burges, London Hospital; Arthur Hubert Davis, St George's Hospital, Cecil James Stewart Dismore, Guy's Hospital; Kenneth Alan Crawford Doig, Westminster Hospital, Charles Roland Babington Eyre, St. Thomas's Hospital, George Ernest Oswald Fenwick, Otago University and University College Hospital, Charles Aubrey Godson, St George's Hospital, Ernest Harrison Griffin, Cambridge University and Guy's Hospital, Robert George Ernest Grote, Charing-cross Hospital, Charles John Hope Gunning, St. George's Hospital; George Read Hannon, King's College Hospital, Henry Francis Hatfield, Guy's and St. Bartholomew's Hospital, George Wykeham Heron, Westminster Hospital, Archibald Edward Hills and Edward Torriano Holland, St Thomas's Hospital, Basil Hood Charing-cross Hospital, Philip Reginald Humphry and Mark Oliver Hunter St George's Hospital, Edgar Joseph and John Alfred Laughton, Charing-cross Hospital, Richard Ernest Howell Leach and George Mackenzie Lester Lester Oxford University and St. Thomas's Hospital, George Murray Levick, St. Bartholomew's and University College Hospitals, Hamish Nicol, Westminster Hospital, Bryan Pick, St George's Hospital Carl Henry Reinhold and Jules Frederick Rey, Guy's Hospital, Ernest Sydney Routly, St. Mary's Hospital, Malcolm Winfrid Shutte, St. George's Hospital, Charles Speers, St. Mary's Hospital, Frederick Morton Vincent Smith and Francis John Turner, Guy's Hospital; George Sydney Welham, Charing-cross Hospital, Frank Pilrod Whitehead, Ambrose Cyril Wilson, and Frank Herbert Wood St. Bartholomew's Hospital, and George Ernest Wood, St Mary's Hospital.

*Elementary Biology.*—Robert Nicholas William Biddulph, University College, Bristol; Albert John Knowles Brayton, Owens College, Manchester, and University College, Liverpool, Archibald Cordon, Mason College, Birmingham, Henry Drysdale Dakin, Yorkshire College, Leeds, Llewellyn Etter Davies, University College Liverpool, Herbert Alfred De Pinna, Middlesex Hospital; Francis Carminow Doble and Gurth Eager, King's College Hospital; Howard Græme Gibson Felsted School; William Robert Greening, Guy's Hospital; Cyril Verity Griffiths, King's College Hospital, John Keith Anderson Helm and Herbert John Hills, Guy's Hospital, Hugh George Hobson Middlesex Hospital; Gerald Holroyde, Yorkshire College Leeds, Charles Metheson Kennedy and John Iles Francis Knight, London Hospital, Thomas Gordon Lewis, King's College Hospital; Albert Lawrence Loughborough, St Thomas's Hospital; Percy John Lush, London Hospital, Oscar Le Fevre Milburn, Birkbeck Institute, Malcolmson Knox Nelson University College, Belfast, John Harry Mayston, Edward Morgan Gerald Hamilton Morris, George Rumsey Phillips, Edward Ebenezer Rendle, and Arthur Tunna Rivers, Guy's Hospital Cecil Frank Rumsey, Charing-cross Hospital, Gilbert Bailey Scott St Bartholomew's Hospital; Gerald Noel Boyd Sebastian St George's Hospital; Sidney Slade, Middlesex Hospital, Frederick Smith, Firth College, Sheffield, Herbert McLean Staley, Owens College, Manchester; Richard Henry Easington Stevens, University College Hospital, Arthur Westray Swinburne, Yorkshire College Leeds; Arthur Christopher Watkin, University College Hospital; Reginald Willan, Guy's Hospital, and John Dill Williams, University College, Belfast.

The following gentlemen passed the Second Examination of the Board at the quarterly meeting of the examiners:—

*Anatomy and Physiology.*—Wilfrid Godwin Attenborough, King's College Hospital; José Maria Barrionuevo and Arthur Morris Benett, Guy's Hospital; Charles Murchison Bernays, St Thomas's Hospital; John Braybrooke Binns, St. Bartholomew's Hospital; William Bowater, Mason College, Birmingham; Herbert Alfred Bodkin and Leonard Howard Bowkett, London Hospital; Robert James Brogden, University College, Cardiff; George Hammond Cheyney, Guy's Hospital, George Percival Charles Claridge and Patrick Duncan MacIver Campbell, St. Mary's Hospital; Thomas Alexander Clarke, King's College Hospital; Owen Cunningham Preston Cooke, London Hospital; Hugh Palliser Costobadie, Guy's Hospital, James Alexander Cowie, B.A., B Sc., New Zealand, Otago, and Glasgow Universities; John Rees Davies, University College, Cardiff, Alban Dixon, St. Mary's Hospital; Edmund Michael Dolan, Yorkshire College, Leeds; Percy Albert Stanley Dyson, Guy's Hospital; Stephen Field, St. Mary's Hospital; Eustace Stanley Hayes Gill, University College, Liverpool; Henry Gray, St. Bartholomew's Hospital; Arthur Donald Griffith, King's College Hospital, Edwin Claude Hayes, St. Bartholomew's Hospital; Samuel Clifford Hayman, University College, Bristol; Frederick Charles Hepburn, Cambridge University; Robert Rutson James, St George's Hospital; Harold Ernest Kitchen, B A, Cambridge and Owens College, Manchester; Arnold Leeming, Guy's Hospital; Archibald Smith Littlejohn, B A., Cambridge and Guy's Hospital, Sidney Hirst Lockwood, St. Mary's Hospital; Conrad Loddiges, St Bartholomew's Hospital; Frederick James Macphail, University College, Liverpool; Edgar William Matthews, King's College Hospital, Frederick William Morgan, University College, Bristol, Ernest Blommart Miles, Hugh Francis Fountain Mortimer, William George O Malley, London Hospital; Arthur O Neill, St Bartholomew's Hospital; Hugh Falkenberg Powell, University College, Hospital; William Hugh Prendergast Parker, University College, Cardiff; Harold Edgar Priestly, St. George's Hospital, Leslie Rawes and Harold William Read, St. Thomas's Hospital, Frederick John Rees, Calcutta Medical College, Walter Reeve, Guy's Hospital; Frank Melville Pitcairn Rice, St Bartholomew's Hospital; Philip Meredith Roberts, University College Hospital; Edwin Walter Routley, Guy's Hospital, Albert Salmon and Ernest Littleton Sandiland, London Hospital, Gerald Maberley Taylor and William Reginald Margetts Turtle, London Hospital, Theophilus Ralph Waltenburg, M A, Oxford, and Owens College, Manchester, Frederick Weber, St. Bartholomew's Hospital, Leonard White, Westminster Hospital; Trevor Hamilton Watkins and William John Wilkinson, St Thomas's Hospital, Ernest Douglas Wolff, King's College Hospital, and Walter John Weston, St. George's Hospital.

*Anatomy only.*—Urban Morris Asplen, King's College Hospital; and Wilfrid Robert Pagen, London Hospital.

*Physiology only* —John William Wynne Hogan, Madras Medical College, and Charles Frederick Stileman, St. George's Hospital.

UNIVERSITY OF CAMBRIDGE.—The following degrees were conferred of Feb. 27th:—

*Doctor of Medicine* —G H. Goldsmith, Gonville and Caius.

*Bachelor of Medicine and Bachelor of Surgery.*—J. S. Steele Perkins, St John's

*Bachelor of Medicine* —J L Timmins Emmanuel

*Bachelor of Surgery* —J E. W. Cole, Corpus Christi.

CAPTAIN E T. INKSON, V.C., R.A.M.C., was entertained at a complimentary dinner given in his honour by the Union Society of University College and Hospital on Feb. 21st, in recognition of his distinguished services in the South African war. The dinner took place at the Café Royal, Regent-street, London, W., and Dr. Vivian Poore occupied the chair. There were over 150 guests present and the proceedings were marked with the utmost enthusiasm Among those present were Mr. Christopher Heath, Dr J. Rose Bradford, Dr. Herbert R. Spencer, Dr Dudley W. Buxton, Dr Vaughan Harley, Mr. Victor Horsley, Lieutenant-Colonel W Babtie, V.C., C.M.G, R.A M C., Sir J. R. A. Clark, Bart., R.A.M.C., Mr. A. E. J. Barker, and Mr. Raymond Johnson. After the usual loyal toasts had been duly honoured Mr. Christopher Heath proposed the toast of "The Services," which was responded to by Lieutenant-Colonel Babtie. The chairman then proposed the health of the guest of the evening, Captain Inkson, V C., and read the following extract from the official statement regarding the act for which that officer received his decoration: "On the 24th of February, 1900, Lieutenant Inkson, R.A.M.C, carried Sec. Lieutenant Devenish (who was severely wounded and unable to walk) for three or four hundred yards under a very heavy fire to a place of safety The ground over which Lieutenant Inkson had to move was much exposed, there being no cover available." The chairman also reminded his audience that General Buller in his official despatches had referred to the habitual gallantry displayed by Captain Inkson. In responding to the toast Captain Inkson thanked the Union Society of University College and Hospital for the honour they had paid to him and with some difficulty was persuaded to give a short account of the active service which he had seen in South Africa.

it does not seem to me necessary to take any general steps with regard to it. I may point out, however, that in any such case it is open to the guardians to terminate their contract with the public vaccinator by giving him 28 days' notice."

*Death after Vaccination.*

Mr. CORRIE GRANT asked the President of the Local Government Board if his attention had been called to an inquest before Dr. G. Danford Thomas on Jan. 31st into the death of Mr. Essex after vaccination; was he aware that Mr. Essex was vaccinated on Jan. 15th, and died on the 26th from blood-poisoning; whether the lymph from which he was vaccinated was supplied by the Local Government Board, and whether five other gentlemen vaccinated at the same time from the same lymph were seriously ill; whether the vaccination was from calf lymph No. 1538; and whether anything was known of the history of this lymph.—Mr. LONG replied: The answer as regards the first three points is in the affirmative. The jury at the inquest found that Mr. Essex died from "coma and septic meningitis, the septic condition occurring after vaccination, from some external infection, from natural causes." They added that they were "satisfied that the vaccination was duly and properly performed." By my direction one of the medical inspectors of the Local Government Board attended the inquest and subsequently made further inquiry into the matter, and he concurred in the view taken by the jury. I am not aware that any of the five other persons referred to were seriously ill as suggested. In only two of the cases does there appear to have been any trouble and in both of these the inspector ascertained that the arm was healing satisfactorily. The lymph was from calf No. 1538 and was used in the vaccination of a large number of persons besides those mentioned and no ill-effects have been reported.

*London Water Bill.*

This Bill was read a second time and referred to a Joint Committee of the two Houses of Parliament, who will have power to hear counsel and witnesses on behalf of the various interests concerned.

TUESDAY, MARCH 4TH.

*The Influenza Epidemic.*

Mr. HENRY HOBHOUSE asked the President of the Local Government Board if, in view of the spread of the influenza epidemic and the uncertainty that prevails as to its causes and conditions, he would consider the appointment of a small commission of experts to investigate and report upon the subject.—Mr. GRANT LAWSON, in the absence of Mr. LONG, replied: The causes and conditions of influenza have already been investigated by the medical staff of the Local Government Board and by experts employed for the purpose, and two lengthy reports on the subject have been issued by the department. In these circumstances it does not appear to me that any good results would follow from a further investigation of the kind suggested by my hon. friend.

Mr. RUTHERFORD asked the First Commissioner of Works if he would make arrangements whereby a sample of the atmosphere of the House during its sitting could be taken for the purpose of analysis and report thereon.—Mr. AKERS-DOUGLAS replied that he had given instructions that this should be done.

Dr. FARQUHARSON asked the right hon. gentleman whether he would take into consideration the advisability of reappointing the select committee which sat on the ventilation and drainage of the House. The committee could take expert evidence and report generally as to the sanitary condition of the House.—Mr. AKERS-DOUGLAS replied that the committee of last session recommended the appointment of a Ventilation Committee, and this recommendation had been acted upon.

*The Army Medical Service.*

Mr. BRODRICK, in introducing the Army Estimates of the year, made a statement with reference to the reform of the Army Medical Service. Last year, he said, he had the advantage of the assistance of several of the very best civil practitioners in London in drawing up a new scheme for this service. The features of that scheme were that they improved the pay and increased the number of officers. They proposed to give zealous officers the opportunity of leave for study and to provide the means for that, if possible, within the metropolis. They carried out by examinations the principle of promotion by merit, which was all-important in the medical service. They hoped for an interchange with the civil schools by bringing these officers into close touch with the civil schools. They proposed that the continual change of quartering of medical officers should be checked and that as much as possible they should be kept in the same quarters for two years, and they proposed at the beginning of a man's service to attach the man to the battalion and thus to give him a home. He knew that a notice of motion had been given on this subject, but he believed that he should be able to satisfy the House that nothing that the wide experience of civil practitioners could bring to bear on the new system had been lost sight of in drawing it up. With the reform of the medical service was connected the reform of the nursing service, a warrant for which would be issued in a few days. They had got the advantage of the actual and practical assistance as president of the new nursing service of Her Majesty the Queen. He attached great importance to that assistance, not merely from the fact of the exalted position of Her Majesty, but because Her Majesty had a practical knowledge and personal acquaintance with nursing which were enjoyed by few women in the kingdom, and he believed that in selecting nurses for the army service the board which they were about to form would be as efficient a one as could be obtained.

## Appointments.

*Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to* THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

ADAMS, JOSEPH DIXON, M.D. St. And., M.R.C.S., L.S.A., has been re-appointed Medical Officer of Health by the Yeovil Rural District Council.

AUSTEN, HAROLD, M.D., B.S. Lond., M.R.C.S., L.D.S. Eng., has been appointed Lecturer on Materia Medica to the Royal Dental Hospital of London.

CALEY, J. W., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medica Officer of Health for the Riccall Sub-district of Selby, Yorkshire.

DRINKWATER, JAMES PRATCHETT, M.R.C.S., L.S.A., has been appointed Medical Officer of Health to the Llangollen District Council.

DRYLAND, J. W., M.R.C.S., has been re-appointed Medical Officer of Health to the Kettering Urban District Council.

FULCHER, G. F., M.B., M.S. Edin., has been appointed Medical Officer of Health to the Chingford Urban District Council.

GRIERSON, J. T., M.B., B.Ch. Vict., has been appointed to the City Hospital, Park-hill, Liverpool.

HALL, ALFRED, M.R.C.S., has been re-appointed Medical Officer of Health to the Mayfield Rural District Council, Derbyshire.

HUMPHRY, R., M.R.C.S., L.R.C.P. Edin., has been appointed Medical Officer of Health for the City of Chichester.

MILLER, J., M.R.C.S., L.R.C.P. Lond., has been appointed to the City Hospital, Fazakerley, Liverpool.

MILLER, J. W., M.B., Ch.B. Vict., D.P.H. Cantab., has been appointed Assistant Medical Officer to the City of Liverpool Hospitals for Infectious Diseases.

NESBITT, C., M.D. R.U.I., has been appointed Certifying Surgeon under the Factory Acts for the Randalstown District of the County of Antrim.

SOPER, G. MORGAN, M.R.C.S., L.R.C.P., has been appointed Assistant House Surgeon to the Royal Albert Hospital and Eye Infirmary, Devonport.

SWORDER, E. G., M.B., B.C. Cantab., has been appointed Honorary Medical Officer to the St. Andrews Convalescent Home, Folkestone, vice Cecil Latter, deceased.

SYMONS, ROBERT FOX, M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer of Health for Pretoria and District and Assistant Medical Officer of Health for the Transvaal.

## Vacancies.

*For further information regarding each vacancy reference should be made to the advertisement (see Index).*

BELGRAVE HOSPITAL FOR CHILDREN, 77 and 79, Gloucester-street, S.W. —House Surgeon for six months. Board and lodging provided and a gratuity of £5.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeons, unmarried. Salary £150 per annum (with allowance of £30 for cab hire), furnished rooms, fire, lights, and attendance.

BIRMINGHAM TAME AND REA DISTRICT DRAINAGE BOARD.—Bacteriologist. Salary £160 per annum.

BRADFORD POOR-LAW UNION.—First Resident Assistant Medical Officer, unmarried. Salary £125, with rations, apartments, and washing

BRADFORD ROYAL INFIRMARY.—Dispensary Surgeon, unmarr Salary £100 per annum, with board and residence.

BRIDGWATER INFIRMARY.—House Surgeon. Salary £80 a year, w board and residence.

BRIGHTON, HOVE, AND SUSSEX THROAT AND EAR HOSPITAL, Churc street, Brighton.—House Surgeon for six months, renewabl Salary at rate of £75 per annum.

BRISTOL GENERAL HOSPITAL.—Assistant House Physician. Salar £70 per annum, with board and residence. Also Assistant Hous Surgeon.

CARDIFF INFIRMARY.—Assistant House Surgeon, also Assistant House Physician, both for six months, renewable. Salaries at rate of £75 per annum, with board, washing, and apartments.

CORNWALL COUNTY ASYLUM, Bodmin.—Junior Assistant Medical Officer. Salary £120, rising to £150, with board, apartments, &c.

DORSET COUNTY HOSPITAL, Dorchester.—House Surgeon. Salary £100, with board and residence.

DUNDEE ROYAL INFIRMARY.—Two Resident Medical Assistants for six months. Salary at rate of £40 per annum, with board and washing.

EAST SUSSEX COUNTY ASYLUM, Hayward's Heath.—Second Assistant Medical Officer and Pathologist, unmarried. Salary £175 per annum, with board, lodging, washing, and attendance.

ESSEX AND COLCHESTER GENERAL HOSPITAL.—House Surgeon. Salar £100 a year, with board, washing, and residence.

FISHERTON ASYLUM.—Assistant Medical Officer, unmarried. Salary £150 per annum, with board, lodging, and washing.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway, N.—Junior House Physician for six months. Salary at rate of £30 per annum, with board, lodging, and washing.

GREY'S HOSPITAL, Pietermaritzburg, Natal, South Africa.—Resident Medical Superintendent. Salary, £350 first year, £400 second year, with board, lodging, and washing.

JESSOP HOSPITAL FOR WOMEN, Sheffield.—House Surgeon (unmarried). Salary £75 per annum, with board, lodging, &c.

KENT COUNTY OPHTHALMIC HOSPITAL, Maidstone.—House Surgeon. Salary £100, with board and residence.

LANCASHIRE COUNTY ASYLUM, Winwick, Warrington.—Assistant Medical Officer, unmarried. Salary £150 per annum, rising to £200, with apartments, board, attendance, and washing.

LEEDS UNION WORKHOUSE SCHOOLS AND INFIRMARY, Beckett-stre Leeds.—Assistant Medical Officer, unmarried. Salary £130 p annum, rising to £150, with board, washing, apartments, a attendance.

LEICESTER INFIRMARY.—Honorary Assistant Physician.

LIVERPOOL WORKHOUSE, Brownlow-hill.—Assistant Medical Officer, unmarried. Salary £80 per annum, with rations, and fees £20.

LONDON LOCK HOSPITAL, Harrow-road, W.—Anæsthetist.

MANCHESTER CLINICAL HOSPITAL FOR WOMEN AND CHILDREN, Park-place, Cheetham Hill-road.—House Surgeon. Salary £80 per annum, with apartments and board.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—House Physician and House Surgeon, with salary at rate of £40 a year each; Assistant House Physician and Assistant House Surgeon, with salary at rate of £20 a year each. All tenable for six months.

METROPOLITAN EAR, NOSE, AND THROAT HOSPITAL, Grafton-street, Tottenham-court-road, W.—Clinical Assistants.

### *Royal Commission on Tuberculosis.*

The financial provision for this commission for the year ending March 31st, 1903, is as follows—viz , secretary, £400 ; clerical assistance, £104 , messenger, £36 , travelling expenses, £500 , shorthand writing, £150 ; incidental expenses, £150 ; and scientific investigations, £12,000.

### *Laundries and Factory Legislation.*

A Bill introduced by the Earl of Lytton, bringing laundries within the scope of factory legislation has been read a second time in the House of Lords. There is little chance, however, of its passing into law, for the Government has intimated that it is not prepared to give it facilities in the House of Commons where it is sure to meet with strenuous opposition from Members interested in religious institutions carrying on laundry business It was the opposition of these Members which caused Mr. Ritchie to abandon the laundry clause in the Factory and Workshop Bill of last session

### *Midwives Bill*

Preparations are now being made for the consideration of the Midwives Bill, by the Grand Committee on Law. At the beginning of each session of Parliament this committee is set up with a certain strength of Members, but when a Bill is referred to it the Committee of Selection nominates additional Members to take part in the discussion of that particular measure. In the case of the Midwives Bill the following 15 additional Members have been so nominated—viz , Mr. Ambrose, Mr Griffith-Boscawen, Mr. John Burns, Mr. Caine, Mr. Emmott, Sir Michael Foster, Sir Walter Foster, Mr. Heywood Johnstone, Lord Cecil Manners, Mr. T. P. O Connor, Colonel Sadler, Mr Schwann, Sir Barrington Simeon, Sir John Tuke, and Mr. Eugene Wason. In anticipation of the proceedings of the Grand Committee Sir John Tuke has given notice of a number of amendments One of these proposes to make it an offence for an uncertified woman habitually and for gain to attend cases of childbirth and another to subject to the approval of the General Medical Council the rules framed by the Central Midwives Board instead of having them, as the Bill proposes, "subject to the approval of the Privy Council after consultation with the General Medical Council." With regard to the licence question, Sir John Tuke proposes to insert these words—viz "No woman shall hold herself out as a practising midwife in any county or county borough without having previously obtained from the local supervising authority a licence enabling her to practise therein, which licence shall be granted on proof by the woman that her name is on the midwives roll The licence shall remain in force till the thirty first day of December following, and shall be revocable at any time by the local supervising authority in case the holder be proved to the satisfaction of the Central Midwives Board to have infringed any of the regulations framed under this Act The licence shall be issued on payment of a fee of one shilling, it shall only be available in the county for which it is issued, and it shall be renewed annually on the first day of January. The Grand Committee will meet on Tuesday, March 11th, to take up the consideration of the Bill, with Sir James Fergusson in the chair.

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## HOUSE OF COMMONS

### THURSDAY, FEB. 27TH.

### *Enforcement of the Vaccination Acts.*

Mr JACOBY asked the President of the Local Government Board whether he was aware that the goods of Gershom Squires and Jabez Hatfield of Wirksworth had been seized for the third time for recovery of the same amount of costs incurred under the Vaccination Acts, these men's goods having been seized and sold in July last, again seized to the value of £400 in December last, but not sold owing to failure on the part of the auctioneer, whether he could explain under what authority the third seizure was made, and if any action would be taken.—Mr RITCHIE replied: I am informed by the chief constable of Derbyshire that the defendants named were ordered in December, 1900, and January, 1901, respectively to pay the costs of orders under the Vaccination Acts and refused to pay The warrants were only partially enforced at the first distress owing to the action of persons in sympathy with the defendants, and on the second occasion in December the auctioneer failed to attend. The police have now taken further steps to recover the amount due I have neither the authority nor the desire to interfere with the enforcement of the law.

### *Richmond Hospital, Dublin.*

Mr PATRICK JOSEPH O BRIEN asked the Chief Secretary to the Lord Lieutenant of Ireland whether he was aware that a claim for £30 had been made on the guardians of Nenagh Union by the governors of Richmond Hospital, Dublin for the maintenance and treatment of pauper patients sent from the Nenagh workhouse to Richmond Hospital in the year 1900, although paupers from this union had been sent to Richmond Hospital for treatment of special cases for upwards of 30 years prior to 1895 without claim for payment by the hospital authorities, whether he was aware that at the said date a bill was furnished to the guardians for maintenance of pauper patients for two years, but which they repudiated on the ground that the hospital, being maintained by Imperial grant, was bound to receive patients free of charge; whether he was aware that since that time the hospital continued to receive the Board's special cases without question till about 12 months ago, when the claim in question was made for which the governors were now pressing for payment; and seeing that this hospital was bound by its charter to receive pauper patients free, would he advise them to do so.—Mr. WYNDHAM replied The authorities of this hospital are not aware that patients were maintained prior to 1895 without payment. The guardians declined to make any payment in November of last year There is no obligation attaching to the conditions upon which the Parliamentary grant is paid to the hospital that pauper patients shall be maintained gratuitously. I may point out that the expenditure incurred by the Richmond and other hospitals in respect of public grants is not covered by such grants.

### *Sophistication of Butter.*

Mr. O SHAUGHNESSY asked the President of the Board of Agriculture whether he was aware that considerable quantities of a material known as milk blended butter were now made by working milk into butter by a mechanical process whereby the amount of water in the original butter was increased from a relatively small proportion up to 20 or 25 per cent , and that quantities of foreign butter thus treated were sold monthly and what steps he would take to prevent this practice —Mr. HANBURY replied that he was aware of this practice Its legality was now before the law courts and he must await their decision before he could properly deal with the subject by an amendment of the law or otherwise As soon as he had had an opportunity of considering the evidence submitted to the Departmental Committee on Butter he would fix a standard, and he hoped that that in itself would go far to meet the difficulty which had arisen.

### *Vaccination in France and Germany*

Mr COGHILL asked the President of the Local Government Board whether his attention had been called to legislation recently passed in France and Germany with the object of making vaccination and revaccination compulsory on all the population in these two countries; and whether he had any information as to the success of such legislation in diminishing the number of cases of small pox.—Mr. GRANT LAWSON answering for Mr LONG, said: I understand that under a law made this month vaccination and revaccination will be rendered compulsory in France In Germany vaccination and revaccination have been compulsory on the population generally since 1874. Information obtained by the Royal Commission on Vaccination and referred to in their report, shows that the system has been highly beneficial in diminishing small pox

### FRIDAY FEB 28TH.

### *The Fees of Medical Witnesses.*

Mr BOWLES asked the President of the Local Government Board whether the instructions given to the auditors with respect to payment of fees by a coroner to medical witnesses under Section 22 of the Coroners Act, 1887 necessitated the disallowance of all fees to medical practitioners who acted gratuitously as medical officers at a hospital infirmary or other medical institution, and whether, if a medical officer attached himself to act gratuitously at any such institution, he was entitled to be paid the fees specified in the said Section 22 of the said statute —Mr GRANT LAWSON, replying for Mr. LONG, said: The Local Government Board has not given any instructions to district auditors on the subject referred to by my hon. friend. It rests with the auditor in any case to decide whether a particular payment is illegal and therefore one to be disallowed The Board's jurisdiction arises only on an appeal from his decision. A question of this sort was considered in 1893 by the Board and the Secretary of State The view taken was that the medical officer of an institution to which the section applied would not be entitled to the fee in question, although he received no pay for performing the duty of medical officer —Mr BOWLES Has that changed the procedure prior to 1893?—Mr. GRANT LAWSON The question had not arisen prior to 1893 That was the decision given in a case then brought before the Board and the Home Office

### *Army Medical Department*

Mr BRODRICK, in reply to a question by Sir JOHN TUKE, said that the warrant bearing on the reconstruction of the Army Medical Department would be issued before the vote for the department was taken

### *Influenza among Members*

Mr DILLON asked the Chancellor of the Exchequer, as acting leader of the House whether he had turned his attention to the necessity of doing something to disinfect the House against the influenza. The casualty list was already heavy and no Member knew the moment when he might be struck down He should have imagined that the experience of the members of the Government themselves would have been enough to turn their attention to this matter. He suggested to the Chancellor of the Exchequer the advisability of asking an informal committee of the medical men who were Members of the House to consider the matter and to report whether in their opinion anything could be done to protect themselves and their fellows from this poisonous atmosphere. Failing that he should ask permission to submit a motion that the House should adjourn for a week in order that the House might be disinfected.—Sir MICHAEL HICKS BEACH said that if any members had suffered from the influenza it was those who sat on the Treasury Bench If it were possible to find a remedy no Members would be happier than the Ministers, but he was not prepared to say that this House was the only place where they were exposed to infection. He would, however, make inquiries and see whether anything could be done

### *Lead poisoning in the Pottery Trade.*

In the course of a debate on this subject Mr. RITCHIE announced that rules have now been agreed upon. They have been submitted to Lord James of Hereford and have received his assent, and the Home Office proposes to circulate them among manufacturers with an expression of the hope that advantage will be taken of them

### MONDAY, MARCH 3RD

### *Vaccination Fees*

Mr CORRIE GRANT asked the President of the Local Government Board whether one of the public vaccinators of the Battle district, Sussex, had charged the guardians fees for the vaccination of certain persons after he had already charged fees to the persons vaccinated for his services, if so could he state in how many cases this had occurred, and what steps he had taken or proposed to take, with regard to this public vaccinator and to prevent the practice occurring elsewhere —Mr LONG replied I understand that the officer referred to in the question included in his register of persons vaccinated for the quarter ended June last the names of three persons for whose vaccination he was paid as their private medical attendant He thus contravened Section 22 of the Vaccination Act 1867 On finding this to be the case he appears himself to have drawn the attention of the guardians to the matter and returned to them the fees they had paid him for the three vaccinations. I have only received the officer's explanation within the last few days and I am still in communication with the guardians on the subject I have no reason to suppose that the practice complained of prevails, and

### NEGLIGENCE AND BAD MEAT.

A NORFOLK farmer was recently fined at the Guildhall Police-court £25 and £4 costs for being the owner of a sheep which was deposited in the Central Meat Market for the purpose of sale, being unfit for food. His case differs from ordinary cases of the wilful exposure of unsound meat in that there was nothing to show that the defendant knew, or might have known, that the sheep was diseased, and no evidence that he had seen the carcass after it was slaughtered. Indeed, the defendant gave evidence that he had not seen the carcass and was entirely ignorant of its condition, and the Alderman expressed his belief that this was the case He pointed out, however, that ignorance in such a case does not constitute a defence in point of law, and the heavy fine inflicted will show owners of dead meat that ignorance avails but little as a plea in mitigation of punishment. The duty, in short, is imposed upon the owner of meat exposed for sale as food to see that it constitutes wholesome food, and the penalty is imposed on those who do not perform that duty, whether the omission is the result of a deliberate determination to pass off good meat as bad or simply of neglect to ascertain its quality.

### THE LITERATURE OF CANCER.

*To the Editors of* THE LANCET.

SIRS,—I should be much obliged if any of your readers could give me references to any old books on cancer, especially to books containing accounts of obsolete methods of treatment.

I am, Sirs, yours faithfully,
F.R.C.S.

March 4th, 1902

### THE REV ROWLAND HILL AND VACCINATION.

THE Cardiff *Western Mail* of Feb 28th contains the following paragraph under the heading "Interesting Items of News Current 100 Years Ago"

"August 1807 —The Rev Rowland Hill, who had been preaching to very large congregations at Haverfordwest and its vicinity, has also continued his efforts to promote the vaccine inoculation with success. During this and a former visit about two years ago he has applied the protecting lancet to no less than 1500 subjects After the most diligent inquiry not one instance of failure has yet been recorded

### THE YARMOUTH BOARD OF GUARDIANS AND THEIR WORKHOUSE MEDICAL OFFICER.

THE relations of the Yarmouth Board of Guardians to their workhouse medical officer are at present peculiar The issues are rather confused, but from the report in the *Yarmouth Mercury* of Feb. 22nd of the meeting of the guardians held on Feb. 17th the matter appears to stand thus A sub committee had been appointed to consider the medical officer's contract Under this contract he received £140 per annum the board finding instruments and appliances. The sub committee recommended that the medical officer, Dr H. Collier, should in future provide his own instruments and appliances, but that his salary should be increased by £25, making it up to £165. The report of the sub-committee on being presented to the board was negatived by 11 votes to seven The chairman then moved that the altered contract be approved, but that no increase in salary be given This was agreed to, so that now apparently Dr Collier will have to provide his own instruments and appliances and still get only £140 per annum We await developments with interest.

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*Abernethian* —We are not prepared to give a legal opinion A legal decision would depend upon the terms of contract as settled by any letters between the parties, and perhaps by evidence as to custom We can only recommend that no steps should be taken before consulting a lawyer We would point out that there ought to be no disposition to exact the uttermost from the employer, he appears to have had to pay his sick assistant, his sick locum tenent, and his sound locum tenent all at the same time

*Inquirer* (1) —A Manual of School Hygiene, by Edward W Hope, M D, and Edgar A Browne, F R C S Edin, Cambridge University Press, 1901, price 3s 6d School Hygiene, by Edgar R Shaw, Professor of the Institute of Pedagogy, New York University, Macmillan and Co, London and New York, price 4s 6d Handbuch der Schulhygiene, von Dr Adolf Baginsky, published by Ferdinand Enke 1898.

*Medical* —The General Medical Council have definitely stated their objection to medical aid associations where canvassing is carried on, and have acted upon their objection If there is no canvassing the Council might see no harm in the clubs in question, yet to act as medical officer to them might not be in the interests of the public, the medical profession or the medical officer

*Inquirer* (2) —If our correspondent will send us the rules prospectus, &c., of the association we will advise him in the matter Hardly any medical aid association is to be completely commended from a professional point of view, but some are better than others

*Venienti occurrite morbo* —The idea is thoroughly sound and has been tried, but unfortunately the preventive, to be strong enough to do its work, is sure to have sufficient irritative properties to make it uncomfortable for constant and regular application

*Morality.*—We should point out that the main question is one the persons concerned must answer for themselves. To give advi practically to allow that something should be done, an attitude w a medical man must be chary of adopting.

COMMUNICATIONS not noticed in our present issue will receive attent in our next.

## Medical Diary for the ensuing Week.

### OPERATIONS.

### METROPOLITAN HOSPITALS.

**MONDAY** (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2 30 P.M.) West London (2.30 P.M.), London Throat (2 P.M.).

**TUESDAY** (11th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3 30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2 30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2 30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2 30 P.M.). Throat, Golden-square (9.30 A.M.).

**WEDNESDAY** (12th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2 30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.), Throat, Golden-square (9 30 A.M.).

**THURSDAY** (13th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3 30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St Mary's (2 30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2 30 P.M.), Throat, Golden square (9 30 A.M.).

**FRIDAY** (14th).—London (2 P.M.), St. Bartholomew's (1 30 P.M.), St. Thomas's (3 30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.). West London (2 30 P.M.), London Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2 30 P.M.), Throat, Golden square, (9.30 A.M.), City Orthopædic (2.30 P.M.).

**SATURDAY** (15th).—Royal Free (9 A.M. and 2 P.M.), London (2 P.M.), Middlesex (1 30 P.M.), St Thomas's (2 P.M.), University College (9 15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.), Throat, Golden-square (9.30 A.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

### SOCIETIES.

**MONDAY** (10th).—MEDICAL SOCIETY OF LONDON (11, Chandos street, Cavendish square, W.).—8 30 P.M. Papers:—Mr. A. M. Sheild A Series of Cases of External Operations on the Larynx.—Mr. O. Mansell Moullin Three Cases of Gastrotomy for Recent Gastric Ulcer

**TUESDAY** (11th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover square, W.)—8 30 P.M. Mr. C. Ballance and Dr. P. Stewart Clinical and Experimental Observations introducing a Discussion on the Regeneration of Peripheral Nerves (with lantern and microscopical demonstrations). (Adjourned discussion.)

CHELSEA CLINICAL SOCIETY (Jenner Institute of Preventive Medicine, Chelsea gardens, Grosvenor road, S.W.).—8 30 P.M. Annual Clinical Debate —Cancer, its Nature, Origin, and General Principles of Treatment The following, among others, will take part in the discussion—Dr J F Payne (who will open the debate), Dr. J. F. W Tatham, Prof R T Hewlett, Dr. Beatson (Glasgow), Dr. J. Galloway, Dr. H R Gaylord (New York) (Communication on Cancer in Swine with lantern slides)

**WEDNESDAY** (12th).—DERMATOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.)—5.15 P.M. Demonstration of Cases of Interest.

HUNTERIAN SOCIETY (London Institution, Finsbury Circus, E C.).—8 30 P.M. Pathological Evening.

**THURSDAY** (13th).—BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.)—8 P.M. Specimens will be shown by Mr. F. Jordan and Mr R O Callaghan Papers —Mr. Freyer (introduced). Stone in the Female Bladder —Also by Dr. E. T. Collins.

**FRIDAY** (14th).—CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.)—8 30 P.M. Papers —Mr. H. W. Page, Dr. Payne, and Dr. Poynton Two Cases of Arthritis of the Knee —Dr. W. H. Whi and Dr W C Pakes A Case of Malignant Endocarditis givin Widal's Reaction —Sir Thomas Barlow, Bart, and Dr. H. B Shaw Hypertrophic Cirrhosis of the Liver.—Mr. A E Sears. Acut Paralytic Dilatation of the Stomach

INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH (9, Adelphi terrace Strand, W C)—7.30 P.M. Paper.—Dr J R Kaye Scarlet Fever, How Far Statistics Prove or Disprove the Utility of Hospital Isolation

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—Cases will be shown by Mr Hartridge and Mr. Harman and Mr. Bradburne. Papers —Mr R L Knaggs. Symmetrical Concentric Changes of Choroid and Retina in Four Cases of Unusually High Mr W. H H. Jessop Membranous Con Mr. S. Stephenson Diphtheria

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# Births, Marriages, and Deaths.

## BIRTHS.

DOWDING.—On Feb. 25th, the wife of Ernest F. C. Dowding, M.R.C.S., L.R.C.P. Lond., of a son (prematurely).

EDE.—On Feb. 23rd, the wife of G. Hubert Ede, M.D. Aberd., of a daughter.

GREEN.—On March 1st, the wife of Howard Green, M.R.C.S., L.R.C.P. Lond., of a son.

HAWTHORNE.—On Feb. 17th, at "Warrawee," Mudgee, New South Wales, the wife of E. Sydney Hawthorne, F.R.C.S. and L.R.C.P., of a daughter.

KENDALL.—On March 2nd, the wife of Nicholas Fletcher Kendall, M.R.C.S., L.R.C.P. London, of a son.

MOIR.—On Feb. 27th, the wife of Major James Moir, R.A.M.C., M.B., B.S. Aberd., of a son.

TAYLOR.—On Feb. 23rd, the wife of Sidney Johnson Taylor, M.B. Edin., M.R.C.S., of a son.

YOUNG.—At Herbertfield, Hamilton, on the 5th inst., the wife of James Murray Young, M.B. Glasg., of a son.

## MARRIAGE.

RAMSAY—CREE.—On Feb. 25th, at the British Residency, Baghdad, Turkish Arabia, Captain G. Ramsay, I.M.S., to Agnes, fourth daughter of the late Mr. W. S. Cree of Glasgow.

## DEATHS.

BERDOE.—On Feb. 28th, at Tynemouth House, Victoria-park-gate, N.E., Mary, the dearly-loved wife of Edward Berdoe, M.R.C.S., &c.

FISHER.—On the 1st March, at Sittingbourne, Kent, Caroline Maud Irene, wife of H. Holdrich Fisher, M.D., of influenza, complicating recent confinement.

JOHNSON.—At Evandale, Tasmania, on Jan. 22nd, John George Johnson, M.R.C.S. Eng., L.R.C.P. Lond., aged 44 years.

KNILL.—On March 2nd, at Heathfield, Bexhill, James Knill, L.R.C.P. Edin., M.R.C.S., aged 68 years

LOMBE.—On Feb. 23rd, at Torquay, Thomas Robert Lombe, M.D. Aberd., aged 81 years.

MYERS.—On March 3rd, 1902, at Birnam, 1, Kent-gardens, Ealing, W., Laura Isabelle (née Bartlett), the beloved wife of Lieutenant-Colonel H. R. Myers, V.D., *late Surgeon 19th Middlesex (Bloomsbury) Rifles.* Funeral service at St. Stephen's, West Ealing, on Saturday, 8th inst., at 12.30 P.M. Interment at Highgate (New) Cemetery at 2.30 P.M. Friends will please accept this (the only) intimation.

SIMPSON.—On Feb. 25th, at Darnley-road, W., Maxwell Simpson, M.D., LL.D., F.R.S., in his 87th year.

TALBOT.—On Feb. 23rd, at Dorset County Hospital, Dorchester, Ashley West Talbot, B.S., L.R.C.P. Lond., M.R.C.S. Eng., aged 25 years

*N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

# Notes, Short Comments, and Answers to Correspondents.

## CHEAP RATES.

*To the Editors of* THE LANCET.

SIRS,—The inclosed was lately sent to me in company with a postal order for 2*s.* 6*d.* For this munificent fee I was expected to make an examination and report equivalent to that required by a high-class life assurance office. I promptly returned the fee and declined the honour. No wonder the profession is exploited by the public as it is when men can be found to do this sort of work at the price considered adequate.

I am, Sirs, yours faithfully,

March 1st, 1902. EAST ENDER.

[INCLOSURE.]

SURREY REFORMED BENEFIT SOCIETY.

Feb 10th, 1902.

*Dear Sir,—An Applicant for Membership of the above Society will wait upon you for Medical Examination. Will you kindly oblige.*

*Yours respectfully,*

*A. J. Clemo, Secretary.*

SURREY REFORMED BENEFIT SOCIETY.

*Office:* WALWORTH, LONDON, S.E.

*Secretary's Address:* A. J. CLEMO, SECRETARY, 171, ALBERT-ROAD, PECKHAM, LONDON, S.E.

MEDICAL REFEREE'S REPORT

*On the health of .....................Proposed for Membership in the above named Society.*

*It is requested that as this report is a strictly confidential statement, the Referee will kindly forward it direct to the Secretary, and not to communicate its purport to the Candidate, or to any other person.*

*The Referee is also requested to obtain the signature of the person to be examined before proceeding with the examination, in order to establish his identity.*

*I acknowledge that I have this day submitted myself to Dr. .......... ..... .. for Medical Examination.*

*Signature* ............. .. .. ...

*Date*........ .. . .. ., 18... *Address*..... ... ... ..... .....

QUESTIONS.

*A*—What is the personal appearance and general conformation of the candidate?

*B*—What is his apparent age?

*C*—Have you any reason to suspect irregular or intemperate habits?

*D*—Is the candidate the subject of hernia, and, if so, are you satisfied a proper truss is worn?

Has he any physical defect or infirmity?

*E*—Has the candidate suffered from asthma, bronchitis, gout rheumatic fever, fistula, sexual disorder, or any serious illness? If so, please state date and duration of last attack, and whether in your opinion, the health is affected thereby.

*F*—Are the veins enlarged in any part, or varicose?

*G*—Are there any external signs which indicate abscess?

*H*—Is there any reason to apprehend paralysis, epilepsy, apoplexy, or insanity?

*I*—Is there any reason to suspect liver or kidney disease?

*K*—Are the heart and lungs normal in every respect, and perfectly free from disease?

*L*—Have either parent or any of the brothers or sisters died from phthisis, or is any member of the family now suffering from that disease? If so, please give particulars

*M*—Are there any other circumstances connected with the Candidate with which you think the Managers should be made acquainted?

*I have this ....... day of..... ...... 19... seen and examined . .. ...... and am of opinion that he is in* . ...........health, and that his constitution is† . .... . I therefore‡........ ... recommend the Managers to accept him as a member.*

*Signature of Medical Referee* ..... ... ..........

*Address* .... ........................ ...

* State whether good, indifferent, or bad. † State whether sound or impaired ‡ Fill in "do not" if you consider case not satisfactory.

*** We agree with our correspondent that 2*s.* 6*d.* is not a proper fee for the services demanded of him. Such questions as those marked E or K entail the most complete physical examination of the patient. Four times the fee offered might well be paid for the physical examination and a similar sum for the written report, and then the Surrey Reformed Benefit Society would have been served at a cheap rate.—ED. L.

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Answers are now received at this Office, by special arrangement, to advertisements appearing in THE LANCET.

Cheques and Post Office Orders (crossed "London and Westminster Bank, Westminster Branch") should be made payable to the Manager, Mr. CHARLES GOOD, THE LANCET Office, 423, Strand, London, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière, Asnières, Paris.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION (11, Chandos-street, Cavendish-square, W.) —4 P.M. Cases will be shown by Mr. M. Collier, Dr. McCall, and the President. 5 P.M. Discussion on the Diagnosis and Treatment of Various Forms of Nerve Deafness (opened by Dr. D. Grant and continued by Dr. G. MacDonald, Dr. B. Baron, and others) .7.30 P.M. Annual Dinner at the Cafe Royal.

## LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

**MONDAY (10th).**—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. C. Stewart: Organs of Respiration.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.).—4 P.M. Dr. J. J Pringle: Clinique. (Skin.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr Saunders: Therapeutics

**TUESDAY (11th).**—ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Dr. G. F. Still· Some Abnormal Psychical Conditions in Children (Goulstonian Lecture)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. W. Ewart. Clinique. (Medical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Ball. Diseases of the Tonsils.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury) —3.30 P.M. Mr. Gunn: Visual Fields in Diagnosis.

**WEDNESDAY (12th).**—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. C. Stewart Organs of Respiration.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. E. W Roughton: Clinique. (Surgical.)

POST GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr Beddard: Some Functional Disorders.

**THURSDAY (13th).**—ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Dr. F. T. Roberts The Comprehensive Study of Thoracic Phthisis. (Lumleian Lectures)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.).—4 P.M. Mr. J. Hutchinson, jun: Clinique. (Surgical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Davis: Medical Anatomy and Physical Diagnosis.

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond street, W.C.).—4 P.M. Mr. S. Colyer: Oral Sepsis in Children.

CHARING CROSS HOSPITAL —4 P.M. Mr. Gibbs: Surgical Cases (Post-Graduate Course.)

**FRIDAY (14th).**—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. C Stewart Organs of Respiration.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.).—4 P.M. Mr R. Lake Clinique. (Ear.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Shuter: Treatment of a few Effects from Anæsthetics.

## EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

*It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.*

*Lectures, original articles, and reports should be written on one side of the paper only,* AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

*Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.*

*We cannot prescribe or recommend practitioners.*

*Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."*

*Letters relating to the publication, sale, and advertising departments of* THE LANCET *should be addressed "To the Manager."*

*We cannot undertake to return MSS. not used.*

## MANAGER'S NOTICES.

### THE INDEX TO THE LANCET.

THE Index to Vol. II. of 1901, which was completed with the issue of Dec. 28th, and the Title-page to the Volume, were given in THE LANCET of Jan 4th.

### VOLUMES AND CASES.

VOLUMES for the second half of the year 1901 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

### *TO SUBSCRIBERS.*

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C, are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c, should be sent to the Agent to whom the subscription is paid and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

The rates of subscriptions, post free, either from THE LANCET Offices or from Agents, are:—

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SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE. It has come to the knowledge of the Manager that in some cases higher rates are being charged, on the plea that the heavy weight of THE LANCET necessitates additional postage above the ordinary rate allowed for in the terms of subscriptions. Any demand for increased rates, on this or on any other ground, should be resisted The Proprietors of THE LANCET have for many years paid, and continue to pay, the whole of the heavy cost of postage on overweight foreign issues; and Agents are authorised to collect, and do so collect, from the Proprietors the cost of such extra postage.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied Address—THE MANAGER, THE LANCET OFFICES, 423, STRAND, LONDON, ENGLAND

## METEOROLOGICAL READINGS.

*(Taken daily at 8.30 a m. by Steward's Instruments).*

THE LANCET Office, March 6th, 1902.

| Date | Barometer reduced to Sea Level and 32° F | Direction of Wind | Rain fall | Solar Radia in Vacuo | Maximum Temp Shade | Min Temp | Wet Bulb | Dry Bulb | Remarks at 8.30 a.m. |
|---|---|---|---|---|---|---|---|---|---|
| Feb. 28 | 29 45 | S W. | 0 01 | 68 | 53 | 46 | 47 | 43 | Cloudy |
| Mar. 1 | 29 59 | I | 0 01 | 66 | 53 | 41 | 42 | 43 | Hazy |
| " 2 | 29 75 | S W | | 70 | 52 | 43 | 44 | 44 | Cloudy |
| " 3 | 30 01 | S W | 0 06 | 69 | 52 | 40 | 44 | 45 | Overcast |
| " 4 | 30 05 | S | — | 60 | 48 | 41 | 40 | 41 | Overcast |
| " 5 | 30 07 | S E | . | 57 | 46 | 36 | 36 | 37 | Foggy |
| " 6 | 30 02 | S W | ... | 42 | 40 | 36 | 37 | 37 | Foggy |

**During the week marked copies of the following newspapers have been received:**—*Eastern Province Herald (Port Elizabeth, Cape of Good Hope), Manchester Evening News, Yorkshire Post, Cardiff Mail, Sheffield Independent, Sussex Daily News, [illegible] Gazette, Wiltshire Mirror, Bradford Observer, Morning Post, Essex Herald, Newcastle Journal, Cambria Leader, Hereford Mercury, Exeter Times Penrith Observer, Daily Graphic, Cambridge Chronicle, Huddersfield Examiner Sanitary Record, Local Government Chronicle, Mining Journal Merthyr Express, Hertfordshire Mercury, [illegible] Chronicle, Dundee Advertiser, West Sussex Gazette, Lincolnshire Advertiser, Barking Advertiser, Luton Chronicle, Liverpool Mercury, Manchester Evening Mail, Kent Messenger, Middlesbrough Gazette, Birmingham Post, Aberdeen Press, Heraldo de Madrid, Meath Herald, Folkestone Telegraph, Hartlepool Mail, Brighton Gazette, Kent Examiner, Suffolk Chronicle, Surrey Advertiser, [illegible] Mercury, Dublin Express, Darlington Star, Times of India, &c.*

towards the heart, much faster and further than the changes in the vessel wall, and the clot may thus spread as far as the aorta. 4. The earliest effect of this diseased artery is pain, then follow other evidences of local ischæmia and these may pass on to gangrene These effects vary with the extent of the vascular obstruction and the efficiency of nature's means of compensation. 5. The disease may be very chronic, slowly progressing for years, or it may run a much more rapid course Having reached a certain point arrest may occur and the symptoms may gradually pass away as the unaffected vessels become more and more efficient substitutes for those that have been occluded. 6. The disease arrested for a time may afterwards recur in the vessels of the same limb or elsewhere, and it may attack more than one vascular area simultaneously. 7. The vascular changes are not always limited to the arteries and endophlebitis may precede or accompany the endarteritis and the venous obstruction then modifies the effects produced on the tissues.

But I think we shall best appreciate the characters of the affection if I describe cases that I have seen and I will take first of all one that I think is a fairly typical case; I will then narrate others to illustrate, as far as my experience permits me, the salient features which are met with, and I will conclude by drawing attention to some of the points not included in the summary just given.

CASE 1.—A man, a carpenter by trade, was admitted into Middlesex Hospital under my care on July 2nd, 1895. He was then 56 years of age, a stout man, looking rather older than his years. He said that he had enjoyed good health up to October, 1894, when, he knew not why, the left internal saphena vein became swollen, inflamed, and painful from the ankle to the groin. For this he rested in bed and the swelling gradually subsided. The following month (November) the left foot became red and "inflamed," and he was treated for some time for gout. The pain was great and in spite of treatment continued all through the winter, and in March, 1895, the foot was noticed to be shrivelling and turning black. The gangrene gradually extended until it involved all the toes. Throughout his illness the pain had been very great and he had been obliged to keep his bed When admitted to hospital the toes of his left foot were black and shrivelled, blue-black gangrene extended on the foot as far as the mid-tarsal joint, and the skin of the rest of the foot up to the front of the ankle was dry and brownish There was considerable œdema of the leg and the skin was very sensitive; it was colder than the opposite leg and the skin was mottled and rather livid in hue The left femoral, popliteal, and tibial arteries were pulseless and could be felt as firm cords. The arteries elsewhere in the body could be plainly felt pulsating; they were neither rigid, tortuous, nor uneven: they did not show any signs of atheroma or degeneration. There was no arcus senilis; the temporal pulse was not visible. The pulse-rate was 136; it was rather uneven and compressible. The area of the cardiac dulness was diminished, the first sound was short, and the second sound was indistinct; there was no bruit. The man was pale, bald, with grey beard, with a good deal of soft subcutaneous fat; the abdomen was full and fat; the liver was not enlarged. The urine was acid, with a specific gravity of 1018, and it was free from sugar and albumin The man was restless with a rather noisy delirium, but was evidently in great pain. The temperature varied between 100° and 101° F There was no history or evidence of syphilis On the lower part of the right leg was a pigmented scar of an ulcer. I amputated the limb at the knee-joint. There was no bleeding from the popliteal artery when the tourniquet was removed and the end of the vessel could be plainly seen securely plugged by soft solid vascular tissue. There was slight oozing of blood from vessels in the sheath of the artery, showing a very vascular condition of that sheath; only five ligatures were needed for the whole stump. Immediately after the operation the patient lost his delirium and his pain, he became quite quiet, and his general health rapidly improved. The stump healed well and the temperature fell to normal on July 9th, and on the 24th he went to a convalescent home at Swanley. (Owing to an accident the amputated member was not dissected.) For two years this man continued well and got about freely. But during the winter of 1897–98 he came to me at the hospital several times complaining of severe pain in the right foot and leg and a sense of coldness and numbness—these pains were much worse when the weather was very cold or if the part was not warmly covered up I found the foot and leg as high as the knee cold and mottled in colour with very sluggish circulation, and I could not detect any pulsation in either the tibial or the popliteal artery. I advised him to rest the limb and to keep it very warm. It was evident that the disease had now affected the arteries of the right foot and leg. On his last visit in the early summer of 1898 he was rather better. But he was suddenly readmitted to the hospital on Oct. 21st, 1898, in a very grave condition He was incoherent, unable to answer questions, restless, and complained of pain in his foot and leg. His tongue was thickly coated with a white f and he seemed to be very thirsty. His friends stated tha his foot had become cold and blue on the 19th and tha after that he had become rapidly more ill. I found th right foot and lower third of the leg very cold, mottled blue and white, slightly swelled, and the circulation, although nowhere arrested, was yet very sluggish. There was no pulse in the tibial, popliteal, or femoral arteries; they were all, when felt, firm cords. The arteries of the arms, on the other hand, were soft and not tortuous. The pulse was rapid, regular, and compressible. The urine was pale, of specific gravity 1005, acid, free from sugar, with a slight cloud of albumin on boiling. The temperature ranged between 99° and 100° F. I kept the limb as warm as I could with thick cotton wrappings, outside which were placed hot bottles, and tried to relieve his pain with morphia. But he got worse. On the 24th I could not demonstrate any circulation in the foot; in the lower third of the leg it was very languid, but the upper half of the leg was warmer and the circulation was fairly active. The superficial veins were not thrombosed. His temperature was higher (101°), he was less conscious, and sometimes passed his urine in the bed. Remembering his rapid improvement after the former amputation I decided to remov the limb at the time and did it on the 24th. He slept wel after the operation and woke up quieter and more rational. The next afternoon, however, he became more restless; his temperature rose; on the 26th it reached 103·8°, his pulse was counted at 156, and just before midnight on the 26th he died.

On dissecting the leg we found the popliteal artery blocked by a firm organising clot. The posterior tibial artery w quite small, occluded in its entire length by a soft colourle clot; the wall of the vessel was considerably thickene especially at the posterior part of its circumference. Th anterior tibial artery was small, with thickened walls, bu had still a narrow lumen. The arteries were very firmly matted to their companion veins and were separated only with great difficulty. The post-mortem examination was made by Dr. A. F. Voelcker who recorded that the heart was dilated, flabby, with ante-mortem clots in both ventricles and in the right auricular appendix. The aorta in the thorax showed very trifling disease and there was no atheromatous ulceration. The carotid and subclavian arteries and the jugular, innominate, and superior caval veins were norma The femoral and iliac vessels were blocked with clot, th lumen of the vessels was only a little diminished, and except for some calcareous patches the walls did not show any marked change. The clot extended up the abdominal aorta as high as the origin of the renal branches and here ended in a conical tip. The left kidney showed one infarct; the right had many.

This case is fairly typical of the affection called obliterative arteritis. I would call attention specially to the insidious onset, slow progress, the severe pain coming on as the firs symptom and lasting throughout—pain that was worse in cold weather or when from any cause the affected part was exposed to cooling Then the signs of local ischæmia with loss of pulse in the arteries and their conversion into solid cords, passing at length into gangrene of the most distant sections of the member,—all t associated with a healthy condition of the arteries gene as shown by their softness, smoothness, and absence of volution and locomotor pulse at the elbow and temple, instance The symptoms may vary in intensity a little time to time, but there is never the marked periodicit intermission of symptoms that characterise Rayna disease. The obstruction to the circulation, whatever it is organic and permanent from the first, and capable of rel only by the agency of anastomosing and alternative arteri The essence of Raynaud's disease is vascular spasm, variab and temporary, and only causing permanent changes gangrene—when prolonged spasm is followed by thrombos Hæmoglobinuria which often occurs in Raynaud's disease never present in obliterative arteritis. The case which I hav

# The Lettsomian Lectures

ON

# CERTAIN DISEASES OF THE BLOOD-VESSELS

*Delivered before the Medical Society of London*

BY A PEARCE GOULD, M S LOND,
F R C S ENG,
SURGEON TO THE MIDDLESEX HOSPITAL

## LECTURE II [1]

*Delivered on March 3rd*

### ON OBLITERATIVE ARTERITIS

MR PRESIDENT AND GENTLEMEN,—I have chosen Obliterative Arteritis as the subject of this lecture partly because of the obscurity in which its origin and causes are wrapped and partly because many of us are not so familiar with the main features of the disease as its frequency and gravity demand It has barely found its way into our text books, and it is still regarded as a very rare affection, and yet it cannot be so when from my own experience I can cite nine cases The first important paper on the subject was written by Friedlander[2] in 1876, and was followed three years later by an article by Winiwater[3] giving a very careful description of the vessels in a case that had been under Billroth's care Isolated cases were previously described by Jaesche[4] in 1865 and by Burow[5] in 1857 But it is undoubtedly to Friedlander that the credit belongs of recognising the condition and of working out its pathology Since his paper was published many examples of the disease have been described, but very little further light has been thrown upon it In 1884 I[6] recorded a well marked case affecting the vessels of the upper limb in a man 19 years of age and at the same meeting of the Clinical Society the late Dr W B Hadden[7] recorded another case of the disease in the hand and forearm of a woman aged 35 years The following year Mr W J Walsham[8] reported to the same society a case of "acute obliterative arteritis" in the arm of a man aged 52 years, but there is some room for doubt whether it belonged to the same category or to that of acute spreading arterial thrombosis In 1891 I[9] read a paper on a case in which the disease caused symmetrical gangrene in the feet of a man aged 43 years In 1894 Saverain[10] recorded a case which began with an attack of phlebitis after which there were persistent pain and lameness in the left foot, in a year the toes became gangrenous and the leg was amputated Saverain found endarteritis in the anterior tibial artery and endophlebitis in the accompanying veins In 1896 Mr Hutchinson[11] described four typical cases and called attention to the importance of examining the state of the artery in the thigh in all cases of gangrene of the foot In 1897 a Russian surgeon Wwedensky[12] wrote of the disease as peculiar to Russia and occurring in men between 19 and 60 years In 1898 Mr W G Spencer[13] recorded a very remarkable case in which the arteries in both legs and in one arm were simultaneously affected Amputation through the middle of the left thigh was necessary, and Mr Spencer gave an admirable account of the condition of the vessels in the amputated limb About the same time Dr W A Hollis[14] discussed the affection from its pathological side and in 1900 Sternberg[15] in a long article described several cases of spontaneous gangrene in young people The arteries of the limbs examined showed total obliteration of their lumen with very vascular connective tissue internal to the elastic lamina, and Gibert[16] described a case of symmetrical gangrene of the feet from arteritis

Before narrating any of the cases of this disease that I have seen I wish to make one or two preliminary observations And first of all I would remind you of the paramount part that the inner coat takes in all active physiological and pathological processes in arteries The prime office of an artery is to maintain a patent channel for the flow of blood and this depends upon the integrity of the tunica intima The physiological obliteration of obsolete vessels, such as the ductus arteriosus and the umbilical vessels, and the narrowing of vessels in stumps are effected almost entirely by proliferation of cells of the intima—the middle and outer coats take no active share in the process Similarly the repair of a wounded artery or of a ligatured vessel is dependent upon the activity of the cells of the intima If an artery is temporarily compressed or bruised or its outer surface is cauterised the changes produced are witnessed in the intima If from any cause a thrombus forms in a vessel it is the inner tunic of the vessel which reacts to its presence, and if the blood circulating through a vessel is irritating or the tension high it is the same coat that suffers The only primary change in the middle coat is one of simple degeneration—calcification—and we know nothing at all of any primary change originating in the tunica adventitia The tunica intima is in fact, the essential part of an artery, it is present throughout the entire system and is equally important everywhere The muscular coat is added as a vaso motor mechanism and the outer coat is an added strength to the artery, but both of these are subsidiary—there are vessels without the one or the other—but without the tunica intima there can be no vessel at all Disease not only occurs in the inner coat of an artery more frequently than in either of the others—e g, atheroma—but there its effects are most serious For when the inner coat is very gravely affected its function is interfered with and the lumen of the vessel is occluded and this occlusion is brought about in one or both of two ways In the first place any hyperplasia of the endothelium or sub endothelial tissue causes a bulging into the lumen of the vessel the elastic lamina on the outer surface is a very resistant structure and as it were shuts in the cells and soft tissues and prevents their bulging out or passing into the muscular and fibrous tunics The direction of growth is towards the centre of the vessel But disease of the inner coat especially when the endothelium is involved very quickly leads to thrombosis, which in small vessels at once obliterates the lumen and except in rare cases the clot soon becomes organised into vascular cellular tissue

Of these two agents in the obliteration of arteries—new growth and thrombus—it must be borne in mind that while thrombosis may be and often is a very rapid process the growth of the inner coat to such an extent as to fill the lumen of a vessel is always a slower process and slow in direct proportion to the size of the vessel We must also bear in mind that a clot in an artery or a vein has a tendency to extend and we often find it extend very rapidly, but the primary inflammatory growths of the intima appear to be much slower in their progress along an artery And, lastly, another difference between these two occluding agents seems to be this—that a blood clot may be absorbed and disappear and the vessel which it has closed opened out again but a like opening out of a vessel once closed with sub endothelial growth so far as we know, never occurs

These considerations in my opinion make it very doubtful whether obliterative arteritis is a specific disease to be sharply differentiated, I would rather regard it as a pathological effect of many causes, and I would not therefore separate it from the syphilitic disease of small arteries described by Heubner and others The chief features of obliterative arteritis are these —1 The disease originates in the subendothelial layers of the tunica intima of the smaller arteries In its early stages it is marked by a small-cell infiltration which later organises into a loose and vascular connective tissue 2. This growth narrows the lumen of the vessel and may entirely obliterate it, more often however thrombosis occurs and the organisation of the clot completes the permanent occlusion of the artery 3. The disease beginning in the smaller arteries tends to spread in a centripetal direction and may reach even the larger arteries The thrombosis it excites also often extends rapidly and far towards the heart, much faster and further than the changes in the vessel wall, and the clot may thus spread as far as the aorta. 4. The earliest effect of this diseased artery is pain, then follow other evidences of local ischæmia and these may pass on to gangrene These effects vary with the extent of the vascular obstruction and the efficiency of nature's means of compensation. 5. The disease may be very chronic, slowly progressing for years, or it may run a much more rapid course. Having reached a certain point arrest may occur and the symptoms may gradually pass away as the unaffected vessels become more and more efficient substitutes for those that have been occluded. 6. The disease arrested for a time may afterwards recur in the vessels of the same limb or elsewhere, and it may attack more than one vascular area simultaneously. 7. The vascular changes are not always limited to the arteries and endophlebitis may precede or accompany the endarteritis and the venous obstruction then modifies the effects produced on the tissues.

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[1] Lecture I was published in THE LANCET of March 1st, p 576 Lecture III will be delivered on March 17th

[2] Centralblatt für die Medicinischen Wissenschaften, 1876

[3] Virchow's Archiv, 1879

[4] Archiv für klinische Chirurgie (Langenbeck), Band vi

[5] Virchow's Archiv, Band xxxviii

[6] Transactions of the Clinical Society, vol xvii

[7] Ibid

[8] Ibid, vol xix

[9] Ibid, vol xxiv

[10] Bulletin de l'Académie de Médecine, 1894, tome xxxi

[11] Archives of Surgery, vol vii

[12] See Centralblatt für Chirurgie, 1898, Band xxv, p 937

[13] Transactions of the Clinical Society, vol xxxi

[14] Journal of Anatomy and Physiology, 1897-98, vol xxxii, p 153

[15] Virchow's Archiv, 1900, Band clxi, p 199

[16] Tr Montpellier Médical, 1902

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The man was pale, bald, with grey beard, with a good deal of soft subcutaneous fat; the abdomen was full and fat; the liver was not enlarged. The urine was acid, with a specific gravity of 1018, and it was free from sugar and albumin. The man was restless with a rather noisy delirium, but was evidently in great pain. The temperature varied between 100° and 101° F. There was no history or evidence of syphilis. On the lower part of the right leg was a pigmented scar of an ulcer. I amputated the limb at the knee-joint. There was no bleeding from the popliteal artery when the tourniquet was removed and the end of the vessel could be plainly seen securely plugged by soft solid vascular tissue. There was slight oozing of blood from vessels in the sheath of the artery, showing a very vascular condition of that sheath; only five ligatures were needed for the whole stump. 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On his last visit in the early summer of 1898 he was rather better. But he was suddenly readmitted to the hospital on Oct. 21st, 1898, in a very grave condition. He was incoherent, unable to answer questions, restless, and complained of pain in his foot and leg. His tongue was thickly coated with a white fur and he seemed to be very thirsty. His friends stated that his foot had become cold and blue on the 19th and that after that he had become rapidly more ill. I found the right foot and lower third of the leg very cold, mottled blue and white, slightly swelled, and the circulation, although nowhere arrested, was yet very sluggish. There was no pulse in the tibial, popliteal, or femoral arteries; they were all, when felt, firm cords. The arteries of the arms, on the other hand, were soft and not tortuous. The pulse was rapid, regular, and compressible. The urine was pale, of specific gravity 1005, acid, free from sugar, with a slight cloud of albumin on boiling. The temperature ranged between 99° and 100° F. I kept the limb as warm as I could with thick cotton wrappings, outside which were placed hot bottles, and tried to relieve his pain with morphia. But he got worse. On the 24th I could not demonstrate any circulation in the foot; in the lower third of the leg it was very languid, but the upper half of the leg was warmer and the circulation was fairly active. The superficial veins were not thrombosed. His temperature was higher (101°), he was less conscious, and sometimes passed his urine in the bed. Remembering his rapid improvement after the former amputation I decided to remove the limb at the time and did it on the 24th. He slept well after the operation and woke up quieter and more rational. The next afternoon, however, he became more restless; his temperature rose; on the 26th it reached 103 8°, his pulse was counted at 156, and just before midnight on the 26th he died.

On dissecting the leg we found the popliteal artery blocked by a firm organising clot. The posterior tibial artery was quite small, occluded in its entire length by a soft colourless clot; the wall of the vessel was considerably thickened, especially at the posterior part of its circumference. The anterior tibial artery was small, with thickened walls, but had still a narrow lumen. The arteries were very firmly matted to their companion veins and were separated only with great difficulty. The post-mortem examination was made by Dr. A. F. Voelcker who recorded that the heart was dilated, flabby, with ante-mortem clots in both ventricles and in the right auricular appendix. The aorta in the thorax showed very trifling disease and there was no atheromatous ulceration. The carotid and subclavian arteries and the jugular, innominate, and superior caval veins were normal. The femoral and iliac vessels were blocked with clot, the lumen of the vessels was only a little diminished, and except for some calcareous patches the walls did not show any marked change. The clot extended up the abdominal aorta as high as the origin of the renal branches and here ended in a conical tip. The left kidney showed one infarct; the right had many.

This case is fairly typical of the affection called obliterative arteritis. I would call attention specially to the insidious onset, slow progress, the severe pain coming on as the first symptom and lasting throughout—pain that was worse in cold weather or when from any cause the affected part was exposed to cooling. Then the signs of local ischæmia with loss of pulse in the arteries and their conversion into solid cords, passing at length into gangrene of the most distant sections of the member,—all th associated with a healthy condition of the arteries genera as shown by their softness, smoothness, and absence of co volution and locomotor pulse at the elbow and temple, instance. The symptoms may vary in intensity a little fro time to time, but there is never the marked periodicity intermission of symptoms that characterise Raynaud disease. The obstruction to the circulation, whatever it is, organic and permanent from the first, and capable of reli only by the agency of anastomosing and alternative arteri The essence of Raynaud's disease is vascular spasm, variab and temporary, and only causing permanent changes— gangrene—when prolonged spasm is followed by thrombos Hæmoglobinuria which often occurs in Raynaud's disease never present in obliterative arteritis. The case which I hav quoted is instructive, too, in the recurrence of the malady in another limb, and this event is so important that I will briefly quote another case in which I have seen it

CASE 2 —A man, aged 60 years, a carpenter, was admitted into Middlesex Hospital under my care on May 12th, 1897 There was no family history of importance His general health had always been good, he had been a temperate man and had not had syphilis, gout, or tubercle He told us that he was subject to chilblains, especially when young, and that he had injured his right leg and foot on two occasions, once, 28 years before we saw him, when the lower part of the leg was "crushed" and it took six months to heal up 18 years later the right great toe was contused, the nail separated and had never grown again He had been laid up for three and a half years when I first saw him The trouble began, he said with a sore formed on the left heel which became black (gangrenous); later the little toe, then the second toe, and afterwards the third toe became gangrenous, part of the second toe had separated spontaneously Four months before admission he noticed a black spot on the great toe Two months later the skin over the dorsum of the foot became blue, and this spread to the leg All this time he had suffered from dull aching pain with sharp twinges in a part before it became black He was a dark-haired, thin, emaciated man He was depressed, haggard looking, and complained of great pain and inability to sleep The left foot and ankle were blue and cold and on the outer side this extended as high as the middle of the leg The three inner toes were mummified, there was a large patch of dry gangrene on the dorsum of the foot, the sole of the foot was purple and cold but not actually gangrenous No pulse was felt in either tibial artery, there was slight pulsation in the popliteal artery There was some matting of tissues over the dorsum of the right foot and the lower fourth of the leg; the skin was thin and atrophied, there was no loss of sensation or of pulsation in the arteries The heart was healthy; the temporal artery was not visible or tortuous there was no locomotion or tortuosity of the brachial artery at the elbow The urine had a specific gravity of 1017 it was free from sugar, and it contained excess of phosphates and a faint trace of albumin The temperature ranged from 100° to 101° F I amputated the left leg at the knee-joint only three arteries were tied—the popliteal, a large branch coming off from it and the internal sural artery, the popliteal artery was thickened with a narrow lumen and would not twist The arteries in the amputated leg were found to be all greatly thickened, the dorsal artery of the foot and the external plantar artery were occluded, the internal plantar was still patent The veins in the sole were thrombosed, those in the leg were pervious The man made a slow convalescence, part of the outer flap sloughed, and the bone had to be shortened But he eventually left the hospital for the convalescent home in August, 1897, free from pain, sleeping well, cheerful, and quite a different man from when he came in

He remained well till March 1899, when he found that the inner side of his great toe was tender and he began to suffer pain in the foot At the end of September a black patch appeared at the root of the great toe and the gangrene spread to the other toes and the dorsum of the foot The pain meantime increased to great severity, described as aching in character, with sharp twinges or paroxysms He was again admitted into the hospital on Nov 29th 1899, having been ill nine months The left stump was sound and well, it was very difficult to detect any pulsation in the femoral artery on that side The right foot was swollen, cold, mottled in colour, and the toes were gangrenous He complained of intense pain in the foot and was evidently in great suffering There was no pulse to be felt in any artery below the femoral The radial artery was not hardened or tortuous and there was no evidence of disease in other arteries The urine was of specific gravity 1020, free from sugar, and contained a trace of albumin On Dec 2nd I amputated through the condyles of the femur by Lister's method The popliteal and two or three small arteries were tied, the wall of the popliteal artery was much thickened Convalescence was again slow but he went to Clacton with the stump healed on Jan 11th and returned on Feb 6th, having gained 13½ pounds in the four weeks I have seen this man occasionally since The left stump has given him no trouble, but on his last visit to me the right thigh was very painful, it was cold, rather blotchy and blue, and I could not feel any pulse in the femoral artery I advised him to keep it very warm.

The liability for the disease to attack both lower limbs was illustrated by a case that I reported to the Clinical Society and which will be found recorded in vol xxiv of that society's Transactions

CASE 3 —The patient was a man, aged 43 years, a draper's traveller While an inmate of an asylum for acute mania supervening upon an attack of influenza he was seized with severe pain in his feet and legs They were noticed to become cold and blue and in a few days gangrenous When admitted to the Middlesex Hospital there was gangrene on each side as high as the bases of the malleoli with mummification of the toes and œdema of the legs Pulsation could not be felt in the popliteal or tibial arteries, the heart sounds were normal, the pulse was 88, and the brachial arteries were not obviously diseased The urine was acid, free from albumin and sugar I amputated the legs at the knee-joints and the patient made a good recovery I have heard nothing of him since The popliteal arteries, where divided, were filled with organising clot, and the wall of the vein was thickened The arteries and some of the veins in the leg showed marked thickening of the interior coat with, in places, occlusion of the lumen by coagulum, there was no calcareous degeneration

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Let me now relate some cases from which I think we may learn something of the etiology of this affection The first of them is that of a woman who developed symptoms of erythromelalgia after an attack of influenza and then shortly afterwards showed signs of local ischæmia in the same limb caused by arterial obliteration

CASE 4 —The patient was a woman, aged 65 years, seen in consultation with Dr Ker and Dr Aldren Turner I am indebted to Dr Turner for the notes of the earlier history of this patient This patient had enjoyed good health until the early part of 1898 when she had an attack of influenza She made a good recovery and remained well through the summer In October, 1898, she experienced pain in her right foot without any loss of power This continued more or less all through that winter and the following spring, and in August, 1899, she consulted Dr Aldren Turner He found marked tenderness over most of the nerves of the upper and lower limbs, she complained of pain in the right foot, and over the toes there was marked superficial pain, with redness and increased heat She could scarcely bear to place the foot on the ground so great was the pain produced There was no paralysis She was thin and all the tissues were flabby Dr Turner ordered galvanism When next seen in September there was marked improvement in the foot—apparently as the result of the galvanism General massage and the recumbent position were then ordered, and bromide of potassium, salicylate of soda, and phenacetin were prescribed On Oct 6th Dr Turner received a letter from Dr Ker, stating that there had not been any improvement lately and the treatment seemed to have lost its beneficial effect But very soon after that the patient appeared to get quite well, she went about freely, walking was easy to her, and she went on a visit into the country On Jan 14th 1900, Dr Turner visited her in the country and learnt that she had continued well until the onset of very cold frosty weather about 14 days before Christmas when she had great pain and a burning sensation in the right foot, followed shortly after by signs of local asphyxia in the toes—chiefly the second toe At his visit he found all the toes of the right foot blue, there was a large blue patch over the right heel, and another over the dorsum of the foot The foot felt moderately cold to his hand, but subjectively was said to be very cold The toes were very tender, there was no anæsthesia The pain in the foot was intense at times, chiefly at night. There was no pulse in the posterior tibial artery, the radial pulse was of good volume and there was no sign of marked atheroma; and no affection of the nose or ears was present. The patient complained of slight pains in the left toes, where there was some doubtful redness, and also of slight numbness in the fingers. The pain continued very severe, the condition of the foot became worse, and I was asked to see the patient on Jan. 24th There was then gangrene of the toes and dorsum of the foot and the heel I could not detect pulsation in any of the arteries of the right lower limb below the middle of the thigh; the arteries could be felt as firm cords Pulsation could be plainly felt in all the arteries of the left thigh and leg. The urine contained lithates, but was free from sugar and albumin. The radial, brachial, and temporal arteries did not show atheromatous change. The patient was thin, much worn by her suffering, and her appetite was failing. She got very little sleep. The heart and lungs and the liver were healthy. The right kidney was moveable. There was no evidence of syphilis or of alcoholism. We advised amputation and next day I removed the limb just above the knee-joint. The popliteal artery was a solid cord and did not require a ligature. She made a good recovery from the operation, the stump healed well, and the pain was at once greatly relieved and the patient's general condition correspondingly improved. I was, however, asked to see this patient in March—two months after the amputation—and I found that she was then suffering from severe pain in the thigh. This was swollen quite considerably and the skin was marked with blotches of blue and red; the surface was cold. The pain in the thigh was described as very severe. I could not feel any pulse in the femoral or external iliac arteries. The arteries on the left side pulsated normally. I advised that the limb should be kept raised, very warmly swathed, and gently massaged twice a day. At the same time I gave a serious prognosis, as I feared that the disease might extend to some visceral artery. I did not see the patient again, but Dr. Ker has informed me that the pain, swelling, and discolouration of the thigh disappeared, and the patient seemed to get "quite well" so far as the arterial disease was concerned. She died in 1901 from some chest affection—not from anything connected with the old trouble. She was not then under Dr. Ker's care and I have not been able to obtain more precise information. The arteries in the amputated limb showed the usual changes. The popliteal, tibial, and peroneal vessels, as far as they could be traced, were converted into solid cords with greatly thickened walls. The tunica intima was much thickened and the narrowed lumen was occluded with organising thrombus

This case is specially interesting because of the history of the onset of the affection—unique in my experience and reading. When Dr. Aldren Turner first saw this patient she presented the symptoms of erythromelalgia—that is to say, neuralgic pains with signs of dilatation of the arteries and increased vascularity of the tissues. There was local heat and the pain was greatly increased by putting the foot to the ground and by warmth. This was the state of things in the summer of 1899, and these symptoms passed off and the patient appeared to be quite well in the autumn. But with the onset of wintry weather the picture was strangely altered; the local heat and flushing were changed into coldness and sluggish circulation which gradually culminated in gangrene. Erythromelalgia is a rare affection and but little is known about it. In his excellent article in Clifford Allbutt's "System of Medicine" Sir Thomas Barlow sums up the evidence for and against the various views of its pathology that have been advanced, and shows that the balance of evidence is in favour of the view of its consisting in a dilatation of the arteries caused by paresis or inhibition of the vaso-motor nerves Whether this be a primary or a sequential phenomenon the dilated arteries are the most important feature of the disease, and Sir Thomas Barlow very pertinently remarks that the arterial dilatation might excite changes in the intima and lead to thickening of the arteries and narrowing of their tissues; he refers to Thoma's experiments to show that increased arterial tension, if kept up, leads to proliferation of the intima The case I have related shows us this very sequence. It is also of interest as an illustration of the tendency of the disease to spread upwards even after amputation well above the gangrenous area and of the smaller gravity of the disease in the thigh than in the foot and the leg.

The next case illustrates another cause of the same condition.

CASE 5—The patient was a woman, aged 45 years, seen in consultation with Dr S Blake Jolly. For many years she had suffered from very severe menorrhagia which had kept her in a state of extreme anæmia. For years she had taken alcohol in excess, chiefly in the form of spirit. She was constantly needing medical attention, either for the hæmorrhage, or the anæmia, or the effects of special alcoholic excess Ten days before I saw her Dr. Jolly was called in and found her in great pain in her left foot with paroxysms of very severe agony; the foot was colder than the other, pale, mottled in colour, with sluggish circulation. The severe pain continued in spite of the application of local heat, and injections of morphia had to be given. I saw the patient on March 6th, 1900; she was very stout and flabby with a very fat abdomen, her skin was white and her mucous membranes were very pale, and she looked very unhealthy. The toes of the left foot were gangrenous, blue-red in colour, not altered in size, and the gangrene extended for about an inch on to the dorsum of the foot and a little further on to the sole. The rest of the foot was cold, mottled blue and white in colour, but the skin retained its sensitiveness as far down as the edge of the gangrene. I could not feel a pulse in the popliteal artery or either of the tibial arteries; there was pulsation in the femoral artery and in the tibial arteries of the right side. There was no evidence of general atheroma of the arteries. The brachial artery was not tortuous or hard. There was no valvular disease of the heart. The urine was free from sugar, but it contained a very slight trace of albumin. This patient was in very severe pain in the foot and leg. I recommended amputation and next day removed the limb above the knee-joint. This patient made an excellent recovery. I heard of her quite recently from Dr. Jolly and he told me that her stump had remained well, so had her left foot and leg, and that she had continued the abstinence from alcohol which we enforced during the healing of the wound and with very great benefit to herself. I think the *causa causans* in this case was the alcoholism—the irritating effect of the alcohol circulating in her blood. The case illustrates also what we so often see—the great benefit which alcoholic patients derive from breaking off the habit and excluding alcohol altogether from their dietary even when organic change such as obliterative arteritis has taken place. If this patient will continue her abstinence from alcohol I am very hopeful that she will have no return of the disease. She has been free from it for two years already.

In the following case the condition probably resulted from syphilis. This patient was in the Middlesex Hospital under the care of Dr. W. Pasteur, and I am indebted to him for an opportunity of examining the man and for permission to use the notes of the case.

CASE 6.—A man, aged 48 years, a gardener, was admitted into Middlesex Hospital on Jan. 3rd, 1898 He had had good health up to the time of this illness and we failed to elicit from him any history of syphilis or of injury. He said that for three and a half years he had suffered from redness and a burning and stinging pain in the left great toe at night, so severe as to prevent sleep. This pain sometimes came on during the day. Similar symptoms came on in the right foot about six weeks after he noticed them in the left. The feet were at times quite white, at others blue, and he noticed then that when he pressed the colour out with his finger it returned very slowly. The great toes suffered most, the other toes to a less extent He had not noticed any numbness or loss of sensation. Six months before he came under observation he observed mottled redness of the soles of the feet, and a month before admission he saw a blister on the tip of the right great toe; this gradually extended under the nail and beneath it a black eschar was seen. This change was accompanied by most excruciating pain. He was a man of spare build and nervous habit; his pulse was 72, weak and compressible; the heart sounds were healthy. The urine was acid, 1020, and there was no albumin or sugar. The temperature ranged between 97·6° and 99° F. The skin of each foot, especially on the sole, was much mottled and generally reddened; on the end of the right great toe was a patch of black gangrenous skin. He suffered great pain, and even hypodermic injections of morphia failed to give him more than two hours' sleep at a time. There was no pulse in either posterior tibial artery or in the left popliteal and femoral; that in the right femoral artery was quite distinct The gangrenous patch on the toe extended a little, the slough slowly separated, and the ulcerated surface still more slowly healed. He was sent to Clacton on Feb. 27th in good general health, nearly free from pain, but still showing blotchy discolouration and sluggish circulation in both feet. The man returned to hospital on April 13th, 1898, on account of increasing pain in the left foot. The right femoral pulse was only just perceptible, the left could not be felt. and the artery was represented by a hard cord in Scarpa's triangle. No arterial pulse was felt in either limb below the femoral artery. The toes of the left foot were of dark blue-black colour and "somewhat swollen." There was very distinct "marbling" of the foot with purple and red and paler areas. The lividity of the toes increased, blisters formed and burst, and exposed foul, discharging surfaces, and slowly in quoted is instructive, too, in the recurrence of the malady in another limb, and this event is so important that I will briefly quote another case in which I have seen it.

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He remained well till March, 1899, when he found that the inner side of his great toe was tender and he began to suffer pain in the foot. At the end of September a black patch appeared at the root of the great toe and the gangrene spread to the other toes and the dorsum of the foot. The pain meantime increased to great severity, described as aching in character, with sharp twinges or paroxysms. He was again admitted into the hospital on Nov. 29th, 1899, having been ill nine months. The left stump was sound and well; it was very difficult to detect any pulsation in the femoral artery on that side. The right foot was swollen, cold, mottled in colour, and the toes were gangrenous. He complained of intense pain in the foot and was evidently in great suffering. There was no pulse to be felt in any artery below the femoral. The radial artery was not hardened or tortuous and there was no evidence of disease in other arteries. The urine was of specific gravity 1020, free from sugar, and contained a trace of albumin. On Dec. 2nd I amputated through the condyles of the femur by Lister's method. The popliteal and two or three small arteries were tied; the wall of the popliteal artery was much thickened. Convalescence was again slow, but he went to Clacton with the stump healed on Jan 11th and returned on Feb. 6th, having gained 13½ pounds in the four weeks. I have seen this man occasionally since. The left stump has given him no trouble, but on his last visit to me the right thigh was very painful; it was cold, rather blotchy and blue, and I could not feel any pulse in the femoral artery. I advised him to keep it very warm.

The liability for the disease to attack both lower limbs was illustrated by a case that I reported to the Clinical Society, and which will be found recorded in vol. xxiv. of that society's Transactions.

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*Age.*—My youngest patient was 19 years of age and my oldest was 60 years of age. It seems to be a disease of adult life, not occurring in infancy or in old age. Dr. Bryant and Dr. W. Hale White have recorded a remarkable case in the fifty-fifth volume of the Guy's Hospital Reports of an infant, six months old, who had gangrene of the toes and distal half of the foot. The child was greatly emaciated and died. There was widespread arterial disease, the inner coat was greatly thickened and there was calcification of the deep layers of the intima and of the media, so that the artery cracked when bent and felt gritty. I hesitate to include this case in the same category as those which we are considering. It seems to stand out as almost unique—possibly it is of the same nature as one recorded by Durante.[17]

*Etiology.*—Various views of the causes of this form of endarteritis have been advanced. Friedlander attributed it to the influence of injury and external cold. Wwedensky believes that there is a neuritis associated with, and possibly antecedent to, the arteritis. Sternberg attributed it to the effect of various injuries upon a weak and depressed vascular system. Hollis suggests that by the repeated impact of foreign particles against the sides of a small artery a state of "irritation" or "molecular unrest" is established within certain endothelial cells. This unrest manifests itself physiologically by rousing the little central mass of nuclear protoplasm of the cell from a dormant condition to activity. We really know so little of the ultimate causes and processes of disease that it is difficult to accept or to reject such theories as these Of all known causes syphilis is perhaps the most certain; influenza, alcoholism, erythromelalgia, cold, contusions, and previous thrombosis or phlebitis may be regarded as more or less important factors in originating the disease. Diabetes sometimes causes gangrene by exciting this disease.

*Treatment.*—There is little to say on the subject of treatment. In the earlier and less advanced stages of the malady prolonged rest of the affected part is certainly called for. Local warmth should be carefully supplied. Anodynes often in large quantities may be necessary for the relief of pain. Massage carefully carried out has also an important influence in furthering the opening out of collateral vessels, in promoting absorption through the lymphatics, and in freeing the muscles and other tissues of their waste products. In the acute stage the parts are too tender to admit of it; in all early cases it must be most cautiously employed; where the disease seems to be arrested and we have to deal with its effects only it may be used a little more vigorously. Small mummified areas may be left to separate naturally, especially in the hand. For more extensive gangrene, which is always, I believe, of the "mixed" form, amputation is necessary; the relief to pain that the operation affords always reconciles the patient to the mutilation The operation should be done high above the gangrenous spot and at a place and by a method that throws least strain upon the vessels of the part. Thus amputation through the lower part of the thigh is to be preferred to disarticulation at the knee and musculo-cutaneous flaps are to be chosen in preference to skin flaps.

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[17] Brit. Med. Jour., Epitome, 1899, vol. i., p. 542.

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WOMEN AS SURGICAL OPERATORS.—At the annual meeting in connexion with the New Hospital for Women, Euston-road, Sir Thomas Smith, Bart, K.C.V.O, F R C.S Eng., referred to the surgical work done at the New Hospital for Women. At that hospital, he said, women surgeons had gained a reputation for good surgery and had dissipated all prejudice which had existed against them. There had been attended at that hospital upwards of 1900 cases of maternity and up to within a short time of that meeting he could have said that among those cases there had been no deaths. The case he referred to, however, was not a maternity case, and so they had 1900 cases of maternity attended from that hospital without a death. 577 major operations had been performed with a mortality of under 6 per cent. He had been allowed personally to attend the operations in the operating theatre of the hospital, and he had very great pleasure in stating that he had nothing but admiration to express for the great dexterity and celerity with which the operations had been performed.

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ABSTRACT OF

# The Hunterian Lectures

ON

# THE ANATOMY, PHYSIOLOGY, AND PATHOLOGY OF THE IMPERFECTLY DESCENDED TESTIS.

*Delivered before the Royal College of Surgeons of England on Feb. 24th, 26th, and 28th, 1902,*

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## LECTURE III.[1]

*Delivered on Feb. 28th.*

### PATHOLOGY—(*continued*).

*Cysts of the imperfectly descended testis.*—There are at least four varieties of cysts that may be developed in connexion with the testis that has failed to reach the scrotum. These are: (1) cysts formed upon the epididymis; (2) cysts found in the testis proper; (3) cysts due to fœtal remains; and (4) dermoid cysts, teratomata.

1. Cysts in connexion with the epididymis.—Like the cysts derived from the epididymis of the fully descended organ, so those found associated with the arrested gland are of two varieties, the small and the large. In the former the cysts never tend to enlarge to any but a comparatively small size, certainly not greater than that of an ordinary cob-nut. They are not therefore of much clinical importance. In the latter there is a tendency for the cysts to grow and they may assume such proportions as to become of very definite clinical significance. Small cysts in the epididymis of the fully descended organ are uncommon before the age of 40 and almost unknown previous to puberty. In the imperfectly migrated gland, on the other hand, they may appear earlier and more frequently than this. They may be sessile or pedunculated. When of the latter form they occasionally give rise to the production of loose bodies in the tunica vaginalis of the testis. Not infrequently they are multiple and sometimes they are very numerous. When pedunculated they cause small balloon-shaped swellings, very firm to the touch, almost giving the impression that they are of a solid nature. When sessile they raise the serous membrane so as to produce small oval or hemispherical tumours, also with the feeling of extreme hardness If punctured a clear fluid, as a rule, escapes, which but rarely contains spermatozoa. It is possible that rupture of one or more of these small cysts may lead to the production of a vaginal hydrocele on account of some irritation set up by the extravasated fluid These small cysts owe their origin to one of two sources. Either they are involution cysts due to the distension of previously existing cavities or they are connected with some fœtal remains, and are therefore cysts of congenital origin If they are derived from the blockage and dilatation of the ducts or tubes of the epididymis they must be formed in the depths of this structure and gradually reach the surface, there to elevate the serous covering of the tube and in some cases to become pedunculated, possibly as the outcome of the almost constant pressure and movement to which they are likely to be subjected. Further, should this view of their origin be correct it would be thought that there ought to be a definite communication between the ducts of the epididymis and the cavity of the cysts themselves. It is doubtful whether such has ever been shown to exist, for by careful injection of the ducts with mercury none has ever penetrated into the interior of the cysts, and it is but rare to discover any traces of spermatozoa in the fluid even of those cysts which are found associated with a normally placed and developed testis. But in spite of these facts it does not necessarily follow that a communication

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[1] Lectures I. and II. were published in THE LANCET of March 1st, 1902, p 569.

a month or so the toes were quite gangrenous. All this time the patient suffered very severe pain. The urine was sometimes quite normal; more often it contained just a trace of albumin. Nothing was detected abnormal in the arteries of the upper limbs. On May 27th the urine was noticed to be of a dark orange colour, of specific gravity 1020, no albumin or sugar. This colour persisted up to the man's death. Albumin was sometimes present in small quantity. It did not give the reaction for blood-pigment, bile, or indican. On the 31st the gangrene of the foot was found to be extending towards the heel. He was frequently sick and was unable to retain any food. On June 3rd the vomiting, with much retching, returned, and persisted until the man died from exhaustion on the 8th. On the 7th a tumour was discovered occupying the greater part of the lower half of the abdomen. Its outline was indistinct and it was dull on percussion. Above it percussion revealed a distended stomach. This "tumour" was not present three days before, it was uninfluenced by emptying the bladder by a catheter.

At the post-mortem examination a gumma was found in the liver as well as definite syphilitic infiltration; the vessels of the liver were not thickened. A gumma was also found in the spleen. The lower 21 inches of the ileum were firmly adherent to the anterior abdominal wall and to each other. This portion of the intestine was purple-black in colour, without any peritoneal lustre, and its coats were greatly thickened by an infiltration of coagulated blood, so that its lumen was considerably diminished. The intestine above this was greatly distended. The colon was filled with feculent material of a dark coffee-ground colour. The mesentery corresponding to the affected part of the bowel was much thickened from extensive hæmorrhage into it. The superior mesenteric vein was distended with a thrombus quite up to the commencement of the portal vein. The superior mesenteric artery was markedly thickened and its lumen was almost obliterated in parts. A thrombus extended from the upper end of the left external iliac artery to the popliteal artery, and on the right side a clot extended from the upper end of the external iliac artery down into the tibial arteries two inches below the bifurcation of the popliteal. The heart was healthy and the abdominal aorta was healthy except for small areas of atheroma around the mouths of branches. A microscopical examination of the vessels showed distinct thickening of the intima of the superior mesenteric artery with a loose connective tissue; in the arteria dorsalis pedis there were similar changes except that the endothelium, though irregularly thickened, had a dense structure as compared with the loose one seen in the mesenteric artery.

In this case the cause of the disease was probably syphilis. There were old endarteritis of the vessels in the feet, more recent extensive thrombosis of the arteries above, and in addition arteritis and (possibly) phlebitis of the superior mesenteric vessels with thrombosis leading to great hæmorrhage into the walls of the intestine with corresponding loss of function.

I have seen two cases of this disease in the upper limb, one of which is very fully recorded in Vol. xvii. of the Transactions of the Clinical Society.

CASE 7.—This case occurred in a young brickmaker. The painful illness extended over about eight months and the main arteries of the limb were gradually obliterated up as high as the upper end of the brachial artery. There was gangrene of the tips of two digits. While the disease was active the pain was most intense.

CASE 8.—This case occurred in the right arm of a woman between 30 and 40 years of age whom I saw on one occasion only as she was passing through London. After an attack of influenza she began to suffer with severe pain in the right hand and forearm, made worse by using it and by exposure. The pain was attributed to neuritis; remedies had no effect upon it. When I saw her she was much better and was returning home after a visit to Bournemouth. I found the radial, ulnar, and brachial arteries as high as the middle of the arm converted into firm pulseless cords; the forearm was a little wasted, tender, bluish red in colour, not so warm as its fellow, and painful if allowed to get cold. The other arteries of the body and of the heart were healthy; so was the urine.

CASE 9.—A man, aged 43 years, was seen by me once only in 1896. He had lived a healthy active life and there was no history of rheumatism, gout, or syphilis. In the autumn of 1890 when out shooting he suddenly felt his right leg become cold, weak, and painful; this was not due to any injury, strain, or exposure to cold. He lay up for many weeks at the suggestion of his medical man who told him that there was no pulse in his posterior tibial artery. He remained well until September, 1891, and then, again when out shooting, he was seized with the same kind of pain in his left foot. This attack was more serious than the former one; the pain was very severe, and the second toe became almost gangrenous. Among others he was seen by M. Charcot who prescribed prolonged rest in the recumbent position. He rested the leg for six months. After that he had two attacks of phlebitis—one in each thigh. When I saw him in 1896 he could walk with comfort for 100 yards, but then a painful sense of weakness in the legs came over him. When standing he was always desirous of sitting or lying down. Each leg was slightly œdematous and the circulation in the feet and lower part of the leg was distinctly sluggish. On the right side there was no pulse in either of the tibial arteries; on the left side there was no pulse in the anterior tibial and only a slight one in the posterior tibial vessel. Both femoral arteries were normal and so were the arteries of the head and neck. There was no disease of the heart or any sign of aneurysm; the urine was 1018, acid, and free from albumin and sugar. The liver and spleen seemed to be healthy. I recommended this patient to use his legs a little more and to have them carefully massaged. I have not seen him since. The history of this case is certainly peculiar. The sudden onset of the symptoms is suggestive of embolism, but there was no obvious source of such. The recurrence of the attack under exactly similar circumstances is striking, and yet I cannot see what clue it gives us. In other respects the case resembles endarteritis, and in each leg the obliterated vessel could be clearly demonstrated.

These cases illustrate several points in the history of this affection in addition to those which I mentioned in my preliminary summary. I will refer to a few of them. The *extreme chronicity* of the process is well exemplified by Cases 2 and 6, where it had been going on for three and a half years before I saw the patients. Cases 3, 4, and 5 are, on the other hand, examples of a more acute form of the malady, and intermediate grades are furnished by Cases 1, 7, and 8. The *pain* which is experienced by these patients is generally very severe. I have never seen stronger evidence of extreme pain in anyone than I witnessed in the young man whom I saw in 1884 (Case 7). He often writhed on the floor in agony that even large doses of morphia had little effect in controlling. Pain is the earliest symptom noticed; it has been described as "rheumatic," also as pain in the bones; it is referred to the deep structures of the part and is aching in character, and the intensity of this ache may culminate in an agony. It is often worse at night, is generally made worse by use of the part, and is always aggravated by exposure. The *ischæmia* varies in degree. As a rule there is not much alteration in colour until gangrene is threatened; what there is is blotchy in distribution and dull red. It is specially noteworthy that it is not accompanied with anæsthesia. There may be slight wasting of the part or swelling from œdema—this generally due to venous obstruction. The *gangrene* may be a slow mummification or a more rapid sphacelation; in some cases the parts preserve their consistence and proportions quite remarkably, being neither "dry" nor "moist." This variation, no doubt, depends upon the degree to which venous obstruction is associated with the arterial obstruction, if, indeed, it is present at all. The case which Dr. Pasteur has allowed me to use (Case 6) showed the extreme degree of venous thrombosis in the mesentery with extensive hæmorrhage into the bowels and between the layers of the mesentery. Another feature of the gangrene often noticed is its patchy distribution—in some cases, no doubt, it is total up to a given level (Case 3), but in others (e.g., Cases 1 and 2) separate areas of the foot necrose. This is easily explained by the irregular extension along the arteries of the obstructive disease. *Fever* is usually present when the disease is active (see Cases 1, 2, and 7), and other constitutional effects may be witnessed, such as wasting, loss of appetite, and delirium. The state of the *other arteries* of the body is naturally laid great stress upon in diagnosis. Widespread atheroma or calcification affords an obvious explanation of interference with the circulation in distal parts; but, of course, this disease may occur in patients who manifest some degree of atheroma, and an instance of this is afforded in Case 1.

*Sex.*—The disease is certainly more common in men than in women—in my cases in the proportion of seven to two mixed-celled variety. These two sarcomata are of rapid growth, commencing generally in the connective tissue of the body of the gland, being but rarely primary in the epididymis. At first the new growth is confined within the tunica albuginea of the testis and is often surrounded with fluid in the tunica vaginalis, which fluid is not infrequently blood-stained. As the growth advances it transgresses the confines of the tunica albuginea and involves the surrounding structures. Usually, however, lymphatic glandular infection or secondary deposit in viscera has taken place before considerable local extension has occurred. The sarcomatous elements often in the imperfectly descended organ appear first in the connective tissue forming the walls of the poorly developed seminal tubules, or in the tissue found between these parts. The invasion of the round or spindle cells displaces the tubules further and further from one another and at the same time compresses them so that their shape becomes completely altered, their lumen entirely obliterated, and their imperfect epithelial cell-lining destroyed. The deposition of interstitial fibrous tissue in these sarcomata is not uncommon and in some instances it is present in a marked degree. No instance of cartilage being present with the sarcomatous elements in a testis which has not reached the scrotum is on record. This is a matter of some interest seeing that cartilage is comparatively frequently found in the spindle-celled sarcoma of the fully descended organ. The testis is extremely rich in minute lymphatic vessels which surround the tubules and, uniting to form larger vessels, run in the septa between the compartments of the gland. Most of the lymph is conveyed by these channels to the corpus Highmori and thence by way of larger vessels, constituting the lymphatics of the cord, to the lumbar lymphatic glands. Efferent vessels from these glands pass to the receptaculum chyli, and thus in one case at least there was an enlargement of the left supra-clavicular glands in sarcoma of an inguinal testis. Secondary growths in every way resemble the primary lesions. They may be found in the lungs, liver, spleen, and peritoneum, in addition to the lumbar glands. Blood-vessels, particularly the inferior vena cava, are sometimes the site of the secondary deposits whereby a blocking of their lumen is caused which very seriously impedes the return of blood from the lower extremities. Œdema may also be produced by the direct pressure upon the vena cava of an intra-abdominal sarcomatous testis or by the diseased lymphatic glands in the right lumbar region. By microscopical examination there will be seen either round or spindle cells disseminated in the meshes of the connective tissues of the gland, and in some instances it is difficult to say whether the trabeculæ present are those which originally existed in the gland or are themselves part of the new growth. As in cases of sarcoma of the fully descended organ, there is but little recorded that is of much value as to the real cause of the sarcoma of the partially descended testis

On analysing a considerable number of instances of sarcoma of an imperfectly migrated testis—in fact, all those which it has been possible to find in medical literature up to the present year—some interesting facts become apparent. It will be found that the disease begins most usually between the ages of 20 and 40 years, and it is therefore a disease rather of middle life. Sarcoma of the fully descended gland is not uncommon in quite young boys. There does not seem to be any marked difference as to which side the new growth attacks. This is not altogether in accord with the fact that the right testis is the one that is most frequently the seat of arrest. There is, therefore, possibly some reason why the testis on the left side should be more frequently the seat of the new growth, but none suggests itself to me. The position that the testis has been found in when diseased is also of interest. Inguinal inclusion is the most common place for the arrested testis to be found, and thus it is the general position in which sarcomatous imperfectly descended testes are discovered. After this position the abdominal retention is the next most productive of a malignant new growth, which again is of interest from the fact that abdominal inclusion is not the second most common position for the testis to be found, just below the superficial abdominal ring being more usual.

A definite history of an injury, such as a blow, a squeeze, &c., is not infrequently given in the cases where sarcoma attacks the testis lying in the scrotum, but when the lesion affects the imperfectly descended testis a predisposing cause of this nature is not nearly so common or so clear. On the other hand, it must be remembered that the testis which lies in the inguinal canal is subjected to numberless though probably slight occasions of violence, which may pass in the greater number of instances without any notice being taken of them. As was shown when inflammation of the arrested organ was being discussed, muscular effort, blows, extrusion of the organ suddenly through the deep or through the superficial abdominal ring, all contribute to the onset of inflammation and possibly also to the incidence of neoplasms. When the testis is retained within the abdominal walls it cannot be so exposed to the risk of injury, and yet it has been seen that the abdominal inclusion does not by any means protect the gland from the onset of malignant disease. It is conceivable that the pressure to which the testis is so repeatedly subjected when it lies in the inguinal canal may produce such an effect upon the ill-developed gland as to induce some fœtal relic within it to start into malignant activity in the form of a sarcomatous growth. On the other hand, it is possible that some injury may result in the formation of reparative material which being arrested at that stage when its cells so closely resemble those of sarcoma this new growth may actually later derive its origin from this source. And, lastly, it is possible that the injury to which the testis is exposed may result in such an inflammation that the tissues of the gland are unable to withstand the ingress of parasites, should such be the essential cause of the new growth. Previous inflammation, other than that which has been due to trauma, is rare also apparently in cases of new formation in the arrested testis. There is, however, at least one case in which the malignant trouble was preceded by a double orchitis secondary to parotitis, but the interval of time between the two affections was considerable—namely, 23 years.

An associated hernia is such a common complication of an imperfectly descended testis that caution must be used in considering that it has any influence on the production of malignant disease, though this has been much asserted by some observers. In the 854 instances of arrest of the testis accompanied by hernia which have been already mentioned in no single instance was a sarcomatous growth also present. Further, out of 26 cases of sarcoma of the imperfectly descended testis only two had a hernia associated with the new growth, and in neither of these did the protrusion seem to have any bearing whatever on the production of the neoplasm. Two other patients had worn trusses for supposed herniæ, but only with a possible relation to the onset of the new growth in one. But there are two facts that must be taken into consideration under this heading—namely, that many instances of imperfect descent of the testis are mistaken for hernial protrusions and a truss is applied, and also that a hernia is in reality so frequently present with the arrested testis that a truss is needed, and therefore most of the cases in which a sarcoma has developed were in patients who had been wearers of trusses. It is, however, extremely doubtful whether a truss worn over the inguinal canal in the case of an inguinal inclusion of a testis really does produce harmful pressure on the gland provided that the truss is of right construction and size. On the other hand, the pressure of a truss if applied over a testis that is lying just below the superficial abdominal ring is ever prone to excite the occurrence of inflammation in the organ, but sarcoma, as has been seen, is rare in a gland so placed Heredity does not seem to have the slightest influence on the production of sarcoma of the imperfectly descended testis. The persistence or not of embryonic traces or cell elements—possibly such as might reasonably be termed "rests"—in testes that have failed to reach their normal resting-place is a matter which requires a closer histological investigation and for this purpose, among others, every imperfectly descended testis that is removed should be submitted to a rigid microscopic examination. Further, in every castration for early sarcoma—and such early removal should be of increasing frequency, and whether the gland affected is an imperfectly or a fully descended one—the testis should be considered as likely to throw some light on this till now obscure question of etiology.

It is well recognised that vestigial elements in imperfectly developed organs are peculiarly liable to give origin to malignant growths As was shown in the first lecture, the examination of testes which have failed to reach the scrotum reveals in most of the instances two distinct abnormalities Firstly, the seminiferous tubules are atrophic or undeveloped and present no signs of spermatogenesis; and may not have existed at an earlier period in the formation of the cyst than the one that was taken for the injection experiment and that the aperture may have become obliterated. Spermatozoa, moreover, may in time become completely disintegrated in the fluid in which they lie. Another argument in favour of this origin of these small cysts is the fact that the epithelium lining their wall bears a close resemblance to the epithelium of that which lines the ducts of the epididymis The senile changes which occur in the epididymis when the testis is fully descended and the similar changes which take place in the testicular tissue of the organ that has failed to reach the scrotum consequent upon repeated attacks of inflammation both go to prove that there is an increase in the interstitial connective tissue. This new fibrous tissue, by a process of contraction to which it is ever prone, may bring about the obliteration of portions of certain ducts with a dilatation of that part which remains patent.

With regard to the theory that these small cysts of the epididymis owe their origin to the dilatation of fœtal remains, such as traces of the Müllerian duct, in favour of it may be advanced the fact that the enlargement usually occurs close to the spot where such remains are likely to be left, and against it is the knowledge that they seldom, if ever, are found in quite early life, a period of existence in which it might be thought that they would have been common.

The large cysts of the epididymis of the retained testis have their origin altogether within the substance of the epididymis in the majority of instances and are probably closely connected with the seminal tubulès or the ducts of the epididymis. They are usually single, have a tendency to increase in size so that at times they assume considerable proportions, they often contain spermatozoa when the gland to which they belong is functionally active, and they can be readily palpated from without. They are generally found during the period of sexual activity and are therefore more common at an earlier age than the small cysts of the epididymis which have been just dealt with. The fluid that they contain is, as a rule, limpid and colourless or slightly milky. Occasionally the contents may be straw-coloured, more like the fluid found within an ordinary vaginal hydrocele.

There are, again, two theories as to the causation of these large cysts of the epididymis. They may in the first place be derived from the dilatation of one of the seminal tubules, one of the vasa efferentia, one of the ducts of the epididymis itself, or even in the sac that may result from the inflammation produced by the rupture, traumatic or spontaneous, of a seminal tubule. There is no doubt about the fact that spermatozoa in the active gland are generally present in the fluid of the encysted hydrocele, and that this proves a direct communication probably between the sperm-producing testis and the connected cyst. Further, the origin of some of these large cysts sometimes from fœtal remains is certain, and in these instances the sac will not contain any spermatozoa. Large cysts of the epididymis are not common in association with the imperfectly descended testis.

2. Cysts in connexion with the testis proper.—That the tissue forming the testis proper can originate cysts is a fact that is well recognised. They have been for the most part designated simple cysts or cystic fibroma of the testis. They are found in connexion with the imperfectly descended testis as well as in that organ which has reached the scrotum. They are, perhaps, more usually seen in the lower animals than in the human subject. Sometimes the cyst is derived from the tissue forming the corpus Highmori and its walls are then lined with ciliated epithelium.

3. Cysts in connexion with fœtal remains.—Attention has been already drawn to the fact that cysts in connexion with the imperfectly descended testis are derived from the dilatation of certain fœtal remains, and perhaps more frequently so in the arrested testis than in the one that has fully descended. They are extremely interesting, and may be classified as follows: those derived (*a*) from the hydatid of Morgagni; (*b*) from the Wolffian tubules; (*c*) from the vasa aberrantia; and (*d*) from the paradidymis. These cysts vary much in their characters. One which was found in the abdomen of a sheep, considered before death to be of the female sex, occupied the pelvis. It was four and a half inches in diameter. The vas deferens of the same side was thin and membranous and impervious save at its termination. It was lost on the wall of the cyst, which was filled with a greenish-grey putty-like substance and composed chiefly of a fatty material. Part of the cyst wall was covered with outspread bands of striped muscle. The cyst was composed of an inner layer of embryonic tissue of round cells, a middle layer of spindle cells, and an outer layer of fibrous tissue; these three layers probably represented the different stages in the development of the tissue. The cyst was either an undifferentiated genital gland, or it had been developed in connexion with the remains of the Wolffian body. Another cyst that I have examined was formed from the left testis which was removed from the abdomen of a horse, aged two years The right testis was normal and had been removed from the scrotum three months earlier. The left testis was converted into a cyst of about the size of a walnut, the cavity of which contained a fatty, sebaceous-like material and in the centre of it a worm, probably a strongylus armatus, which had reached the gland almost certainly by passing down the spermatic artery. I have further lately seen an almost similar specimen, in which again a strongylus was found.

4 So-called dermoid cysts of the testis that have reached the scrotum have been undeniably observed, although it is no doubt true that some of the specimens that have been recorded are more likely to have been dermoids derived from the scrotal tissues rather than from the testicular body. I have not been able to trace a record of a true dermoid cyst of an imperfectly descended testis in the human subject, but there are several recorded in animals, and particularly in the horse. In these latter animals they have been shown to present similar characters to the common dermoids found in the human ovary, and probably their origin is somewhat the same. They may be in reality an attempt on the part of nature to produce a descendant from germinal epithelium which has remained from the primary genital mass but undifferentiated, and this abortive development, being without the help of the union of cells of the two sexes, results in the formation of the heterogeneous mass of sebaceous matter, teeth, ossifying cartilage, bone, hairs, &c. It is conceivable that the testis, and especially the imperfectly descended one, may contain the same or similar cells to those which the ovary does and from which this curious growth takes its origin. Finally, it must always be borne in mind that cysts may develop in connexion with malignant disease of an imperfectly descended testis, though such seem to be rarer than in the case of the gland that has passed into the scrotum.

*Malignant new growths of the imperfectly descended testis* —Both sarcoma and carcinoma may attack an imperfectly descended testis, but the mesoblastic neoplasm seems to be of rather more frequent occurrence than the epiblastic. Sarcoma of a testis, whether of the fully descended or the partially migrated organ, is a comparatively rare disease. Considering that every male, except an infinitesimal minority, has at birth two testes, wherever they may be situated, it follows that the number of testes that might become the seat of a new growth of a malignant character is enormous, yet the instances of such lesions admitted into large hospitals are decidedly small. From the published statistics of one hospital at which over 4000 males are annually admitted there were only 38 cases of sarcoma of the testis, whether fully or imperfectly descended, seen in 15 years, giving an average of two and a half cases a year. It is a matter of extreme difficulty to determine satisfactorily whether a testis that has not reached the scrotum or has passed into an abnormal position is proportionally more liable to become attacked with sarcoma than one which is situated in its usual place. In the 38 cases which have just been alluded to only one was in a testis which was imperfectly descended, the gland lying in the abdomen and belonging to the left side. In a close examination of 48,000 males with hernia 854 had imperfect descent of one or both testes, or one in every 56, and none of these presented any form of malignant disease of the testis, though many had had attacks of inflammation of the testis, and in some instances these had been often repeated. The forms of sarcoma that affect the testis when it is retained are similar to those that occur in the normally placed gland, although there are not, so far as I have been able to determine, instances of every variety. The varieties as a rule met with are: the round-celled, whether chiefly of large or small cells, the spindle-celled, the mixed-celled, and the myxo-sarcoma. Chondro-sarcoma, lympho-sarcoma, and melano-sarcoma have not apparently been observed in connexion with a partially descended testis. Round celled sarcoma is undoubtedly the most usual form to occur, and after this the

secondly, there is a distinct increase in the interstitial cellular elements. It is open to question whether these latter cells, which appear in so much larger numbers than they do in normally placed testes, have an epithelial or mesoblastic origin. If epithelial, then they may be the remains of the lining of aborted seminiferous tubes; if mesoblastic, probably they are the remnants of the Wolffian body. Although there does not at present seem to be sufficient evidence definitely to determine their source, yet on the whole it would appear that they owe their existence to mesoblastic rather than to epiblastic tissue The cells, moreover, are somewhat like those of the adrenal, particularly the cortex of this structure, but it is doubtful whether they can be taken as the remains of such. As has been stated, the majority of malignant growths of the testis which has been arrested are of a sarcomatous nature, and the occurrence of these interstitial cells may therefore be an explanation of this frequency.

While it has already been noticed that carcinoma of the imperfectly descended testis is less common than sarcoma of the gland, yet it is probable that this is even more distinctly so from the fact that many of the cases which have been recorded as "cancer," "encephaloid," or "medullary" disease by the older writers were in reality examples of sarcoma rather than of carcinoma. Several varieties of carcinoma are met with in the imperfectly descended testis: the encephaloid or medullary, the schirrous and the colloid, and, lastly, a rare form of chondro-carcinoma. The cells are spheroidal, oval, or polygonal. They are abundantly rich in protoplasm, and do not, as a rule, have very distinct outlines, both of which peculiarities are strong evidence of their epithelial origin. The most probable source of the cells, and, therefore, the growth of which they form the chief part, is from the imperfectly formed epithelial elements of the seminal tubules. Another reason why carcinoma of the arrested testis is comparatively uncommon may be found in the fact that there is so little active epithelium present in the poorly developed organ. In the fully descended gland the tubular epithelium is constantly, between puberty and the involution of the testis, undergoing division and subdivision for the formation of spermatozoa, a condition which has a predisposing influence upon the incidence of carcinoma.

While sarcoma of the arrested testis occurs most usually between the ages of 20 and 40 years carcinoma is, on the whole, a disease of rather later life—namely, between the ages of 30 and 50 years The two sides of the body are equally liable to the affection. Of the more recent cases in which the microscopical examination has proved the presence of undoubted carcinoma the testis has been found in the abdomen, the inguinal canal, and just below the superficial ring. There is no record of a case of carcinoma of the testis when lying in the perineum or in Scarpa's triangle.

With regard to causation, injury would seem to have rather more association with the onset of carcinoma than it had with the development of sarcoma, and this particularly when the testis has been lying in the inguinal canal Previous inflammation has apparently no very definite bearing upon the origin of the disease In a few instances there has been a history pointing to some hereditary influence. Secondary glandular and visceral infection is very rapid in its appearance and the case runs a peculiarly quick and fatal course.

*Hydrocele in connexion with imperfect descent of the testis.*—When the testis is arrested within the abdominal cavity no tunica vaginalis testis is developed, and therefore there can be no intra-abdominal hydrocele formed. But when the organ has passed beyond the bounds of the abdominal wall, then a processus vaginalis testis will always be found of a smaller or greater extent, and a hydrocele may therefore be in evidence Further, it is true that when a testis is retained within the abdomen sometimes a processus vaginalis may be drawn down into the inguinal canal, the scrotum, or even into the perineum or Scarpa's triangle. It is possible, then, to have a hydrocele outside the abdominal wall with a testis which is completely retained within that cavity. A short classification of hydroceles in connexion with imperfect descent of the testis may be given as follows: inguinal, scrotal, bilocular, and trilocular, peritoneal, and in Scarpa's triangle. An inguinal hydrocele may be further subdivided into two classes—one in which the testis is still within the abdomen and the other in which it is lying in the inguinal canal. When the testis is within the abdomen the processus vaginalis may still communicate with the general cavity of the peritoneum, or it may be shut off from that space, and the same difference may be found in association with the inguinal testis. When the processus vaginalis has been formed, but the testis is arrested within the abdomen, it is usual for the pouch of peritoneum to remain in communication with the general cavity of the serous membrane. Fluid, therefore, which may be found in it has either been formed *in situ*, or has drained down from the peritoneal cavity In both cases it will be freely reducible, or rather it will flow back into the abdomen when the patient assumes the horizontal posture. When the communication is obliterated, then, when fluid collects, there will be irreducibility and the cyst will present all the signs of an inguinal hydrocele of the processus vaginalis, except for the fact that a testis can never be felt within it.

Inguinal hydrocele with the testis in the canal is the most common form of hydrocele in association with an arrested testis. When there is a communication of the processus vaginalis it may be either a very free one or it may be blocked by the testis. When the tunica vaginalis is shut off from the general cavity of the abdomen the hydrocele may be unilocular or multilocular. The fluid found within is of the ordinary serous hydrocele nature or is inflammatory in its origin and characters In a certain number of instances the testis, when it occupies a position at the upper limit of the canal, acts as a plug to the deep abdominal ring and thus prevents the return of the fluid within the sac except under special conditions. Unilocular hydroceles with the communication with the abdominal cavity shut off may be acute or chronic, the acute being as a rule due to inflammatory attacks, while the chronic is probably caused by slight recurrent inflammations. The multilocular hydroceles are the outcome of inflammation, which has not only caused the formation of the fluid but has led to production of adhesions which have divided up the cavity of the tunica vaginalis. Truss pressure is not a marked cause of hydrocele, for out of 936 cases in which a truss had been worn only 32 were complicated by a hydrocele. A scrotal hydrocele is one in which the processus vaginalis testis has passed into the scrotum beyond the place of the arrest of the accompanying testis. As a rule, that part of the pouch which lies below the superficial abdominal ring becomes shut off from the rest before the onset of the hydrocele. Such a condition is not so very uncommon. The presence of the fluid in the upper part of the scrotum may be mistaken for the testis in its normal position, particularly if the scrotum on that side is fairly well developed and there is no evidence of any inguinal swelling. These scrotal hydroceles do not, as a rule, reach any great size. The peritoneal process accompanying the testis is by no means infrequently drawn down into the scrotum beyond the site of the arrested testis and in such a case the original communication with the general cavity of the abdomen may remain patent or it may become cut off. If it is closed, then all the conditions necessary for the development of a bilocular hydrocele are present and the same may be said of those instances in which the imperfectly descended testis acts as a plug at the deep abdominal ring, preventing the return into the abdomen of any fluid which has collected in either portion of the processus vaginalis, the inguinal or the scrotal. Distension, therefore, of the inguinal and scrotal parts of the peritoneal pouch will lead to the formation of one variety of bilocular hydrocele and a swelling will be apparent both in the groin and in the scrotum. Both of these portions may be tense or one may be lax and the other firm, and on pressure being applied to the less tense sac the other will become more firm immediately. Fluctuation can also be readily obtained through from one to the other As a rule, both portions are translucent and although the inguinal portion may have a forward impulse on coughing, the scrotal part is not thereby affected. When the communication with the abdomen is cut off, the fluid in both of the swellings will be irreducible Where an aperture still exists, even though the testis may block the opening, there will be variations in the fulness and the tenseness of the swellings, and under certain conditions the whole of the tumour may be made to disappear by reason of the reduction of the fluid. If the inguinal portion can be emptied the testis, smaller than normal, can usually be readily palpated in the inguinal canal and generally at the upper end of that passage. In some instances the scrotal portion of the sac may be completely shut off from the inguinal part and both become distended with fluid. This separation is commonly at the site of the superficial ring.

A second variety of hydrocele occurs when the testis is arrested whether within the abdomen, in the inguinal canal, or just below the superficial ring, and that portion of the processes vaginalis which lies in the canal becomes distended with fluid and, being unable to contain more without further space, a secondary sac is formed in one of the planes of the abdominal wall. Sometimes this additional portion is protruded in the space between the aponeurosis of the external oblique and the muscular tissue of the internal oblique muscles. In other cases, less common, with the testis lying without the superficial ring, the primary pouch of peritoneum also traverses the same aperture, and then, instead of entering the scrotum, which may be practically absent, mounts upward and outward on the abdominal wall in the plane between the aponeurosis of the external oblique and the skin.

The third variety is very rare and consists of a secondary sac lying in the extra-peritoneal tissue behind the body of the os pubis in the pelvis. The three varieties may be respectively termed the deep interstitial, the superficial interstitial, and the properitoneal. Sometimes the superadded sac may become of enormous size and may mount up on the abdominal wall so as to lie in such position as to simulate a hydronephrosis.

A few instances of trilocular hydrocele have been seen. In these there is, in addition to the two pouches of the bilocular hydrocele just described, a third pouch which lies in the upper part of the scrotum. The arrested testis is to be found either in the canal or just below the superficial ring. Probably in the majority of instances the inguinal and the scrotal portions are the first to be formed and subsequently the interstitial diverticulum is produced. When the testis has passed into the perineum the processus vaginalis that accompanies it may become the site of a collection of fluid, usually as the outcome of an inflammatory process in the ectopic organ. In like manner a testis which has passed into Scarpa's triangle is liable to have its surrounding peritoneal sac distended with fluid as the outcome of inflammation.

*Hernia in association with imperfectly descended testes.*—It is probable that a hernial protrusion is the most frequent pathological condition associated with imperfect descent of the testis. The exact frequency in which inguinal hernia accompanies imperfect descent of the testis is difficult to estimate, but from a review of a large number of cases it is distinctly more than half. As has already been seen, in the majority of cases of arrested testes there is an associated want of formation or arrest of development of the annexa. Thus it happens that there remains a patent process of the peritoneum into which abdominal viscera may descend. It is, however, necessary, as in the herniæ of congenital type with a testis normally placed, that there should be some other besides this primary predisposing factor, and, indeed, other than the imperfect development which so often accompanies imperfect descent. Neither of these two factors is in itself sufficient actually to determine protrusion. 35 per cent. of the cases of herniæ with arrested testis occur in the first year of life, while of those in persons who are not affected with imperfect descent, only 7·7 per cent. commence before 12 months of age, showing that the congenital defect has an undoubted influence on the onset of the protrusion. Inguinal and abdominal inclusion favour the early development of a hernia. The exciting causes may be such as are present in other so-called congenital herniæ—viz., disease of the lungs, over-distension of the abdomen by intestinal gas, obstruction to the outflow of urine, constipation, and other less common conditions. It may be also true that the presence of the testis in the inguinal canal may in itself prevent the proper sphincter-like action of the lower fibres of the internal oblique and transversalis. This and other reasons would seem to show that the position in which the testis is arrested plays an important part in the frequency with which a hernia is developed.

There are at least five varieties of inguinal hernia associated with imperfect descent of the testis—namely, bubonocele, scrotal, interstitial, cruro-scrotal, and superficial perineal As would be naturally expected a bubonocele is the most frequent form of inguinal hernia to be met with in association with imperfect descent of the testis. It is, moreover, the early stage of several of the other varieties. With the non-closure of the processus vaginalis nothing is more likely to happen when the testis is lying in the inguinal canal than that some of the abdominal viscera should prolapse into the waiting sac The same may happen when the testis is completely retained within the abdomen, provided that a peritoneal pouch has entered the canal and has remained patent. As a rule the testis can be palpated and its exact position made out. Sometimes the contents of the sac will obscure the presence of the gland which, however, can be felt on the return of the viscera within the abdomen. The deep ring, the potential opening in the transversalis fascia through which the organ has entered the canal, is usually small and therefore strangulation, should it occur, is frequently very severe. There is generally an intimate relationship between the back of the peritoneal pouch and the short spermatic cord and their separation the one from the other may be a matter of some difficulty in a radical operation upon the hernia. In some cases there will be found adhesions between the contents of the sac and the upper part of the testis, thus rendering the hernia an irreducible one. In the history of the case it is frequently stated that the swelling which has been noticed in the inguinal region becomes larger on the advent of the hernia. A bubonocele may also be associated with a testis which has transgressed the confines of the inguinal canal and is lying in front of the body of the os pubis. Further, a scrotal hernia may be associated with imperfect descent of the testis. By this term is meant a protrusion which, having left the inguinal canal through the superficial ring, has passed into the scrotal tissue and has not distended the fold between the scrotum and the thigh. A scrotal hernia is further covered with dartos tissues and expands more or less the scrotum, which, until the entrance of the hernia into it, has remained undistended owing to the absence of the corresponding testicle. When the scrotum is but poorly developed then the hernia will actually have to dilate the parts so as to obtain room for itself. The explanation of the scrotal protrusion lies as a rule in the fact that a pouch of peritoneum is so frequently drawn down by the gubernaculum testis into the region of the scrotum beyond the site of the arrested organ.

By an insterstitial hernia is understood an inguinal protrusion, a part or the whole of the sac of which is placed in one or other of the planes of the abdominal wall, transgressing the ordinary limits of an inguinal hernia. Interstitial herniæ may be associated with imperfect or abnormal descent of the testis. On the other hand, they are also found present in males whose testes have reached their normal position in the scrotum. And further, they actually occur in female subjects in a proportion greater than in the male sex; and lastly, all instances of inguinal hernia associated with imperfect descent of the testis are not of the interstitial variety. These statements of fact go to prove conclusively that imperfect transition of the testis is not a necessary accompaniment of interstitial inguinal hernia. An examination, however, of a large number of cases of this form of protrusion in males leads to clear evidence that imperfect descent of the testis has a marked bearing upon a development of the hernia. Nearly 1 per cent. of inguinal hernia in male subjects is of the interstitial variety; 5 per cent. of those who show hernial protrusions with imperfect descent of the testis present one or other of the varieties of interstitial hernia. In males 73 4 per cent. of interstitial inguinal herniæ are associated with more or less imperfect descent of the testis. The position of the arrested testis is a matter of great interest in view of the relationship which undoubtedly exists between the imperfect descent and the interstitial sac. The position, however, which is observed is usually that which is found at the time when the patient presents himself for treatment, and it does not, therefore, necessarily imply that this was the site of the testis when the hernia first made its appearance. It is not common, however, for the testis to alter its position after the commencement of a hernia, though undoubtedly this may occur in some cases. In the majority of instances the arrested testis is found in the inguinal canal and at a position towards the lower end of that space. Next, it is most usually seen just below the superficial abdominal ring, and in some of these latter cases it is conceivable that it may have been pushed by the oncoming hernia through the superficial ring In a few instances it may be found lying on the aponeurosis of the external oblique and towards the anterior superior spine of the ilium, again having reached the spot by the pressure exerted by the protruded viscera.

Several theories have been advanced to explain the relationship between the arrest of the testis and the development of an interstitial hernia. First, there is the position of the testis itself, for if lying in the inguinal canal and especially if occupying a position at its lower and inner end, tethered by a short cord, it may act as a barrier to the of the contents of a hernial sac through the superficial abdominal ring. Repeated expiratory efforts drive the viscera into a patent processus vaginalis, and after a time tend to force the testis and the viscera from the canal through the superficial ring. The gland is, however, prevented from being extruded by its short cord and the peritoneal pouch dilates in the plane of least resistance, but on the other hand, the smallness of the superficial ring itself may be the cause of the imprisonment both of the testis and of the contents of the sac. Secondly, want of muscular development in the inguinal region is not infrequently present with a want of descent of the testis and may be a reason why the hernial sac insinuates itself in the planes of the abdominal wall, though it is open to question whether the abnormal condition of the muscles is not rather the result of the pressure exerted by the hernial protrusion than the cause of the formation of the sac. Thirdly, it is possible that some abnormal drag of the gubernaculum testis on a portion of the peritoneum near the abdominal opening of the processus vaginalis may cause adventitious pouches to be formed and these lead to the production of an interstitial sac.

There are three chief varieties of interstitial hernia usually described. In the first the sac is found between the aponeurosis of the external oblique and the muscular fibres of the internal oblique and this is the one which is most frequently associated with arrest of the testis. It usually presents an external swelling which is very characteristic in its shape and extent, beginning in the region of the inguinal canal, it mounts upwards and outwards towards the anterior superior spine of the ilium. The whole course of the gradual formation of the tumour can be observed if a patient, after the contents of the sac have been reduced, is directed to lie on his back and cough. There is no other condition that will give the spectacle of a gradually increasing tumour under these circumstances. The shape of the swelling is usually ovoid and its margins are fairly distinct. It is flattened on the surface and does not project far from the abdominal wall. The limits of the tumour may be wide and sometimes it reaches as high as the costal arch, sometimes it may overlap the rectus muscles or may even hang down in front of Poupart's ligament so as to simulate a femoral hernia. The contents of the sac can generally be reduced, though sometimes it is a difficult matter entirely to empty it. When reduction has been effected, the ill developed testis can be made out lying in the inguinal canal. When there is a scrotal portion as well as an interstitial, the former is usually secondary to the development of the latter and usually *indicates that the resistance to the increase in the* primary part has become greater than that to the entry of the viscera into the scrotum. The second variety of interstitial hernia is that in which the sac is placed between the aponeurosis of the external oblique and the skin. It also is not infrequently associated with an arrest of the testis. The method in which the sac has arrived at its position may be one of two. Either the peritoneum has been pushed forward and then upward through a gap in the aponeurosis, or the sac, at first lying in the inguinal canal, has transgressed the bounds of this space, protruded through the superficial ring and finding its way into the scrotum blocked has turned upward on the abdominal wall. In both of these the direction taken by the hernia is that of the least resistance for the attachment of the deep layer of the superficial fascia to the front of Poupart's ligament would bar its progress into the thigh. As a rule, the external swelling present in the second variety is more pronounced than that of the first. Some help may be obtained in the diagnosis between the two forms by requesting the recumbent sufferer to raise *his head and shoulders*, and thus throw into action the abdominal muscles when if the external oblique is placed in front of the sac the hernia will become more tense but will not evidently increase much, while if the aponeurosis be posterior to the bulk of the swelling then this will be markedly enlarged and its tenseness will only be augmented in proportion to its size. The third form of interstitial hernia is that in which the sac lies in the plane between the transversalis fascia and the peritoneum, that is in the extra-peritoneal tissue. This is a rare form and one which is not so commonly associated with imperfect descent of the testis. There is usually a scrotal portion of the sac in addition to the properitoneal. In almost every case the additional portion of the sac within the abdominal wall has not been recognised until after death or during an operation on account of the strangulation for there is no external swelling and it is rare that the deeper part of the sac can be palpated. There are two chief sites in which the secondary sac may be placed, one the iliac fossa and the other the prevesical region.

By a cruro scrotal hernia is meant a hernial sac which distends not the scrotal tissues but the fold of skin which is found between the scrotum and the thigh. The hernia, therefore, will be covered *with ordinary cutaneous tissue and* not with dartos. It is always associated with an imperfect or abnormal descent of the testis, and the hernia follows the organ. The testis, usually an imperfectly developed one, having left the inguinal canal, is for some reason—probably either a want of development of the scrotal tissue or a tenseness of the fascia at the entrance of the scrotum—prevented from continuing its further descent into that region. It will therefore remain permanently in the cruro-scrotal fold, or pass into the perineum or possibly into Scarpa's triangle. If the processus vaginalis testis which accompanies it remains patent *viscera may descend into it* and gradually distend the fold so as to form a cruro scrotal hernia. As the hernia progresses the pouch becomes larger and more definite and hangs directly downwards and does not pass backwards into the perineum. On examining a patient who is the subject of this form of hernia it will be first noticed that the scrotum is either imperfectly developed on one side or, being developed, it is not distended. Lying external to it and separated from it by a distinct sulcus is an adventitious sac covered with normal skin. On the patient being requested to cough an expansile impulse will be felt in the swelling. The contents of the sac are usually reducible and after reduction a small testis may usually be felt fixed at the bottom of the pouch of skin which, when the viscera are not distending it, hangs lax and is thrown into folds.

A hernia which accompanies the testis into the tissues of the perineum may be designated a superficial perineal hernia, it being termed superficial to distinguish it from that rare form of perineal hernia which leaves the pelvis through a gap in its floor. The course of the descent of a superficial perineal hernia is from the abdomen, along the canal, through the superficial ring, past the scrotum near its entrance and then backwards towards the margin of the anus. This form of hernia is necessarily rare, for perineal ectopia of the testis is uncommon, and even when present an accompanying hernia is seldom seen. It appears as an elastic swelling on one side of the perineum with an expansile impulse on cough, frequently resonant on percussion, and usually reducible on pressure. After the *return of the contents of the sac the testis, sometimes well* developed, can be felt lying by the side of the anus and often tethered by a band, probably of the gubernaculum, to the region of the external sphincter or tuberosity of the ischium.

# NEUROLOGICAL FRAGMENTS

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## No XX

### LOWEST LEVEL FITS.—HYPOTHESIS ON THE MECHANISM OF LARYNGEAL CRISIS IN TABES DORSALIS.—THE PHYSIOLOGICAL FACTOR IN SYMPTOMATOLOGIES.—REMARKS ON SOME OTHER LOWEST LEVEL FITS.—TERMINAL TONIC SPASMS

A LARYNGEAL crisis is one of what (THE LANCET, Feb 16th 1895 p 394) I called the Sub-maladies of Tabes Dorsalis. It is a respiratory, or a respiratorily beginning, fit; it is a "lowest level fit"—a "bulbar fit." Even a slight laryngeal crisis is a rudimentary respiratory fit. In severe laryngeal crises loss of consciousness and convulsion may occur. Grasset in his important work ("Maladies du Système Nerveux," 4th ed., vol i, p 548, chapter on "Progressive Locomotor Ataxy") writes: "Raymond a bien décrit les divers troubles bulbaires laryngo-bronchiques et notamment ce que Charcot et Cherchewsky ont étudié sous le nom de *vertige laryngé*." The following is by Raymond: "Au moment de la crise le malade éprouve une sensation de strangulation, de chaleur au larynx, suivie d'un véritable spasme de la glotte. Puis le malade perd connaissance; il tombe sur le sol, *il est pris de secousses comme un épileptique* [no italics in original]. Après quoi il se relève, et cette attaque peut se renouveler un certain nombre de fois." The following quotation from Marie's very valuable work, "Lectures on Diseases of the Spinal Cord," New Syd. Soc. (translated by Lubbock), p. 278, gives Charcot's account of the *laryngeal ictus* in tabes: "...... Usually a burning sensation is first felt in the region of the larynx, representing a form of aura, which is followed by a dry cough occurring in short hacks, the patient then falls to the ground in a state of unconsciousness, and most often general flaccidity, whilst epileptiform convulsions sometimes occur, causing the attack at times to resemble those which occur in epilepsy; the face is usually livid."

The convulsions and loss of consciousness result, I suppose, from asphyxia set up by spasm of the muscles closing the glottis and perhaps from spasm of other muscles of the thoracic cage. We must bear in mind that whilst highly supervenous blood annuls the function of convolutions, at least of those of the Rolandic area (motor province of the Middle Level), it strongly stimulates the Respiratory and some other "vital" centres of the Lowest Level.

In a severe laryngeal crisis the glottis is in an extreme expiratory condition; possibly, it is completely closed. In this note I state an hypothesis as to the neuro-muscular mechanism of this spasmodic closure or narrowing. It is an impossibility that this positive, or rather super-positive, thing can be caused, in a strict sense of the word cause,[1] by a negative lesion of any part of the nervous system. Yet in most cases of these crises in tabetics there presumably *is* a negative central lesion, one answering to paralysis of the abductor muscles of the vocal cords (Semon)—a negative lesion of the medulla centres for these muscles, some motor centres of the Lowest Level. I shall in what follows consider cases in which the abductor muscles are paralysed until I come towards the end of this note when cases of tabetic patients subject to laryngeal crises, who have no discoverable paralysis of these muscles, will be spoken of.

The adductor muscles of the vocal cords and, inferentially, their medulla centres, some centres of the lowest level, are, in the cases I now deal with, intact and so, too, is the Respiratory, medulla, centre, a Superior centre of the Lowest Level.[2]

Applying to a particular case a notion from Duchenne as to muscular action in general, I suggest that in normal conditions the abductor and adductor muscles of the vocal cords act in a "coöperation of antagonism" ("in amicable antagonism")—that when the glottis of a healthy man is widened there is *preponderating* action of the abductor muscles with *moderating* action of the adductors, and that when it is narrowed, there is *preponderating* action of the adductor muscles with *moderating* action of the abductors. And correspondingly, that there is simply preponderating activity, as the case may be, of the abductor or of the adductor (medulla) centres.[3]

We must bear well in mind that for respiration proper these two laryngeal motor centres, abductor and adductor (and also phrenic and costal motor centres, other centres of the Lowest Level) are some of the fundamental centres of the Lowest Level and are subordinate to the Respiratory (medulla) centre, one of the Superior centres of the Level. There is no reason to suppose that the abductor and adductor muscles of the vocal cords (similarly for muscles, which for the present I ignore, of other parts of the thoracic cage) ever act *respiratorily* (Organic Duty), except at the instigation of the Respiratory (medulla) centre and by intermediation of the medulla abductor and adductor motor centres for these muscles. I say "act respiratorily" because I suppose (THE LANCET, Feb. 23rd, 1895, p. 476, and THE LANCET, Dec. 16th, 1899, p. 1659) that the laryngeal motor centres (the medulla abductor and adductor centres spoken of) when they serve in an Animal Duty—that is, in "voluntary operations," that is, in operations of cerebral (Higher Level) initiation, for example, preparatory to, and during certain kinds of "effort" (as when lifting a heavy weight with one hand) or in drawing in the breath when told—are acted on (as are also the costal motor centres for movements of another part of the thoracic cage) by intermediation of fibres of the pyramidal tract which on their way down from motor centres of the Middle Level (Rolandic Region) of the cerebral subsystem pass by and, so to say, evade the Respiratory centre. I went further in speculation, suggesting that during these animal services of the thoracic cage the (medulla) Respiratory centre is inhibited by cerebral Higher Levels.[4]

To repeat. In health the Superior, the Respiratory, medulla, centre, my supposition is, puts both the abductor and adductor muscles of the vocal cords in action during inspiration proper (the action of the abductors then preponderating) and does or can put them both in action in expiration (the action of the adductors then preponderating); in each case the Respiratory centre acts on the vocal cords by intermediation of the subordinate abductor and adductor, motor centres.[5]

Besides governing the abductor and adductor motor centres of the medulla region of the lowest level, the Respiratory (medulla) centre—I am still dealing with healthy conditions—governs also those other motor centres of the cervical and dorsal regions of the lowest level which are for the diaphragmatic (phrenic centres) and costal movements (costal centres) of the thoracic cage. Now speaking of tabes abdominal muscles are, no doubt, engaged expiratorily in some stage of severe laryngeal crises. To return to a consideration of the mechanism of these Crises. (What I shall call the Respiratory Nervous System of the Lowest Level is, of course, much more complex than I describe it )

So far I have spoken as if in the case of those tabetic patients who are subject to laryngeal crises the only flaw in the Respiratory Nervous System of the Lowest Level is a *negative* lesion of, or of more or less of, the motor centres for the abductor movements of the vocal cords. Presumably there is something more than this negative lesion; there is also, I submit, an opposite, a super-positive, lesion, a so-called "irritative state," of some sensory medulla elements—a super-positive functional lesion produced by some pathological process.

In those tabetics who are subject to laryngeal crises it is said that there is hyperæsthesia of some part of the mucous membrane of the larynx. This, however, is, I suppose. understood to mean that there is an "irritative state," or as I prefer to say, a super-positive functional state of medull *sensory* nervous elements representing that part.[6] We ar here, it will be seen, assuming that there are sensory medull centres subservient to the Respiratory centre; these ar sensory companions of the motor abductor and adducto centres which are subordinate to the Respiratory centre. I healthy people the respiratory centre is, or can be, acted o *upwardly* from the mucous membrane of the larynx by inter mediation of these subservient sensory centres; and th muscles of the vocal cords are acted on *downwardly* by th of the contents of a hernial sac through the superficial abdominal ring. Repeated expiratory efforts drive the viscera into a patent processus vaginalis, and after a time tend to force the testis and the viscera from the canal through the superficial ring. The gland is, however, prevented from being extruded by its short cord and the peritoneal pouch dilates in the plane of least resistance, but, on the other hand, the smallness of the superficial ring itself may be the cause of the imprisonment both of the testis and of the contents of the sac. Secondly, want of muscular development in the inguinal region is not infrequently present with a want of descent of the testis, and may be a reason why the hernial sac insinuates itself in the planes of the abdominal wall, though it is open to question whether the abnormal condition of the muscles is not rather the result of the pressure exerted by the hernial protrusion than the cause of the formation of the sac. Thirdly, it is possible that some abnormal drag of the gubernaculum testis on a portion of the peritoneum near the abdominal opening of the processus vaginalis may cause adventitious pouches to be formed and these lead to the production of an interstitial sac.

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[1] See remarks on the use and abuse of the words "cause," THE LANCET, Dec. 12th, 1896, p. 1662

[2] See THE LANCET, Feb 23rd, 1895, p 476, on Superior and Subordinate Centres of the Lowest Level.

[3] Possibly what we call the abductor medulla centre simply represents movements of the abductor muscles much more than it does movements of the adductors; similarly, *mutatis mutandis*, for the adductor centre.

[4] I here refer the reader to a case of supposed pneumonia recorde (No. XII., THE LANCET, Dec. 22nd, 1894, p 1472), in which with loss o the respiratory movements of the intercostal muscles, perfect "volun tary" (cerebral) movement of these same muscles remained possibl The knee jerks were absent.

[5] The term centre, as here applied in the expressions "abducto centre" and "adductor centre" and on other occasions, is not use rigidly Horsley and Semon (Phil. Trans., vol. 181 (1890), pp. 187–21 have, however, found that experimental excitation of two differen particular parts of the medulla oblongata produces, of one, adductio of the other abduction of the vocal cords." (In beginning the investigations on this matter Semon and Horsley found abductio alone to be represented in the medulla oblongata).

I may here mention that Risien Russell has found that movement both of the adductors and of the abductors of the vocal cords a represented in the cortex cerebri of the dog. The former (adductio are represented in the præcrucial gyrus, just where it terminates i the narrow isthmus which connects it with the anterior composit gyrus, as had been previously found by Krause and by Horsley an Semon. The latter (abduction) is represented in the anterior com posite gyrus just behind the supra-orbital sulcus and below the level the imaginary prolongation of the coronal sulcus, to touch the supr orbital sulcus. "The Influence of the Cerebral Cortex on the Laryn Phil. Trans., vol. 187 (1876) B. pp. 59–81.

[6] That there are so called "irritative" states of some centr elements of the lowest level in many tabetic patients is clear; I ref to "lightning pains"; these pains (super-positive things) cannot owing to a negative state (sclerosis, loss of function and structur destruction, of fibres), but must be owing to an exactly opposi functional state of some central nervous elements, I suppose to a s called "irritative" condition of cells of sensory centres of the cor In "Neurological Fragments" (THE LANCET, March 5th, 1892, p. 51 I spoke, quoting Semon, of an "irritative state" of the adduct centres in laryngeal crises. I now suppose, as I have said in the tex that these motor centres are healthy and that their over-action these crises is brought about in a very indirect way.

There are three chief varieties of interstitial hernia usually described In the first the sac is found between the aponeurosis of the external oblique and the muscular fibres of the internal oblique and this is the one which is most frequently associated with arrest of the testis. It usually presents an external swelling which is very characteristic in its shape and extent; beginning in the region of the inguinal canal, it mounts upwards and outwards towards the anterior superior spine of the ilium The whole course of the gradual formation of the tumour can be observed if a patient, after the contents of the sac have been reduced, is directed to lie on his back and cough There is no other condition that will give the spectacle of a gradually increasing tumour under these circumstances. The shape of the swelling is usually ovoid and its margins are fairly distinct. It is flattened on the surface and does not project far from the abdominal wall. The limits of the tumour may be wide and sometimes it reaches as high as the costal arch, sometimes it may overlap the rectus muscles or may even hang down in front of Poupart's ligament so as to simulate a femoral hernia The contents of the sac can generally be reduced, though sometimes it is a difficult matter entirely to empty it. When reduction has been effected, the ill-developed testis can be made out *lying in the inguinal* canal. When there is a scrotal portion as well as an interstitial, the former is usually secondary to the development of the latter and usually indicates that the resistance to the increase in the primary part has become greater than that to the entry of the viscera into the scrotum. The second variety of interstitial hernia is that in which the sac is placed between the aponeurosis of the external oblique and the skin. It also is not infrequently associated with an arrest of the testis. The method in which the sac has arrived at its position may be one of two. Either the peritoneum has been pushed forward and then upward through a gap in the aponeurosis, or the sac, at first lying in the inguinal canal, *has transgressed the* bounds of this *space, protruded* through the superficial ring, and finding its way into the scrotum blocked has turned upward on the abdominal wall. In both of these the direction taken by the hernia is that of the least resistance, for the attachment of the deep layer of the superficial fascia to the front of Poupart's ligament would bar its progress into the thigh. As a rule, the external swelling present in the second variety is more pronounced than that of the first. Some help may be obtained in the diagnosis between the two forms by requesting the recumbent sufferer to raise his head and shoulders, and thus throw into action the abdominal muscles, when if the external oblique is placed in front of the sac the hernia will become more tense, but will not evidently increase much, while if the aponeurosis be posterior to the bulk of the swelling then this will be markedly enlarged and its tenseness will only be augmented in proportion to its size The third form of interstitial hernia is that in which the sac lies in the plane between the transversalis fascia and the peritoneum, that is, in the extra-peritoneal tissue. This is a rare form and one which is not so commonly associated with imperfect descent of the testis. There is usually a scrotal portion of the sac in addition to the properitoneal. In almost every case the additional portion of the sac within the abdominal wall has not been recognised until after death or during an operation on account of the strangulation, for there is no external swelling and it is rare that the deeper part of the sac can be palpated. There are two chief sites in which the secondary sac may be placed, one the iliac fossa and the other the prevesical region.

By a cruro-scrotal hernia is meant a hernial sac which distends not the scrotal tissues but the fold of skin which is found between the scrotum and the thigh. The hernia, therefore, will be covered with ordinary cutaneous tissue and not with dartos It is always associated with an imperfect or abnormal descent of the testis, and the hernia follows the organ. The testis, usually an imperfectly developed one, having left the inguinal canal, is for some reason—probably either a want of development of the scrotal tissue or a tenseness of the fascia at the entrance of the scrotum—prevented from continuing its further descent into that region. It will therefore remain permanently in the cruro-scrotal fold, or pass into the perineum or possibly into Scarpa's triangle. If the processus vaginalis testis which accompanies it remains patent viscera may descend into it and gradually distend the fold so as to form a cruro-scrotal hernia. As the hernia progresses the pouch becomes larger and more definite, and hangs directly downwards and does not pass backwards into the perineum. On examining a patient who is the subject of this form of hernia it will be first noticed that the scrotum is either imperfectly developed on one side or, being developed, it is not distended. Lying external to it and separated from it by a distinct sulcus is an adventitious sac covered with normal skin. On the patient being requested to cough an expansile impulse will be felt in the swelling. The contents of the sac are usually reducible and after reduction a small testis may usually be felt fixed at the bottom of the pouch of skin which, when the viscera are not distending it, hangs lax and is thrown into folds.

A hernia which accompanies the testis into the tissues of the perineum may be designated a superficial perineal hernia, it being termed superficial to distinguish it from that rare form of perineal hernia which leaves the pelvis through a gap in its floor. The course of the descent of a superficial perineal hernia is from the abdomen, along the canal, through the superficial ring, past the scrotum near its entrance, and then backwards towards the margin of the anus. This form of hernia is necessarily rare, for perineal ectopia of the testis is uncommon, and even when present an accompanying hernia is seldom seen. It appears as an *elastic swelling on one side of the perineum with an* expansile impulse on cough, frequently resonant on percussion, and usually reducible on pressure. After the return of the contents of the sac the testis, sometimes well developed, can be felt lying by the side of the anus and often tethered by a band, probably of the gubernaculum, to the region of the external sphincter or tuberosity of the ischium.

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# NEUROLOGICAL FRAGMENTS.

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*(Continued from* THE LANCET, *Dec. 16th, 1899, p. 1660.)*

## No. XX.

### LOWEST LEVEL FITS.—HYPOTHESIS ON THE MECHANISM OF LARYNGEAL CRISIS IN TABES DORSALIS.—THE PHYSIOLOGICAL FACTOR IN SYMPTOMATOLOGIES.—REMARKS ON SOME OTHER LOWEST LEVEL FITS.—TERMINAL TONIC SPASMS.

A LARYNGEAL crisis is one of what (THE LANCET, Feb. 16th, 1895, p. 394) I called the Sub-maladies of Tabes Dorsalis. It is a respiratory, or a respiratorily beginning, fit; it is a "Lowest Level fit," a "bulbar fit." Even a slight laryngeal crisis is a rudimentary respiratory fit In severe laryngeal crises loss of consciousness and convulsion may occur. Grasset in his important work ("Maladies du Système Nerveux," 4th ed., vol. I., p. 548, chapter on "Progressive Locomotor Ataxy") writes: "Raymond a bien décrit les divers troubles bulbaires laryngo-bronchiques, et notamment ce que Charcot et Cherchewsky ont étudié sous le nom de *vertige laryngé.*" The following is by Raymond: "Au moment de la crise, le malade éprouve

The loss of consciousness may be partly owing to upward discharges from the Respiratory centre to the cerebral cortex (Binswanger and Horsley) or to super-venosity, or to both.

It may be said that if the mechanism of a severe laryngeal crisis be as stated, if the asphyxia started by closure of the glottis is increased in compound degree to a maximum by increasing stimulation of the respiratory centre by blood getting more and more super-venous, the patient must die in his attack. But, as I mentioned in a former paper (THE LANCET, March 5th, 1892, p. 509), Risien Russell has found[10] that a dog has gone through all stages of artificially produced asphyxia (convulsion, of course, in one of the stages), and yet, on removal of the tracheal clamp, has recovered without artificial respiration.

Mr. Victor Horsley was so good as to make for me some experiments and observations on the condition of the vocal cords during artificially produced asphyxia. (The animals were etherised.) It is of importance with regard to the asphyxia occurring in severe laryngeal crises to know what goes on in the larynx in the asphyxia of otherwise healthy animals in which abductor as well as adductor movements of the cords are possible. The following is the substance of an account written for me by Mr. Horsley.

A cat etherised was tracheotomised; a window was made in the trachea so that the larynx could be viewed from below. At 11.30 A.M. the vocal cords were moving strongly and synchronously with the chest. When the trachea was clamped;—

(A) At the commencement of Inspiration (i.e., abduction);—the cords abduct and remain abducted for about two seconds, and then move synchronously with the movements of the chest which follow and persist during the asphyxial state until towards the end when the cords stop with the chest;—

(B) At the commencement of Expiration (i.e., adduction);—the cords adduct firmly and remain adducted for about four seconds and then move synchronously with the chest as in (A).

If the asphyxial state be kept up until respiration stops and if after that artificial respiration be begun, the following is observed: (*a*) With the *first* insufflation of the chest there occurs an inspiratory movement of the vocal cords (i.e., abduction). (*b*) Next succeed a few irregular movements of the cords partly synchronous with the chest movements which begin to recover and accelerate spontaneously even before the artificial insufflation of the chest is stopped. (*c*) The artificial respiration being stopped it is found that the chest moves rapidly (100 per minute) but that the cords are in strong abduction[11] and remain so. (*d*) Gradually as the effect of the asphyxia passes off the cords begin to move, but very slowly, the abductions being prolonged over the period of two movements of the chest. Consequently the rhythm of larynx to chest is one to three and therefore asynchronous. (*e*) Gradually after about a quarter of an hour normal synchronism is restored.

Mr. Horsley observed the same in a dog except that the abduction arrest of the laryngeal movements was only slightly marked.

In the animals experimented on the abductor muscles and their centres were intact and thus there was inspiratory activity of the vocal cords in asphyxia, a thing impossible in the asphyxia of a tabetic with paralysis of the abductors.

To return to Laryngeal Crises in tabetics. I do not conclude that the internal muscles of the larynx alone are concerned even in the first stage of the severe attacks we call *laryngeal* crises; experimental excitation of the superior laryngeal nerve in a lower vertebrate brings the abdominal muscles into expiratory action. Here is an important matter with regard to operative procedures in tabetic patients subject to severe laryngeal crises. Tracheotomy would obviate the effects of spasm of the adductors of the glottis in a laryngeal crisis, but could not prevent over-activity of other expiratory muscles—those of the abdominal wall, for example. The following quotation from the late Dr. Althaus' work, "Sclerosis of the Spinal Cord," p. 188, is interesting in this regard. In the case of severe laryngeal crises which he mentioned great benefit was derived from tracheotomy, but less severe crises occurred after the operation. Speaking of the severest of three degrees of laryngeal crises, Dr. Althaus wrote (I italicise some words): "The patient may die in the fit, the heart's action being likewise presently arrested. Krishaber has in such a case performed tracheotomy, and thereby probably saved the life of the patient. After the operation the crises became subdued, the laryngeal spasm being much less severe. The patient no longer lost his consciousness in such *fits and seemed to have rather more spasm in the diaphragm than in the larynx.* This man wore a canula for some years afterwards and when he felt an attack coming on, opened it at once in order to allow air to enter the windpipe."[12]

The neuro-muscular mechanism of a laryngeal crisis is supposed to illustrate the same general principle as does that of production of "secondary deviation" of the left eye in the case of paralysis of the external rectus of the right eye, when the patient tries to look far to the right. (I suppose that the lesion is of the trunk of the right sixth nerve.) In both cases there is over-development ("forcing") of one movement consequent on a strong, but yet abortive, attempt to develop an associated movement. There are, however, important differences in the application of the principle to the two cases, that is on the supposition that my hypothesis of the mechanism of a laryngeal crisis is correct. In ocular paralysis there is a negative lesion only, and the "forced movement" (the secondary deviation of the sound eye) is of cerebral (higher level) initiation—is, to speak popularly, the result of strong "volition." In the laryngeal crises of tabes (in which the lowest level alone, not the higher levels is concerned), there is a sensory super-positive lesion (medulla) which when roused into activity from the periphery (laryngeal mucous membrane) next induces very strong activity of the healthy respiratory (medulla) centre. So much for the upward activity. It is with the downward activity from the respiratory centre that there comes the similarity with the production of secondary deviation of the normal eye in the case of ocular paralysis. To speak figuratively, any efforts there could be for the initial narrowing or closure of the glottis by the greatly over-acting respiratory centre in the asphyxial stage (if there be in healthy people the coöperation of antagonism Duchenne supposed) to produce abduction, would be abortive and would necessarily produce very great adduction; this is just as a strong effort (the impulses in this case starting from higher levels) to turn out, abduct, the lamed right eye (in a case of lesion of one sixth nerve to the external rectus of that eye) are abortive and necessarily produce very great turning in (adduction) of the sound left eye.

The same general principle—that the positive or super-positive parts of symptomatologies in cases with negative lesions are owing to action or to over-action of perfectly healthy nervous elements—that these parts of symptomatologies are in the domain of physiology and not of pathology—has been exemplified (THE LANCET, Dec. 12th, 1896, p. 1662) by the case of thigh lifting when there is paralysis of the extensors of the feet, and, very hypothetically, by writer's cramp (and implicitly by other occupation neuroses). In the fifth paragraph, *op. cit.*, the same principle is illustrated by what I suppose to be the mechanism of the ataxic gait (underdoing of some movements and overdoing (forcing) of others). I should apply the hypothesis[13] to the other crises of tabes.

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regarderait en même temps le tronc d'un chien décapité et le tronc d'un chien asphyxie, aurait peine à reconnaître une différence entre les deux à déterminer le genre de mort auquel, l'un et l'autre animal ont succombé. C'est que les mouvements, identiques dans les deux cas, sont dus à la même cause, à l'asphyxie: après la décapitation, le tronc, comme la tête, meurt asphyxié." "La Mort par la Decapitation," par le Dr Paul Loye, p. 116.

[10] Risien Russell has published his researches on this subject, Proc. Roy. Soc., vol. liii, p. 430.

[11] During this persisting abduction Mr. Horsley observed that a swallowing movement of the pharynx was accompanied by the usual closure of the glottis, normal in strength and extent.

[12] In the Medical Times and Gazette, Dec. 15th, 1866, I recorded what I now believe to have been a case of tabes with a laryngeal crisis. I did not then, 35 years ago, make even the diagnosis of tabes. The case is, however, valuable on account of a laryngoscopical examination by the late Sir Morell Mackenzie. Sir Morell Mackenzie diagnosed "paralysis of crico arytenoidei postici dependent on disease within the cranium." The larynx was examined post mortem by the late Mr. Rivington, and atrophy of these muscles was found. No doubt there was disease in the medulla, but no microscopical examination of it was made. I regret that I did not adopt Sir Morell Mackenzie's advice and direct tracheotomy to be done earlier. Laryngo tracheotomy was done, but too late to save the patient.

[13] The word "hypothesis" is hardly used; it is sometimes used as if it meant conclusion, a most erroneous use of it, and sometimes for mere conjecture. I am using it in the text in the sense that when I have opportunities for observation I shall attempt so to analyse the symptomatology of gastric and other crises that I may ascertain whether, to speak very generally, there *is* or *is not* underdoing of one movement, or of some movements, with *necessitated* forcing of another or of some others.

Respiratory centre by intermediation of the subordinate motor, abductor and adductor, centres. In laryngeal crises the action *upwardly* on the Respiratory centre is supposed to be far greater than in health, because those sensory centres, which are on the upward path from the mucous membrane of the larynx to the Respiratory centre, are in an "irritative" condition and are thus intensifiers. And in those cases there are no longer abductor centres to be influenced by the greatly increased downward action of the respiratory centre.

I stay here to remark that, in scientific exposition, I do not use the word "functional" in senses in which it is used clinically by many medical neurologists—as it is used, for example, when it is said of a patient "that all his symptoms are functional." I use it as the adjective of the word function. The function of nervous matter is to "store up" and to "expend" energy (anabolism and katabolism) Hence I use the term function for the dynamics, the physiology, of the nervous system. In what I call a Negative Lesion there is defect or loss of function, defective or lost expenditure of energy—a crude hypo-physiological state; or if the negative lesion be a destruction-lesion, there is loss of function and of structure too—there is a structural and functional vacuum. In a super-positive lesion there is excess of function; there is an increased expenditure of energy—a crude hyper-physiological state (The separation into structure, function and nutrition is, of course, artificial.) I venture to think that there is no such thing as a functional lesion without a corresponding alteration of nutrition or of structure or of both. But then I must say that I only apply the terms negative and super-positive *lesions* to those functional states which are *produced by pathological processes or by injury.* In a patient subject to laryngeal crises, according to the hypothesis stated, there are two opposite functional *lesions;* a negative one (loss of function and of structure too) of the abductor centres and a super-positive one, a so-called "irritative lesion," of sensory laryngeal centres; these lesions, negative and super-positive, are produced by pathological processes. And although the Respiratory centre and the adductor centres are engaged in the crises, these are healthy centres which are compelled *ab extra* to function excessively (hyper-physiologically); they are not the subjects of any pathological process and thus there is not what I should call a *lesion* of either. I speak so far of the first stage of the crises; in the second stage when asphyxia comes on, we may say that these centres are in a pathological state from great super-venosity, there is whilst that super-venosity lasts a change in their metabolism which makes them more explosive. (Of course in increased function of healthy nervous elements there will be correspondingly greater metabolism than in their normal activity.)

To return to the crises, with some recapitulation. The hypothesis is that there are in most of those tabetic patients who are subject to laryngeal crises, two persisting abnormal functional lesions—not only a persistent *negative* functional (in this case a complete structural, a destruction) lesion of motor elements (of the subordinate abductor centres), but also a persistent *super-positive* functional, so-called "irritative," lesion of sensory elements (of the subservient sensory centres) The two opposite functional lesions are supposed to be the only lesions, *the only things, I mean, which are produced by pathological processes;* the remainder of "the respiratory nervous system of the lowest level" is supposed to be healthy—to be untouched by any pathological process And yet this healthy remainder, or much of it (the adductor centres and the Superior, the medulla, Respiratory, centre) is strongly engaged in the crises That the centres of the healthy remainder are really healthy is shown in most cases by the facts that the tabetic patient with persisting paralysis of the abductors of his vocal cords, breathes ordinarily, I mean in the intervals of laryngeal crises, without particular difficulty or discomfort, and that his voice during talking is but little affected Yet now and then a laryngeal crisis, a lowest level fit, occurs and the patient may be cyanosed in it by compulsory engagement of these healthy, these innocent, centres.

Now for the hypothesis as to the mechanism of the paroxysm itself. An impulse from a part of the interior of the larynx (the "epileptogenous," or better, the "peripheral," zone) puts the medulla sensory centres representing that part into great activity, they being, from their "irritative" state[7] very susceptible. These *morbid* sensory centres, easily roused into great over-activity, provoke great over-activity of the *healthy* Respiratory centre. Consequently, from this *healthy* Superior Respiratory centre *abnormally* strong impulses come down to *both* (that is on the principle of coöperation of antagonism) the subordinate abductor centres (or properly speaking to the place where these abductor centres once were) and to the subordinate adductor (healthy) centres; the impulses will be especially to the adductor centres, the nisus[8] being for expiration. The impulses coming down from the healthy respiratory (medulla) centre being in the circumstances abnormally strong, there is induced by them abnormally great over-activity of the healthy adductor centres and consequent excessive development of the adductor movements of the vocal cords; moreover, these movements are no longer restrained, because the abductor movements cannot be developed to act in "amicable antagonism" to fight against, the strong adduction. The glottis is very much narrowed, possibly closed. So much for what we call the first stage of the crisis; it may be the sole stage. We shall next consider the *effect* of this induced adductor spasm of the glottis (and possibly also embarrassment or fixation of the chest walls, *vide infra*)—that is the asphyxia; we might call this, the second stage of a severe laryngeal crisis.

As the blood becomes rapidly very super-venous consequent on the narrowing or closure of the glottis, the Respiratory medulla centre will be still more strongly stimulated but in a different way from that stated so far—it will be stimulated by the super-venous blood. In consequence its over-action, its discharge, will become still greater than it was from stimulation by impulses from the interior of the larynx by way of the subservient sensory centres. Thus the Respiratory (medulla) centre will (still, of course, by intermediation of the subordinate adductor centres) make the vocal cords come still closer, or more tightly, together and will keep up the closure of the glottis. For if in those whose respiratory nervous system of the lowest level is *intact*, abnormally strong discharges of the Respiratory (medulla) centre caused by super-venous blood in asphyxia produce, or constitute one factor in the production of, inspiratory, abductor, movements of the vocal cords first of all, they cannot in the crises we are considering produce these movements at all because the abductor muscles are paralysed from negative lesion of their medulla centres. Moreover (see footnote on effects of experimental excitation of the superior laryngeal nerve in some lower animals) the respiratory centre in a laryngeal crisis is, so to say, "tuned for expiration" by the impulses starting from the laryngeal mucous membrane. The asphyxia will increase in compound degree; for the more the thoracic cage is fixed the more venous does the blood become and thus the greater is the stimulation of the Respiratory centre and therefrom still more persistent is the fixation of the thoracic cage.

The convulsion which sometimes occurs in severe laryngeal crises is presumably owing to abnormally strong discharges of the Respiratory centre set up by super-venous blood; crises of this degree are severe asphyxia fits. Doubtless there are, besides discharges of motor centres for movements of the thoracic cage, discharges of other fundamental motor centres of the lowest level produced by the discharges beginning in the Respiratory centre. Possibly, however, discharges of some of these fundamental motor centres of the lowest level are directly induced by super-venous blood. In this, the second, stage of laryngeal crises there is evidently a Respiratory, an asphyxia, a Lowest Level, a bulbar, fit.[9]

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[7] "Charcot and Krishaber have shown that the (laryngeal) crises (in tabes) are due to reflex contracture of the muscles adjoining the glottis, a contracture which is due to hyperæsthesia of the mucous membrane (of the larynx), these authors having been able to reproduce it by touching that mucous membrane with a soft body" (Marie's Lectures on Diseases of the Spinal Cord, New Syd. Soc. Trans., by Lubbock, p. 279).

[8] I say the nisus for expiration, because experimental excitation of the central end of the superior laryngeal nerve (which nerve supplies the mucous membrane of the larynx sensorily) produces inhibition of inspiration and stimulates expiration. "The superior laryngeal nerve is remarkable for containing a large number of inhibitory respiratory nerves, or nerves which cause arrest of the respiration in expiration, or even fibres causing expiration. One knows that it is the sensory nerve of the larynx, and that foreign bodies or irritating matter in the larynx excites coughing, i.e., forced expiratory acts reflexly." (Physiology, by Landois and Stirling, ed. 4, vol. ii., p. 871.) And if the nisus in a laryngeal crisis were for inspiration, the glottis would not dilate, the abductor muscles being paralysed; I suppose on the contrary, if the principle of "coöperation of antagonism" applies, the great excitation on a strong nisus for inspiration must produce closure.

[9] According to what is said in the following quotation there is certainly producible in a dog a lowest level fit (or rather, so to say, part of one) from asphyxia independently of the higher levels and of the higher parts of the lowest level. "Ainsi, un observateur, qui

The loss of consciousness may be partly owing to upward discharges from the Respiratory centre to the cerebral cortex (Binswanger and Horsley) or to super-venosity, or to both.

It may be said that if the mechanism of a severe laryngeal crisis be as stated, if the asphyxia started by closure of the glottis is increased in compound degree to a maximum by *increasing stimulation of the respiratory centre* by blood getting more and more super-venous, the patient must die in his attack. But, *as I mentioned in a former paper* (THE LANCET, March 5th, 1892, p. 509), Risien Russell has found[10] that a dog has gone through all stages of artificially produced asphyxia (convulsion, of course, in one of the stages), and yet, on removal of the tracheal clamp, has recovered without artificial respiration.

Mr. Victor Horsley was so good as to make for me some experiments and observations on the condition of the vocal cords during artificially produced asphyxia. (The animals were etherised.) It is of importance with regard to the asphyxia occurring in severe laryngeal crises to know what goes on in the larynx in the asphyxia of otherwise healthy animals in which abductor as well as adductor movements of the cords are possible. The following is the substance of an account written for me by Mr. Horsley.

A cat etherised was tracheotomised; a window was made in the trachea so that the larynx could be viewed from below. At 11 30 A.M. the vocal cords were moving strongly and synchronously with the chest. When the trachea was clamped ;—

(A) At the commencement of Inspiration (i.e., abduction) ;—the cords abduct and remain abducted for about two seconds, and then move synchronously with the movements of the chest which follow and persist during the asphyxial state until towards the end when the cords stop with the chest ;—

(B) At the commencement of Expiration (i.e., adduction) ;—the cords adduct firmly and remain adducted for about four seconds and then move synchronously with the chest as in (A).

If the asphyxial state be kept up until respiration stops and if after that artificial respiration be begun, the following is observed : (*a*) With the *first* insufflation of the chest there occurs an inspiratory movement of the vocal cords (i.e., abduction). (*b*) Next succeed a few irregular movements of the cords partly synchronous with the chest movements which begin to recover and accelerate spontaneously even before the artificial insufflation of the chest is stopped. (*c*) The artificial respiration being stopped it is found that the chest moves rapidly (100 per minute) but that the cords are in strong abduction[11] and remain so. (*d*) Gradually as the effect of the asphyxia passes off the cords begin to move, but very slowly, the abductions being prolonged over the period of two movements of the chest. Consequently the rhythm of larynx to chest is one to three and therefore asynchronous. (*e*) Gradually after about a quarter of an hour normal synchronism is restored.

Mr. Horsley observed the same in a dog except that the abduction arrest of the laryngeal movements was only slightly marked.

In the animals experimented on the abductor muscles and their centres were intact and thus there was inspiratory activity of the vocal cords in asphyxia, a thing impossible in the asphyxia of a tabetic with paralysis of the abductors.

To return to Laryngeal Crises in tabetics. I do not conclude that the internal muscles of the larynx alone are concerned even in the first stage of the severe attacks we call *laryngeal* crises ; experimental excitation of the superior laryngeal nerve in a lower vertebrate brings the abdominal muscles into expiratory action. Here is an important matter with regard to operative procedures in tabetic patients subject to severe laryngeal crises. Tracheotomy would obviate the effects of spasm of the adductors of the glottis in a laryngeal crisis, but could not prevent over-activity of other expiratory muscles—those of the abdominal wall, for example. The following quotation from the late Dr. Althaus' work, "Sclerosis of the Spinal Cord," p. 188, is interesting in this regard. In the case of severe laryngeal crises which he mentioned great benefit was derived from tracheotomy, but less severe crises occurred after the operation. Speaking of the severest of three degrees of laryngeal crises, Dr. Althaus wrote (I italicise some words) : "The patient may die in the fit, the heart's action being likewise presently arrested. *Krishaber has in such a case performed tracheotomy, and* thereby probably saved the life of the patient. After the operation the crises became subdued, the laryngeal spasm being much less severe. The patient no longer lost his consciousness in such *fits and seemed to have rather more spasm in the diaphragm than in the larynx.* This man wore a canula for some years afterwards and when he felt an attack coming on, opened it at once in order to allow air to enter the windpipe."[12]

The neuro-muscular mechanism of a laryngeal crisis is supposed to illustrate the same general principle as does that of production of "*secondary deviation*" of the left eye in the case of paralysis of the external rectus of the right eye, when the patient tries to look far to the right. (I suppose that the lesion is of the trunk of the right sixth nerve.) In both cases there is over-development ("forcing") of one movement consequent on a strong, but yet abortive, attempt to develop an associated movement. There are, however, important differences in the application of the principle to the two cases, that is on the supposition that my hypothesis of the mechanism of a laryngeal crisis is correct. In ocular paralysis there is a negative lesion only, and the "forced movement" (the secondary deviation of the sound eye) is of cerebral (higher level) initiation—is, to speak popularly, the result of strong "volition." In the laryngeal crises of tabes (in which the lowest level alone, not the higher levels, is concerned), there is a sensory super-positive lesion (medulla) which when roused into activity from the periphery (laryngeal mucous membrane) next induces very strong activity of the healthy respiratory (medulla) centre. So much for the upward activity. It is with the downward activity from the respiratory centre that there comes the similarity with the production of secondary deviation of the normal eye in the case of ocular paralysis. To speak figuratively, any efforts there could be for the initial narrowing or closure of the glottis by the greatly over-acting respiratory centre in the asphyxial stage (if there be in healthy people the coöperation of antagonism Duchenne supposed) to produce abduction, would be abortive and would necessarily produce very great adduction ; this is just as a strong effort (the impulses in this case starting from higher levels) to turn out, abduct, the lamed right eye (in a case of lesion of one sixth nerve to the external rectus of that eye) are abortive and necessarily produce very great turning in (adduction) of the sound left eye.

The same general principle—that the positive or super-positive parts of symptomatologies in cases with negative lesions are owing to action or to over-action of perfectly healthy nervous elements—that these parts of symptomatologies are in the domain of physiology and not of pathology—has been exemplified (THE LANCET, Dec. 12th, 1896, p. 1662) by the case of thigh lifting when there is paralysis of the extensors of the feet, and, very hypothetically, by writer's cramp (and implicitly by other occupation neuroses). In the fifth paragraph, *op. cit.*, the same principle is illustrated by what I suppose to be the mechanism of the ataxic gait (under-doing of some movements and overdoing (forcing) of others). I should apply the hypothesis[13] to the other crises of tabes.

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regarderait en même temps le tronc d'un chien décapité et le tronc d'un chien asphyxié, aurait peine à reconnaître une différence entre les deux, à déterminer le genre de mort auquel, l'un et l'autre animal ont succombé. C'est que les mouvements, identiques dans les deux cas, sont dus à la même cause, à l'asphyxie : après la décapitation, le tronc, comme la tête, meurt asphyxié." "La Mort par la Décapitation," par le Dr Paul Loye, p. 116.

[10] Risien Russell has published his researches on this subject, Proc. Roy. Soc., vol. liii., p. 430

[11] During this persisting abduction Mr. Horsley observed that a swallowing movement of the pharynx was accompanied by the usual closure of the glottis, normal in strength and extent.

[12] In the Medical Times and Gazette, Dec. 15th, 1866, I recorded what I now believe to have been a case of tabes with a laryngeal crisis. I did not then, 35 years ago, make even the diagnosis of tabes. The case is, however, valuable on account of a laryngoscopical examination by the late Sir Morell Mackenzie. Sir Morell Mackenzie diagnosed "paralysis of crico arytenoidei postici dependent on disease within the cranium." The larynx was examined post mortem by the late Mr. Rivington, and atrophy of these muscles was found. No doubt there was disease in the medulla, but no microscopical examination of it was made I regret that I did not adopt Sir Morell Mackenzie's advice and direct tracheotomy to be done earlier. Laryngo-tracheotomy was done, but too late to save the patient.

[13] The word "hypothesis" is hardly used ; it is sometimes used as if it meant conclusion, a most erroneous use of it, and sometimes for mere conjecture. I am using it in the text in the sense that when I have opportunities for observation I shall attempt so to analyse the symptomatology of gastric and other crises that I may ascertain whether, to speak very generally, there *is* or *is not* underdoing of one movement, or of some movements, with *necessitated* forcing of another or of some others.

The same general principle applies, I think, to all cases of insanity except total dementia and to cases of partial aphasia.

I have not forgotten that laryngeal crises occur in some tabetic patients who have no discoverable paralysis of the abductor muscles of the vocal cords (Semon); to these[14] the foregoing hypothesis does not, it may well be said, apply. But there may in them be the "irritative" state of the sensory, medulla, elements suggested. And once more I urge, having regard to the effects of experimental stimulation of the superior laryngeal nerve, that the nisus of the Respiratory centre when it is stimulated from the "irritative" sensory elements representing the laryngeal mucous membrane, is for expiration, for narrowing of the glottis. I suggest that in the cases where the abductor muscles are not discoverably paralysed the "irritative state" of the medulla sensory elements representing part of the mucous membrane of the larynx is very great.

I will now mention some things which I think ought to be considered when we witness a laryngeal crisis of a tabetic. The limbs are, it is said, convulsed in some severe attacks. But perhaps in some of these attacks there occur only writhings of the limbs as an indirect consequence of arrest of respiration; these writhings, being movements proper, ought not to be confounded with convulsion proper, as I believe is done in accounts of some slight cerebral paroxysms commonly called epileptic. If the limbs were the subject of such an intense discharge as produces convulsion there could not be movements even so little elaborate as those of writhing: there would be tonic or clonic spasm of them and not movements properly so-called. In any case of fits, epileptic or of any other sort, we ought to note the condition of the chest and *whether or not the fit begins thoracically*—begins by fixation of the chest walls or by mere cessation of respiration—with subsequent involvement of the limbs.

I here state the hypothesis regarding patients rendered hemiplegic in infancy by a *cerebral* lesion and who later in life become subject to fits, that in some of the cases the fits are *not cerebral* but bulbar (lowest level fits). Certainly very careful attention should be given to the paroxysms in this clinical group of "epilepsies" to determine whether the *onset* is thoracic, more generally by convulsion of the bilaterally acting muscles (trunk) or by convulsion of the limbs. (So, too, for observations of fits in cases of general paralysis.)

I think it possible—this is merely a speculative inference from reports of friends of patients—that there may occur in some stage of a laryngeal crisis terminal tonic spasms like those of tetany. Such terminal tonic spasms are certainly, in no kind of malady, parts of convulsion proper.[15] We should note whether or not the patient perspires very much during the crisis (supervenosity would account for sweating). If he be deeply asphyxiated, we should note whether his knee-jerks are present or absent (no doubt, however, in nearly every case they will be absent at all times, as part of the tabetic symptomatology). Is there passage of urine or fæces in or just after severe seizures? The passage of fæces might be a result of great venosity and thus not a part of the fit proper, or at least a very indirect result of the nervous discharges in the fit.

In some cases of whooping-cough there occur convulsions which are, I suppose, caused by highly supervenous blood (consequent on severe cough-paroxysms) over-stimulating the respiratory centre. Whether, when in these cases there is considerable supervenosity but no convulsion, there are ever carpo-pedal contractions, I do not know. I believe that these persisting terminal tonic spasms are owing, indirectly, to suspension of the influence of certain cells of the Rolandic cortex, and that when they occur in rickety children in association with, in the intervals of, attacks of laryngismus stridulus, and in some other cases, the cerebral influence is suspended owing to supervenosity annulling the function of small cells of the hand area of the Rolandic cortex. The spasm itself is owing *directly* to permitted over-action of cells of anterior horns for the hands and, as I think, also by non-antagonised cerebellar influence upon those horns, cerebral influence on them being suspended.[16] The *attacks* of laryngismus stridulus in rickety infants are, I have tried to show (*Brain*, April, 1886), lowest level fits caused by very great stimulation of the Respiratory centre by supervenous blood.

# SOME REMARKS UPON "INTERNAL DERANGEMENT" OF THE KNEE-JOINT:

## BASED UPON 59 CASES IN WHICH OPERATION WAS PERFORMED.

BY HERBERT W. ALLINGHAM, F.R.C.S. ENG.,
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"INTERNAL derangement of the knee-joint" is a term that was used originally to describe cases having a well-defined series of symptoms, in which the lesion was held to be always damage or displacement of one of the semilunar cartilages. Since the publication of my book on this subject in 1889 I have met with a variety of cases in point which it may now be of use to put forward. We know now that the trouble within the joint is by no means always of the nature mentioned above.

*Variety of lesion.*—The fact is that a considerable variety of lesions in the knee-joint may all cause the symptoms common to cases known as examples of internal derangement. Moreover, some cases present these symptoms and improve after the joint is opened, although no lesion at all is discerned. This seems just analogous to what happens in certain cases of pain and discomfort in the abdomen in which laparotomy leads to a cure, and presumably the effect upon the two large serous surfaces, the peritoneum and the lining of the knee-joint, when they are exposed is similar and at present equally obscure. In the case of the abdomen such instances are most commonly seen in connexion with tuberculous peritonitis. Possibly similar cases in the knee-joint may represent very early instances of tuberculous affection of the synovial membrane. Or, for want of more definite knowledge, perhaps we may explain some of these cases of symptoms without apparent lesion but with excess of fluid in the joint, in the same way that we veil our ignorance in the matter of hydrocele and say that the proper balance between secretion and absorption is upset in the joints in question. If then we continue to use the term "internal derangement," we must realise that in so describing a case we do not infer that the lesion is necessarily one of a semilunar cartilage. Having now had the opportunity of operating upon a considerable number of such cases, it seemed to me that to put them on record with a brief statement of the actual lesion present in each case might serve a useful purpose by illustrating the various conditions that may produce similar symptoms and demonstrating the consequent difficulty of accurate diagnosis in these cases before the joint is opened. It must not therefore be assumed that I am advocating immediate and indiscriminate opening of the knee-joint in all these cases. The very opposite is, in fact, my aim, one of the main objects of this paper being to lay stress upon what I consider the proper treatment of all these cases if they are seen when the trouble has first arisen.

*Early treatment.*—Suppose a young man to have received a blow upon, or to have twisted, one of his knees. The joint became fixed for a time, very painful, and rapidly swelled. Perhaps something was felt to move or to lock in the joint. Possibly even something was felt protruding from the joint and on pushing this in the joint could be moved again. The treatment to be pursued is briefly this: splinting for a period varying from one to three weeks, followed by massage, passive movements, and properly selected exercises for the joint. The *rationale* of such treatment is that first of all rest is given so that the damage may heal, the split cartilage join, the displaced one grow firmly fixed again, the torn alar ligament mend, &c., and then the slackness of ligaments and muscles consequent upon the distension and the disuse of the joint is remedied by massage and movement. Thus the supporting structures of the joint being thoroughly restored

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[14] It is possible that in these cases there may be (to borrow a term from ophthalmology) a slight degree of weakness, which we may call "insufficiency," of the abductors of the vocal cords.

[15] I have, however, been said to regard carpo-pedal contractions as rudimentary epileptiform convulsions. I admit that I have (Brain, vol. ix., p. 17, April, 1886) written so carelessly that it was naturally inferrible that I thought so. I there wrote "carpo-pedal contractions as well as the severer universal convulsions."

[16] I have suggested that both carpo-pedal contractions and tetany are owing to suspension of cerebral influence; in infants the Rolandic cells for the small muscles of the hand will, I submit, not be well developed, whilst those for the larger muscles moving the hand and fingers will be more developed, hence carpo-pedal contractions. In older people the cells for the small as well as the large muscles will be developed, hence tetany when the function of these cells is annulled. Moreover in infants the pyramidal tract is ill-developed.

## A Table of 59 Cases in which the Knee-joint was Opened for Symptoms of Internal Derangement.

| Case. | Sex and age. | Date. | History and symptoms. | Description of condition found at the time of operation. | Operation. | Result. |
|---|---|---|---|---|---|---|
| 1 | M., 33 years. | September, 1887. | At the Great Northern Hospital. The patient had slipped when carrying a heavy load one and a half years previously. The right knee became painful and swollen; never strong since. | The right internal semilunar cartilage freely moveable over the head of the tibia both forwards and backwards. | The cartilage was sutured to the head of the tibia. | The knee perfect two years later. |
| 2 | M., 20 years. | September, 1888. | With Dr. Wharton Hood. The patient had injured the right knee while playing football. For one year suffered recurrences of pain and swelling. A moveable body felt on the inner side of the joint. | The right internal semilunar cartilage torn away from the anterior attachment. | The semilunar cartilage was removed. No drainage. Transverse incision. | Pain from excessive synovial secretion. Five years later the knee was perfectly sound. |
| 3 | M., 21 years. | October, 1888. | With Dr. Wharton Hood. The patient had knelt on a lump of coal and twisted the left knee which became quickly swollen. After that the knee frequently gave way occasioning sickening pain. | The alar ligament torn away from its attachment to the intercondyloid notch. | The free extremity of the ligament was brought into the wound and fixed. Drainage. Internal incision. | Six months later using the knee in every way without trouble. |
| 4 | M., 30 years. | October, 1888. | At the Great Northern Hospital. For years the patient had had trouble with the left knee, thought to be due to "the small bone being out of place." A rounded body palpable on the outer side of the joint above the external tuberosity of the tibia. This sometimes disappeared. | A pendulous mass consisting of enlarged alar ligament found within the joint. | The mass of ligament was removed and the stump fixed to the lower part of the wound. External incision. | One year later had had no trouble since operation. |
| 5 | F., 26 years. | January, 1889. | At the Great Northern Hospital. Three months previously the patient had fallen from bed with the right knee under her. Sharp pain on the inner side of the knee and subsequently frequent attacks of pain on the inner side of the joint. | The internal semilunar cartilage detached and loose at the anterior extremity. | The semilunar cartilage was fixed to the head of the tibia. Drainage. Internal incision. | Eight months later perfect movement of the joint. |
| 6 | F., 31 years. | March, 1889. | At the Great Northern Hospital. One year previously the patient fell with her left knee under her; pain and swelling of the joint. The joint afterwards always ached and sometimes on rising from kneeling she felt something "jump in the joint" on the inner side. Tender spot on the inner side of the joint. | The internal semilunar cartilage very freely moveable; not detached at either end. | The cartilage was fixed to the head of the tibia. No drainage. Internal incision. | Left cured |
| 7 | M., 47 years. | March, 1889. | At the Great Northern Hospital. The patient had felt sudden pain on the outer side of the left knee when getting out of bed three months previously. The knee became fixed and painful. Similar attacks followed frequently. A small flat body palpable over the external tuberosity of the tibia. | No abnormality in the structures of the joint except some roughness of the external cartilage of the femur. | The joint was opened and explored. No drainage. External incision. | Six months later he had no further trouble. Could walk 20 miles. |
| 8 | M., 41 years. | August, 1889. | At the Great Northern Hospital. Three years previously the patient had fallen down a hole and had had great pain in the right knee. Two months before admission the pain recurred and caused him to fall. The pain and stiffness became chronic. | The internal semilunar cartilage was loose, but not detached at either end. | The cartilage was fixed to the head of the tibia. No drainage. Internal incision. | Redness round the joint. On Sept. 8th pus was let out from the lower end of the incision. Long convalescence. Discharged cured. |
| 9 | M., 22 years. | October, 1889. | At the Great Northern Hospital. The patient twisted the left knee six months before. Could often "start" a lump on the inner side of the joint. This sometimes came when walking and the knee gave way. | The left internal semilunar cartilage was torn away from the head of the tibia anteriorly. | About three-fourths of the internal semilunar cartilage were removed. Drainage. Internal incision. | Discharged "cured" in three weeks. No further history obtained. |
| 10 | M., 22 years. | February, 1890. | At the Great Northern Hospital. One and a quarter years previously the patient fell down some steps. The right knee was very swollen, and a few months later "it gave way under him and he felt a bone come out." | The internal semilunar cartilage was torn across the middle of its anterior inner part. This had left the normal semicircular groove and was lying in the antero-posterior position between the head of the tibia and the internal condyle of the femur. | The detached portion of the semilunar cartilage was removed. No drainage. Internal incision. | Discharged cured. |

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*Variety of lesion.*—The fact is that a considerable variety of lesions in the knee-joint may all cause the symptoms common to cases known as examples of internal derangement. Moreover, some cases present these symptoms and improve after the joint is opened, although no lesion at all is discerned. This seems just analogous to what happens in certain cases of pain and discomfort in the abdomen in which laparotomy leads to a cure, and presumably the effect upon the two large serous surfaces, the peritoneum and the lining of the knee-joint, when they are exposed is similar and at present equally obscure. In the case of the abdomen such instances are most commonly seen in connexion with tuberculous peritonitis. Possibly similar cases in the knee-joint may represent very early instances of tuberculous affection of the synovial membrane. Or, for want of more definite knowledge, perhaps we may explain some of these cases of symptoms without apparent lesion but with excess of fluid in the joint, in the same way that we veil our ignorance in the matter of hydrocele and say that the proper balance between secretion and absorption is upset in the joints in question. If then we continue to use the term "internal derangement," we must realise that in so describing a case we do not infer that the lesion is necessarily one of a semilunar cartilage. Having now had the opportunity of operating upon a considerable number of such cases, it seemed to me that to put them on record with a brief statement of the actual lesion present in each case might serve a useful purpose by illustrating the various conditions that may produce similar symptoms and demonstrating the consequent difficulty of accurate diagnosis in these cases before the joint is opened It must not therefore be assumed that I am advocating immediate and indiscriminate opening of the knee-joint in all these cases. The very opposite is, in fact, my aim, one of the main objects of this paper being to lay stress upon what I consider the proper treatment of all these cases if they are seen when the trouble has first arisen.

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A TABLE OF 59 CASES IN WHICH THE KNEE-JOINT WAS OPENED FOR SYMPTOMS OF INTERNAL DERANGEMENT—*(Continued)*.

| Case. | Sex and age. | Date. | History and symptoms. | Description of condition found at the time of operation. | Operation. | Result. |
|---|---|---|---|---|---|---|
| 23 | M., 17 years. | November, 1891. | With Dr. M. Prickett. Two years previously the patient injured his left knee at football. Entrance to army was now refused on account of the condition of this joint. | The internal semilunar cartilage was so loose that it could be folded back into the joint; it was not detached from either extremity. | As much as possible of the internal semilunar cartilage was cut away and removed. | After three weeks an anæsthetic and massage were required for stiffness. A perfect result. The patient was accepted into the army and seven years later he had experienced no trouble. |
| 24 | M., 46 years. | December, 1891. | At the Great Northern Hospital. There had been pain and effusion into the left knee-joint at times for years. | There was much thickening of the synovial membrane. An osteophytic deposit in the joint was felt directly the finger was inserted into the inner side of the joint. | The osteophytic growth was removed. Drainage for 10 days. Internal incision. | Two years later movement of the joint was free in every direction. No attacks of pain or swelling. |
| 25 | M., 26 years. | December, 1891. | At the Great Northern Hospital. The right knee was swollen and painful off and on for 10 years. It was always weak. There was a small lump on the inner side of the knee. | There was an excess of fluid. The synovial capsule was thickened. There was no loose body. The inner condyle of the femur was rough and was studded with irregular outgrowths. An osteophyte of the size of a large pea was found on the inner side of the tibial head. | The osteophyte was removed. Drainage. Internal incision. | One year later the joint was quite well and was freely moveable. |
| 26 | M., 24 years. | May, 1892. | Injured right knee while hunting two years previously. | The internal semilunar cartilage was torn from the coronary attachment; it was not separated at the anterior or posterior extremity. | The cartilage was stitched to the head of the tibia. Drainage. | Rapid recovery. |
| 27 | M., 24 years. | May, 1892. | At the Great Northern Hospital. Five years previously the patient had injured the left knee by jumping from a train. There had been constant pain since. | The anterior part of the internal semilunar cartilage was curled on itself and was torn away from the attachment to the internal tuberosity. | The condition of the cartilage was only fully seen on extreme flexion of the joint after opening. Most of the internal semilunar cartilage was removed. Drainage. | There was considerable oozing of synovia for three weeks. Two months later there was some stiffness of the joint. |
| 28 | M., 22 years. | October, 1892. | In private practice. Two years previously the patient had injured his left knee at football and there had been repeated attacks of pain since. | The internal semilunar cartilage was freely moveable though not torn away from its attachments. It could be slipped in and out of the joint. | The cartilage sutured to the head of the tibia. Internal incision. | Three years later the joint was perfect. |
| 29 | F., 27 years. | October, 1892. | At the Great Northern Hospital. The patient had hurt her right knee at the age of five years. Stiffness of the joint with frequent attacks of pain, swelling, and sometimes locking had been experienced since. | The synovial membrane was thickened and nodular. | The joint was washed out and drained. | The patient left the hospital in 14 days with the wound healed. No further history was obtained. |
| 30 | F., 26 years. | February, 1893. | At the Great Northern Hospital. For some years the patient had felt something slipping in the left knee. She was liable to fall. | The internal semilunar cartilage was freely moveable but not unattached. | The cartilage was sutured to the head of the tibia. Internal incision. | The patient left the hospital well after five weeks and has not been heard of since. |
| 31 | M., 30 years. | February, 1893. | With Dr. Wharton Hood. For years the patient had been subject to "slipping" and to pain in the left knee. | The internal semilunar cartilage was very moveable, was torn away from the anterior attachment, and was curled up. | The cartilage was removed. Drainage. Internal incision. | Rapid recovery. Three years later the patient was playing tennis with perfect comfort. |
| 32 | M., 32 years. | April, 1893. | In private practice. The patient suffered from pain and occasional locking of the right knee for two years. | A small portion of internal semilunar cartilage was torn away from its anterior attachment. | The loose cartilage was removed. No drainage. | lower<br>cision.<br>cence.<br>Rapid recovery. stitches were re on the fi patie th |
| 33 | M., 32 years. | July, 1893. | At the Great Northern Hospital. Ten years previously the patient had damaged the right knee at football, and there had been pain frequently since. | The internal semilunar cartilage was torn away from its anterior attachment. | The internal semilunar cartilage was removed. | Discharged "cured" in three weeks. No further history obtained. |
| 34 | M., 21 years. | November, 1893. | At the Great Northern Hospital. Four years previously the patient had felt a lump at the back of the inner side of the joint. It could be pushed away. There had been severe attacks of pain and swelling. | A free cartilaginous lump slipped out when the joint was opened. | Incision over th ing at the inner the knee. ortion of cartilage ed. No ternal in- | Discharged cured. |
|  |  | November, 1893. | With Dr. A. W. K. Picard. One and a half years previously the patient had received a blow on the left knee at cricket. A year later he felt something moving in the joint. | There was a free piece of cartilage. | On opening the the inner si finger could loose body. Th was freely was and a piece of came away |  |

A TABLE OF 59 CASES IN WHICH THE KNEE JOINT WAS OPENED FOR SYMPTOMS OF INTERNAL DERANGEMENT—*(Continued)*

| Case | Sex and age | Date | History and symptoms | Description of condition found at the time of operation | Operation | Result |
|---|---|---|---|---|---|---|
| 11 | M, 20 years | February, 1890 | At the Great Northern Hospital Four years previously the patient had slipped and had hurt the left knee There was pain which was relieved by something going back when he tried to walk There were frequent recurrences | The coronary ligament of internal semilunar cartilage was very relaxed allowing free movement | The cartilage was sutured in the head of the tibia | For several days the dressings were stained with synovial fluid One month later the stiffness of the joint was broken down under gas Discharged cured after two months |
| 12 | F, 33 years | April, 1890 | At the Great Northern Hospital Two years previously the patient had fallen and had bruised the left knee There was a gnawing pain in the knee frequently The movements of the joint were natural but a body was thought to be felt in joint above the patella on flexion | No abnormality was found in the joint except some excess of synovial fluid | The joint was opened and explored | Rapid convalescence No further trouble in the knee |
| 13 | M, 39 years | May, 1890 | At the Great Northern Hospital Five years previously the patient had ricked his right knee which had to be pulled in | The internal semilunar cartilage was very loose and a cystic excrescence was attached to its outer side | The internal semilunar cartilage was removed | Discharged cured after six weeks |
| 14 | M, 23 years | June 1890 | With Dr Wharton Hood Frequent trouble with the right knee since encountering an accident while at football | A piece of loose cartilage of the size of a bean was found on the external side of joint | The loose piece of cartilage was removed No drainage External incision | Much effusion requiring early removal of the stitches The knee gave no further trouble for 10 years |
| 15 | M, 33 years | January, 1891 | At the Great Northern Hospital In 1888 'something snapped in the right knee' and the patient had had trouble ever since | The anterior part of the internal semilunar cartilage was detached and apparently divided into two The larger portion was lying between the condyles of the femur the other lying free on the tibia | Portions of cartilage were removed Drainage Internal incision | Pain for some days after operation When seen six months later the patient was quite well |
| 16 | M 21 years | February, 1891 | With Dr Wharton Hood The left knee had been twisted at football There had been constant trouble with occasional fixation of the joint since | The internal semilunar cartilage was detached from its base centrally but was fixed at each end | The internal semilunar cartilage was removed The joint was washed out Drainage Internal incision | Oozing of synovia for several weeks Adhesions broken down after six weeks Perfect condition of the joint giving no trouble at the end of six months |
| 17 | M, 24 years | July, 1891 | At the Great Northern Hospital Three years previously the patient had slipped while he was unloading a barrow There had been frequent attacks of pain in the right knee ever since | The internal semilunar cartilage was loose and displaced anteriorly | The semilunar cartilage was removed Drainage Internal incision | Rapid convalescence No return of symptoms six months later |
| 18 | M, 24 years | August 1891 | At the Great Northern Hospital Two and a quarter years previously the patient had hurt the right knee at football Soon afterwards the knee suddenly gave way under him and there had been several recurrences later | The anterior portion of the internal semilunar cartilage was detached and was lying loose | The anterior two-thirds of the cartilage were removed Drainage Internal incision | After one month the knee was slightly stiff Six months later this had gone and the knee was perfect |
| 19 | M, 40 years | September 1891 | With Dr Wharton Hood For 10 years there had been symptoms of a loose cartilage in the right knee | Loose cartilage was found in the synovial pouch to the outer side of the patella | Removal of the loose piece of cartilage No drainage External incision | Rapid convalescence The patient went home in a week No further trouble two years later |
| 20 | M 36 years | September 1891 | With Dr Wharton Wood Injured the knee joint when rowing 10 years previously For the last four years there were frequent attacks of pain and swelling | A small extra piece of cartilage found attached to inner side of the joint just above the internal semilunar cartilage | A piece of cartilage was removed from the inner side of the joint Internal incision | Rapid convalescence The knee perfectly well five years later |
| 21 | M, 38 years | October 1891 | With Mr B Carter Two years previously the patient injured the left knee while hunting There had been stiffness pain and effusion frequently since Riding and all active exercise were prevented | The internal semilunar cartilage was very loose but not separated from its attachments | The cartilage was sutured to the head of the tibia Drainage | A few adhesions at the end of a fortnight Massage and movement for two weeks When seen three years later the patient had been perfectly well ever since |
| 22 | M, 37 years | October 1891 | With Dr Wharton Hood For years the patient had suffered from pain in the left knee-joint the original injury having been received while bowling at cricket | The internal semilunar cartilage was freely moveable being torn away from the base but not separated from either extremity | The cartilage was fixed to the head of the tibia. Drainage | Excessive secretion of synovia continued for one month Stiffness of the joint was broken down under an anaesthetic but it returned in spite of massage and movements The knee remained stiff |

A TABLE OF 59 CASES IN WHICH THE KNEE-JOINT WAS OPENED FOR SYMPTOMS OF INTERNAL DERANGEMENT—(*Continued*).

| Case. | Sex and age. | Date. | History and symptoms. | Description of condition found at the time of operation. | Operation. | Result. |
|---|---|---|---|---|---|---|
| 48 | M., 21 years. | April, 1899. | At the Great Northern Hospital. There had been symptoms of a loose body in the right knee for one year. | The internal semilunar cartilage was loose, but not torn away from its attachment. The alar ligament was torn away on the inner side. | The loose alar ligament was removed and the semilunar cartilage was stitched to the head of the tibia. | The patient went out cured in three weeks and was well a year later. |
| 49 | M., 24 years. | May, 1897. | With Dr. Wharton Hood. There had been symptoms of loose cartilage in the right knee. | The internal semilunar cartilage was split. | The smaller piece of the split semilunar cartilage was removed. No drainage. Internal incision. | Perfect progress was made, and the patient remained free from symptoms two years later. |
| 50 | M., 28 years. | July, 1897. | In private practice. The right knee had been constantly giving pain while riding. Sometimes it swelled up. | The internal semilunar cartilage was found to be loosed from the coronary ligaments, but was attached at each extremity. | The internal semilunar cartilage was removed. Internal incision. | Rapid recovery. No trouble since. The patient was seen in January, 1902. |
| 51 | M., 37 years. | July, 1897. | In private practice. There had been pain and weakness in the left knee, which had interfered with military duties. | The internal semilunar cartilage was loose, but was not detached at either end. | The cartilage was sutured to the head of the tibia. | See note at end of table. |
| 52 | M., 32 years. | January, 1898. | With Dr. Wharton Hood. There had been symptoms of loose cartilage in the left knee. | There was no looseness of either cartilage, but a roughened condition of the cartilage of internal condyle of femur was present. | The joint was opened and explored. No drainage. | Rapid recovery. No further symptoms. |
| 53 | M., 25 years. | March, 1898. | With Dr. Robinson. The condition of the patient's right knee had interfered with his entrance to the army. | The right internal semilunar cartilage was torn from the coronary ligament, but was attached at the extremities. | The loose internal semilunar cartilage was removed. Internal incision. | Rapid recovery. The patient entered the army, and up to December, 1901, had not been troubled with the knee. |
| 54 | M., 27 years. | May, 1899. | In private practice. There had been symptoms of internal derangement for six months. | The internal semilunar cartilage of the right knee was split and was very moveable. | Cartilage removed. Internal incision. | Rapid recovery. Cure. The patient was seen two years later. |
| 55 | M., 35 years. | May, 1899. | At St. George's Hospital. Symptoms of internal derangement had been manifest. | The interior of the joint and ligaments was normal. | The joint was opened and explored. The cartilage was not removed. | Discharged cured. |
| 56 | M., 28 years. | June, 1900. | In private practice. There had been pain and frequent attacks of swelling in the right knee. | The internal semilunar cartilage was torn away from the posterior attachment. | The cartilage was removed. No drainage. Internal incision. | Rapid recovery. The patient has been well since. He was seen in December, 1901. |
| 57 | M., 33 years. | August, 1900. | At St. George's Hospital. Attacks of pain and stiffness in the right knee on the outer side had interfered with work. | The cartilages were normal. There was an excessive fringe of synovial membrane. | The excessive synovial fringe was removed. No drainage. External incision. | Rapid recovery. T patient has not be heard of since. |
|  | M., 33 years. | February, 1901. | In private practice. Symptoms of internal derangement had prevailed for three months in the right knee. | The internal semilunar cartilage was very moveable but was not torn away from its extreme attachment. | The cartilage was removed. No drainage. Internal incision. | Rapid recovery. Cure. |
| 59 | M., 26 years. | November, 1901. | In private practice. The right knee had been first damaged at football three years previously. Since then it had been constantly giving way on severe exercise. | Directly the joint was opened the loose body jumped into the wound. No other abnormality was found. | The loose body was removed. No drainage. Internal incision. | Rapid recovery. There has been no return of the symptoms up to the present date though a hard day's shooting has been indulged in. |

CASE 51.—There was pain in the joint from the day after the operation. The temperature was never above 100° F., but the condition of the joint was unsatisfactory. There were a pulpy condition of the synovial membrane and cellulitis superficially. The stitches were removed and the joint was washed out. There were always pain and discharge of synovial fluid. The knee remained swollen and painful and was opened to let out the discharge on two occasions. There was not much discharge of synovia, but there was constant pain. Finally the joint quieted down but it remained absolutely ankylosed.

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SUMMARY.

|  | Removed. | Fixed. | Total. |
|---|---|---|---|
| Operations on internal semilunar cartilage | 22 | 12 | 34 |
| " " external " | 1 | — | 1 |
| " " loose cartilages | 12 | — | 12 |
| " " ligamenta alaria | 1 | 1 | 2 |
| " " chronic traumatic or rheumatoid arthritis | — | — | 7 |
| Exploration of joint and nothing found | — | — | 3 |

A TABLE OF 59 CASES IN WHICH THE KNEE-JOINT WAS OPENED FOR SYMPTOMS OF INTERNAL DERANGEMENT—*(Continued).*

| Case. | Sex and age. | Date. | History and symptoms. | Description of condition found at the time of operation | Operation. | Result. |
|---|---|---|---|---|---|---|
| 36 | M., 22 years. | January, 1894. | At the Great Northern Hospital. The patient dislocated the left knee at football one and a quarter years before There had been frequent pain. A lump was observed on the inner side of the knee-cap. | The internal semilunar cartilage was quite loose, was torn away from the posterior attachment, and was curled up. | The internal semilunar cartilage was removed. | One year later the knee was perfect in all respects. |
| 37 | M., 30 years. | January, 1894. | With Dr. Wharton Hood. The patient injured the left knee when rowing six years previously. All the symptoms of loose external cartilage were present. | The external semilunar cartilage was natural. There was a small pedunculated piece of cartilage under the patella on the outer side of the joint. | A loose piece of cartilage was removed. | The stitches were removed on the sixth day when a good deal of synovia escaped. Massage was required to overcome the stiffness. The patient was eventually quite cured. |
| 38 | M., 29 years. | March, 1894. | At the Great Northern Hospital. The patient had injured the left knee while skating some years before, and there had been trouble since on the inner side. | The internal semilunar cartilage was split. There was a tongue like process projecting into the joint. | The internal semilunar cartilage was removed. Drainage for one week. | Rapid recovery. Cure. |
| 39 | F., 33 years. | April, 1894 | At the Great Northern Hospital. There was frequent pain in the right knee for years which was worse on the outer side of the joint. | The external semilunar cartilage was found to be chipped. | The protruding portion of cartilage was cut away. No drainage. External incision. | Rapid recovery. Cure. |
| 40 | M., 40 years. | June, 1894. | With Dr. Wharton Hood. The patient had fallen while hunting and had struck the right knee seven years previously. There were symptoms of loose cartilage which prevented extension of the leg. | A free loose cartilage was found in the synovial pouch about the patella There was much nodular outgrowth from the synovial membrane. | The loose cartilage and the synovial thickenings were removed. | Rapid recovery. Much improvement in the range of the joint movement. |
| 41 | M., 50 years. | June, 1894. | At the Great Northern Hospital Three months previously, while removing his stocking, the patient had noticed a small lump come up in front of the right knee. He could not straighten the knee for two days when he forced the lump to the inner side of the knee cap It afterwards passed to the outer side, where it stayed. | There was a cartilaginous lump in the synovial pouch to the outer side of the patella. | The cartilaginous lump was removed. | Rapid recovery. |
| 42 | M., 37 years. | October, 1894. | With Dr. Wharton Hood. There had been pain and discomfort in the right knee for some years A loose body was felt wandering about the joint. | A small piece of free loose cartilage was found towards the back of the joint. | The loose body was removed. No drainage. Internal incision. | Rapid recovery. Cure. The patient was well four years later. |
| 43 | M., 30 years. | April, 1895. | With Dr. M. Prickett. There had been symptoms of loose cartilage for two years. | The right internal semilunar cartilage was very moveable but was not torn from its attachments. | The cartilage was sutured to the head of the tibia. No drainage. | Rapid recovery. Cure. The patient was well three years later. |
| 44 | M., 57 years. | June, 1895. | At the Great Northern Hospital. The patient had knocked the left foot against a stone and had twisted the knee a year previously. He had since felt clicking in the joint. | The cartilaginous surface of the inner condyle of the femur was hypertrophied. The capsule of the joint was very thick where it was opened. | Joint examined. No drainage. Internal *incision.* | Rapid recovery, with movement of the joint *and freedom from* the clicking sensation. |
| 20 | M., years. | January, 1896. | With Dr. Wharton Hood. There had been symptoms of a loose body in the right knee-joint for some months. Just before the operation the loose body was demonstrated by the patient and was felt by Dr. Wharton Hood and myself. | The condition of the joint structures was normal. The loose body was not discoverable; complete flushing of joint with water failed to wash out the body, which went into the back of the joint. | Free exploration and washing of joint. Internal incision. | Rapid recovery. No further symptoms when the patient was seen three years later. |
| 21 | M., 38 years. | Octobe 1891.<br>h, | With Mr. L. Jones of Manchester. There had been symptoms of a loose body in the right knee for one year.<br>all<br>ve. | The right internal semilunar cartilage was torn away from its posterior attachment. It was freely moveable in the joint. | The cartilage was cut away from the interior attachment and was removed The ligamentous joint structures were very loose. | Rapid recovery. The patient who was seen in 1901 had been well ever since. |
| 22 | M., 37 years. | October, 1891. | Wit For St. George's Hospital. Five suf onths previously the patient kn el fallen and had twisted the ha ft knee, which became fixed bc r some hours. A small body hich was moveable up and own was palpable over the uter edge of the outer condyle f the femur. | The synovial membrane was thick in position of the body felt before operation. No loose body. | The small fold of thickened membrane was removed. No drainage. | Rapid recovery. Symptoms relieved. |

time. As he did not improve, for the sake of a holiday, he paid a visit to his daughter in Essex. Shortly after his arrival he developed difficulty in swallowing and soon had to limit his food to semi-solids and finally liquids. The latter, however, frequently regurgitated through the nose.

After he had been in Essex about three days he was seen by one of us and again carefully examined. He was then well nourished and when sitting down looked in good health except for his ptosis. He complained of weakness; but on examination it was found that he could fairly well perform any movement of the limbs or trunk. Any such movement, however, was almost immediately exhausted; for instance, he could rise from his chair fairly briskly for a man of his age; a second attempt to do this involved great effort and a third attempt was quite unsuccessful. There was no muscular wasting and the electrical irritability of the muscles was not examined. There was no loss of sensation in any part of the body, nor was there any incoördination, tremor, or involuntary movement of any kind. The abdominal and plantar reflexes were normal. The knee-jerk was at first somewhat exaggerated but became partially exhausted on repeated stimulation. As far as could be determined, however, the knee jerk could not be absolutely abolished. There was no clonus. There was no ocular palsy, but some nystagmoid jerking occurred on lateral deviation of the eyes, which jerking increased if the lateral deviation was prolonged. There was no history of diplopia. Bilateral ptosis was present to a degree sufficient about half to cover the pupils, but the ptosis increased if the patient attempted to read. The pupils were equal and the pupillary and conjunctival reflexes were normal. There appeared to be no weakness of the muscles of mastication or of the muscles of the face. The patient's voice was fairly strong after a rest of half an hour or so, but aphonia developed after a few minutes' conversation. He was unable to swallow solid food. The pharyngeal reflex could not be obtained. Liquids regurgitated through the nose towards the end of a meal. The heart and lungs were normal except that the aortic second sound was louder than natural. His arteries were normal for his age. The patient had full control of his rectum and bladder. At this time the urine contained both sugar and albumin in moderate amounts. The patient rapidly grew worse and returned to Plymouth on June 27th. On the 29th difficulty of swallowing became more pronounced and it increased daily until his death on July 13th.

No necropsy was obtained in this case, but there appears to be little doubt that our patient suffered from myasthenia gravis or asthenic bulbar paralysis. The unusual features to which we would draw attention are the patient's age, the exceptionally acute course of the disease, and the association with diabetes. From previously reported cases (about 70 in number) it would appear that the disease belongs to the third decade of life, and so far as we have seen in the literature no case is on record of such a patient who has reached the seventh decade. Erb's first case—the oldest at present on record—was 55 years of age.

The present case ran an exceptionally acute course. The only undoubted case that has run a more acute course is that recorded by Widal and Marinesco; their patient lived only 14 days after the onset. The association with diabetes in our case appears to have been somewhat intimate since the myasthenia set in almost as soon as the patient relaxed his diabetic diet. So far as this observation goes it is in favour of the prevalent view that myasthenia gravis is due to the effect of some toxic agent upon the peripheral neurons.

# MILK OR WHEY IN ENTERIC FEVER?

BY ARTHUR TREGELLES PRIDHAM, M.B. LOND.,
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IN THE LANCET of Nov. 2nd, 1901, p. 1182, Mr. Prideaux G. Selby of Teynham, Kent, published a paper concerning the treatment of enteric fever by whey instead of milk as a taple food, his death-rate for 73 cases being 2 7 per cent Since that time Dr. S. J. Gee of St. Bartholomew's Hospital has treated four cases entirely, and one case partially, by this method. All did well, but one case perhaps deserves notice on account of its severity and the favourable issue under what is more or less a new departure in treatment, ich I believe that Dr. Norman Moore has for some time past treated his cases of enteric fever chiefly on whey. The patient in question was a man, aged 23 years, a fish-porter, and previously to this illness he had been in good health. On Nov. 3rd, 1901, he caught cold and suffered from headache, and on the 10th he took to his bed. On the 16th he was admitted into St. Bartholomew's Hospital, with the history that for the previous week he had been feverish and his bowels constipated. On admission his temperature was 100·5° F.; his pulse was 84 per minute, soft and regular; his radial artery was thickened; his urine was of specific gravity 1025, had an acid reaction, and presented no abnormality; and his tongue was dry and brown. Examination of his heart and lungs showed nothing abnormal. His abdomen was not distended or tender; his spleen could just be felt. On the 17th his blood gave a well-marked Widal's reaction. On Dec. 2nd there were many typical enteric fever spots on his abdomen and chest. His evening temperature was usually from 103° to 104°, and his pulse was from 110 to 120 per minute and very soft; he was sponged night and morning. He was taking four ounces of brandy and a small quantity (about half a pint) of beef essence; otherwise he had nothing but whey, of which he consumed from three to four pints in the 24 hours On Dec. 4th there were some indications of heart failure and the first sound became faint. The patient therefore began to take four-minim doses of liquor strychniæ, given at first three times a day and afterwards every six hours. On the 6th his pulse was very soft and dicrotic and he had occasional shivering fits. His bowels were open about three times daily; on the 6th the motions were stained with blood, and he passed one very large black slough measuring one inch by half an inch, together with several small sloughs; they were of considerable thickness, showing the ulceration to be very deep. His abdomen presented no distension and was natural in appearance. On the 9th several large blood-stained sloughs were passed. On the 10th the man was very ill and the brandy was gradually increased till he now took eight ounces. About 3 A.M. on the 12th, which was approximately the fortieth day of the disease, there was copious hæmorrhage from the bowel amounting to at least one and a half pints; the man was very ill, but he quieted down with morphia given hypodermically. On the 13th the patient was so collapsed and blanched that Dr. Gee gave an unfavourable prognosis. There was, however, no delirium or distension of the abdomen. On the 16th the patient was very restless, he passed urine frequently, and was with great difficulty made to sleep by hypodermic injections of morphia, hot sponging, and paraldehyde On the 17th his urine was alkaline and contained much pus and the bacillus typhosus; he was given seven grains of urotropine three times a day. On the 18th he was better and the urine was clearing. On the 19th there was an obvious improvement. His bowels were opened twice, the motions containing no blood or sloughs. His tongue was cleaner and for the first time since the hæmorrhage he had strength to put it out when asked to do so. On the 20th the man was better. His temperature was intermitting well and his urine contained no pus. On the 21st (the forty-ninth day of the disease) his temperature was normal, his subsequent convalescence was uninterrupted, and the brandy was gradually reduced. He continued to take nothing but whey until the 31st, when he began to take milk. He was very emaciated, but not more so than might have been expected from the severity of the disease.

The most noticeable points in the case were the following. 1. Distension of the abdomen was entirely absent. Another patient with enteric fever who was taking half a pint of milk with his whey showed more distension on the third day after admission than this patient did at any time throughout his illness. From the size and thickness of the sloughs I am convinced that had the patient's intestines been distended with gas when he passed these sloughs perforation must have followed. 2. There was an absence of delirium almost throughout the illness, except for a short time on one or two occasions. 3 There was an absence of serious diarrhœa in spite of the severe ulceration; the bowels were loose but never became troublesome. It is probable, as suggested by Mr. Selby, that these three symptoms are often much aggravated by, or due to, toxins formed by decomposing milk curd. 4 With regard to the state of the mouth and tongue it did not correspond to Mr. Selby's experience and differed little from than of an enteric fever patient treated with milk, being dry and cracked and difficult to keep clean.

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to their natural strength, when the joint is again fully used in the ordinary way there will be no tendency to a recurrence of the accident. Such a line of treatment is that which has been followed for years with the greatest success by Dr. Wharton P. Hood. In a certain percentage of cases it will fail and the trouble will recur. These must be operated upon Similarly chronic cases that have already had numerous attacks when first seen require operation. Those cases, also, in which a quite loose body can be felt to move to widely different positions in the joint and those in which a loosened cartilage protrudes from the joint will not improve without operation. In all other cases such a course of treatment as has been sketched should be thoroughly tried before the question of operation is considered.

*The operation.*—A few particulars concerning the operation itself may be mentioned. A vertical incision of about three inches, one inch to the inner side of the patella and going down to an inch below the head of the tibia is the incision which I choose for opening the joint, unless, of course, there is special indication, as the presence of a foreign body, for incising at some other situation. An advantage over the transverse incision is that by the vertical cut, the extension of the vasti on to the tibia, an important supporting structure *is not divided; moreover, the vertical incision is easily* prolonged upwards when this is necessary for examination of the large synovial pouch about the patella. Care must be taken to clip and to tie every bleeding point, and the joint is to be literally squeezed dry before it is closed. The joint should not be washed out with antiseptics and no drainage should be employed. One exception to the rule of not washing out is presented by such cases as Case 35 Here a loose body, the presence of which had been determined with certainty before the joint was opened, could not afterwards be found in spite of the freest digital searching. On flushing the joint with boiled water the body literally floated out. Such a manœuvre may occasionally be necessary and has led to no harm. In another case (Case 45) even this proceeding failed to discover a loose body about the presence of which there was absolutely no doubt. It became fixed presumably in the posterior part of the joint behind the crucial ligaments and gave no further trouble. The course of this case to a perfect cure seems to prove conclusively that rest, exercise, and massage may lead to the remedying of a condition within the knee-joint which might well have seemed incurable except by operation. It is, however, possible that the body became fixed owing to influences which would not have come into play had the joint not been opened.

It is hardly necessary to insist upon the strictest asepsis, which must, of course, be observed, but I cannot agree with Mr A. E. Barker that the finger should not be used within the joint. Without such use I cannot believe it possible in some cases properly to estimate or to remedy the fault that may be present. It is necessary in some cases to examine with the finger every part of the joint that can be reached. Even then a small loose body may escape detection as in Case 45

My experience favours removing loose semilunar cartilages rather than fixing them, and the *same* applies to torn or hypertrophied alar ligaments or local hypertrophy of synovial membrane.

In closing the wound the sutures are to be passed so as to include the cut synovial membrane.

*After-treatment.*—The splints are to be taken off within a week. Passive movements are begun as soon as the skin wound is healed, and these are combined with massage If in spite of exercises and massage there appears some stiffness of the joint *it must be freely moved under an anæsthetic* and then daily massaged and freely moved to prevent stiffness from reappearing

*Points concerning diagnosis.*—The 59 cases here tabulated, all of which presented either the characteristic symptoms with locking of the joint, or else weakness with recurrence of pain and swelling, which is often the only evidence of damaged semilunars, illustrate the following conditions: (1) semilunar cartilage, internal or external, split, loosened or displaced, torn *from either or both extremities or from* coronary ligaments; (2) loose bodies—the body may be quite free or may be attached by a pedicle; (3) a torn or hypertrophied alar ligament or hypertrophied fringe of synovial membrane; (4) rheumatoid arthritis—roughened cartilage, thickened synovial membrane, and osteophytic outgrowth; and (5) no obvious derangement. There are some points which help us in differentiating between these conditions, although it will happen not seldom that symptoms most strongly suggestive of one lesion will prove to be due to another. Thus Case 59 was apparently a typical example of semilunar damage, yet the lesion proved to be a perfectly loose body and the semilunars were natural.

In the cases of damage to a semilunar cartilage there are generally these features: (1) distinct history of injury originating the trouble; (2) a well-defined site of pain on the inner or outer side of the knee according to the cartilage damaged; (3) no foreign body palpable; and (4) no creaking in the joint. These same features also characterise generally cases in which the lesion affects an alar ligament or consists in localised hypertrophy of synovial membrane.

In the cases where a loose body is present the symptoms, again, may be exactly similar to those caused by semilunar damage (Case 59). Sometimes, however, the body will be able to be moved into widely separated portions of the joint (Case 45) and felt in its different situations. Similarly a very loose semilunar cartilage may sometimes be diagnosed with certainty through its being protruded at the side of the joint. Such a cartilage, however, may be most confusingly imitated by an excrescence due to rheumatoid arthritis.

*Results.*—Viewed generally these cases show that operation *for internal derangement of the knee-joint is in most cases* highly satisfactory. There are generally quick recovery and no recurrence of the trouble. In one case after several years of freedom another operation was required and a large number of loose bodies were removed from the joint. I am, however, very anxious not to minimise the gravity of the operation, which I hold to be considerable, and would lay stress upon Cases 22 and 51, which illustrate failure such as is probably inseparable from a certain proportion of all serious operations. Even short of the unhappy event of permanent stiffness, considerable trouble may be caused in convalescence by profuse secretion of synovia (Case 37) and by a tendency to stiffness of the joint (Case 23). Such cases cause great anxiety and require the most early careful and persistent treatment if a perfect joint is to be finally secured.

Grosvenor-street, W.

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# A CASE OF ACUTE MYASTHENIA GRAVIS.

BY C. A. HINGSTON, M.D., B.Sc. LOND.,
CONSULTING PHYSICIAN TO THE PLYMOUTH PUBLIC DISPENSARY;
AND
W. H. B. STODDART, M.D., M.R.C.P. LOND.,
ASSISTANT MEDICAL OFFICER TO BETHLEM AND BRIDEWELL ROYAL HOSPITALS.

WE have thought it desirable to place the following case on record, partly on account of the rarity of the condition and partly on account of the fact that our case presented some unusual features

The patient, aged 71 years, was a contractor of Plymouth. He had lived a life of considerable mental and physical activity for about 30 years and during this time his health was above the average. At the age of 60 years he relinquished the greater part of his work; he became easily excited and fatigued and his business capacity obviously lessened At the age of 63 years he began to suffer severe neuralgic pains in various parts of his body and limbs, for which there was no apparent cause Finally, however, these pains became limited to the left leg and were sufficiently severe to confine him to bed for many weeks. At this time the urine was found to be of high specific gravity and to contain a considerable quantity of sugar. The glycosuria never quite disappeared, but it became so inconsiderable as to be scarcely appreciable by the ordinary tests.

About 12 months before his death albuminuria set in and continued to the end During the 12 months prior to his death he steadily lost energy and strength; but no local symptoms presented themselves till seven weeks before his death. He then relaxed his diabetic diet and his final illness appeared to date from this time. He developed a gradually increasing general weakness without malaise. He became exhausted during the process of dressing, the distance which he was able to walk grew daily shorter, and slight bilateral ptosis developed so that he was unable to read for any length of

# A Mirror
OF
# HOSPITAL PRACTICE,
# BRITISH AND FOREIGN.

*Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.*—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

## COUNTY ANTRIM INFIRMARY, LISBURN.

### TWO CASES OF SPINA BIFIDA TREATED SUCCESSFULLY—THE FIRST BY INJECTION OF MORTON'S FLUID AND THE SECOND BY EXCISION.

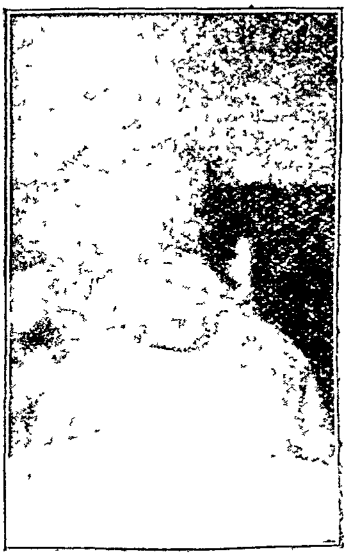
(Under the care of Mr. G. L ST. GEORGE.)

THE treatment of spina bifida by the injection of a small quantity of solution of iodine in glycerine was first practised by Morton, and its use was much extended by the strong recommendation which it received from the committee of the Clinical Society of London which was appointed in 1885 to consider the treatment of this malformation.[1] From our knowledge of the pathology we are justified in thinking that injections of iodine and glycerine can only effect a cure in a pure meningocele, and that it can do no good in a meningomyelocele or in a syringomyelocele. Since, however, it is rarely possible to decide with any certainty that no part of the spinal cord or its nerves is included within the sac, there is nearly always some risk in employing these injections, even if we do not consider the danger arising from a possible infection through the puncture. In consequence of this difficulty of diagnosis many surgeons at the present day are inclined to advise excision of the sac.[2] In this operation the two chief dangers are sepsis and the sudden escape of the cerebro-spinal fluid which may lead to grave disturbance of the circulation in the nerve-centres. The former danger may be guarded against by scrupulous care and for the latter the surgeon should avoid any rapid evacuation of the fluid. The operation of excision is applicable even in cases in which spinal nerves are contained in the sac, for they may be returned within the bony canal,[3] and such an aseptic operation must surely be safer than the indiscriminate injection of an irritant fluid. We congratulate Mr. St. George on his two successful cases.

CASE 1.—A female child, aged seven days, was admitted to the County Antrim Infirmary on Oct. 5th, 1901. She had a spina bifida of the fourth and fifth lumbar vertebræ. The tumour was of about the size of a small orange and was covered for about two-thirds by normal skin, but ended for the upper third in a membrane with a distinct margin. This membrane was beginning to show signs of ulceration. The tumour was markedly distended when the child cried or struggled, but there was no paralysis of the lower limbs or distension of the fontanelles. On Oct. 7th, the tumour having been thoroughly cleansed and made aseptic with sublimate lotion (1 in 2000) and the child having been anæsthetised with chloroform, Mr. St. George punctured the base of the tumour with a fine trocar, and after allowing about two-thirds of the contents to escape injected slowly a drachm of Morton's fluid through the cannula On withdrawing the cannula the opening was firmly grasped and painted over with *a solution of iodoform in flexile collodion* in order to close the orifice. The whole tumour sac having been painted with the collodion and iodoform it was covered with iodoform gauze and absorbent wool. The child seemed to suffer greatly from shock after the operation. The temperature rose to 103° F. and remained high for some days. On Oct. 21st the tumour was again tapped and some fluid having been drawn off the sac was injected as before and painted with the iodoform and collodion. The temperature did not rise on this occasion to any appreciable extent, nor did the child seem to suffer so much from shock, but there were great wasting of the limbs and constipation. She was therefore put on cod-liver oil and malt (Kepler) and Mellin's food. Under this form of food she rapidly improved in weight and appearance. The walls of the sac were now becoming shrivelled and more and more consolidated, except in the centre where a small piece of membrane still remained. On Dec. 21st, having again made the part aseptic, Mr. St. George dissected this piece carefully round expecting to find it communicating with the sac itself, but it did not do so; he therefore closed the flaps of skin over the opening so as to make a firm covering. The child did well and made a rapid recovery, *being shown at the meeting of the British Medical* Association (North of Ireland Branch) in Belfast on Jan. 23rd, 1902, and was discharged from hospital on Feb. 7th, only a fine cicatrix remaining. Unfortunately, no photograph was taken of this case before operation.

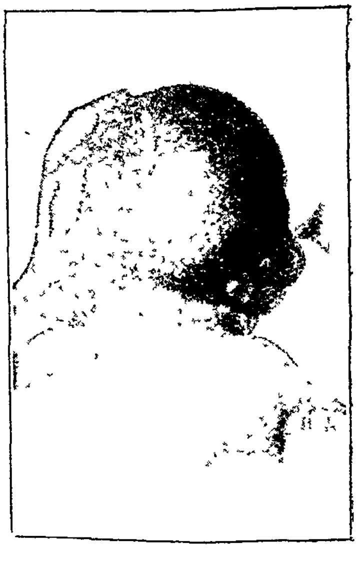
CASE 2.—A male child, aged three weeks, was admitted to the County Antrim Infirmary on Oct. 26th, 1901, suffering from a spina bifida of the seventh cervical vertebra. In this case the tumour was covered by skin completely. As the child was suffering from boils the operation was deferred for some weeks to allow of there being no chance of septic infection, as there was no urgency from the state of the

FIG. 1.



Before operation.

FIG. 2.



After operation.

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[1] Transactions of the Clinical Society of London, vol. xviii., p. 383.

[2] W. H. A. Jacobson: The Operations of Surgery, third edition, p. 1280.

[3] Mayo Robson. Annals of Surgery, 1895, vol. ii, p. 82.

# Clinical Notes:

## MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL

### DESQUAMATION

By J Reid M A., M D, C M Aberd

THE following notes may be of interest and they may lead to more searching inquiry on the subject of contagious diseases

CASE 1 —The patient a child, aged nine years when seen on Jan 8th had a typical measles rash with Filatow s and Koplik s spots Between the 17th and the 27th a brawny desquamation over the body was twice repeated with peeling of the skin of the hand and feet in large pieces

CASE 2 —The patient a woman 35 years of age, was suffering from pneumonia and subacute rheumatism when seen on Dec 29th From Jan 16th to the 22nd there was tonsillitis and from the 23rd to Feb 3rd there were present a brawny desquamation and free peeling of the hands and feet There was never any rash The rheumatism affected the joints the heart (transitorily) and various muscles There was neuralgia of the head None of the patient s children were affected, one had slight quinsy

CASE 3 —In the case of this patient whose age was 12 years tænia and ulcer of the leg were present The head of the tænia was not found An oleaginous preparation was applied to the ulcer on the leg On Feb 8th there was measles with Filatow s and Koplik s spots which was treated with carbonate of ammonia On the 9th there was perspiration in quantity under the oil at the site of the ulcer, the rest of the body was dry On the 14th there were lichen urticatus on the body and the back and erythema papulatum on the legs The itching from these was unbearable After the administration of a stomach mixture no trace of the rashes or itching remained next day On the 19th a brawny desquamation on the body and peeling of the hands and feet were the presenting conditions and on the 27th erythema on the chest and thighs was noticeable as well as some lichen on the back, but there was no itching and the tongue was clean There was no rash next day, but the peeling was nearly completed

CASE 4 —In the case of this patient, a child, aged five years who was seen on Jan 11th a bruit and rheumatism which had been left after an attack of scarlet fever six months previously were present On Feb 15th there was measles with Filatow s and Koplik s spots and on the 22nd a brawny desquamation commenced and there was afterwards extensive peeling of the fingers &c A brother of this patient aged one year, had on this date an irregular slight measles rash with Filatow s and Koplik's spots not followed by desquamation, and no trace of rheumatism exists

Other cases of measles had no desquamation and in all cases of desquamation observed there was evidence of rheumatism in some of the joints the severity of the case bearing no relation to subsequent desquamation Mixed affections in connexion with exanthemata have been little studied and out-of the way nerve lesions, &c, have been attributed to the fever How far the method of placing certain results among the effects of a fever plus a diathesis or latent disease deserves attention must rest on careful observation I have never seen desquamation follow measles in the tuberculous

Bristol

### RUPTURE OF THE COVERINGS OF AN UMBILICAL HERNIA WITH EXTERNAL PROTRUSION OF THE INTESTINE

By Frederick T Travers B S Lond, F R C S Edin,

SURGEON TO THE WEST KENT GENERAL HOSPITAL.

THE following case from its unusual nature may be worth recording The patient was a woman, aged 60 years who had a small umbilical hernia and had suffered for some years *from winter cough On Feb 20th, at 1 P M, she had a* rather more severe fit of coughing than usual and felt something give way in the abdomen She was seen at 1 30 P M by Dr F Voller who found that a mass of intestine was protruding through an aperture in the side of the hernial swelling Seeing that it was impossible to reduce it without operation and that this could not be carried out satisfactorily at her cottage he wrapped the extruded bowel in folds of warm cyanide gauze and, applying a temporary support by bandages ordered her to be removed immediately to the West Kent General Hospital at Maidstone This was a matter of some difficulty, as the patient weighed over 16 stones On arrival at the hospital she was suffering considerably from shock Ether was at once administered, and after cleansing the abdominal wall the gauze wrapping was removed and about six feet of small intestine were found to be protruding from a rent one and a half inches across in the side of an umbilical hernia The gut was irrigated with warm chinosol solution (1 in 2500) and was wrapped in warm sterilised towels The wound in the skin was enlarged till the bowel could be reduced A portion of omentum which was adherent to the interior of the sac was ligatured and cut away and the walls of the sac were freed and sutured The sides of the opening in the fascia were laced together by a continuous suture and after cutting out the portion of skin around the rent the wound was closed

After the operation which occupied half an hour, the patient s condition appeared to be better, she soon however began to run down again and she died from cardiac failure *38 hours later* There had been *no* previous ulceration over the point of rupture and the skin was not stretched and thinned out The sac and skin presented a considerable thickness and had torn linearly without any previous warning Doubtless the patient s extreme obesity and the accompanying loss of elasticity of the skin accounted for the occurrence of the accident

Maidstone

### GANGRENE OF THE SKIN DURING AN ATTACK OF ENTERIC FEVER

By Arthur S Barrow, M R C S Eng, L R C P Lond

A MARRIED woman was attended by me in May 1901 during an attack of enteric fever On the twenty sixth day of the illness there was severe hæmorrhage from the bowel which was repeated 12 hours later and the patient then passed into a typhoid state from which it was difficult to rouse her Two days after the hæmorrhage a small bulla appeared over the left outer malleolus and a large bulla over the right buttock in 24 hours the bullæ shrivelled up leaving a black patch beneath devoid of sensation The site of the bulla over the malleolus formed a slough which I removed leaving a punctiform ulcer one inch long by half an inch wide exposing the subcutaneous tissue The site of the bulla over the buttock formed a slough more gradually, but in 10 days from the appearance of the bulla I removed a large slough which left a deep excavated ulcer with sharply punched out edges one and a quarter inches deep three inches long and two inches wide The ulcer over the malleolus speedily healed although that over the buttock took longer but with the patient keeping the prone position a good result was obtained My patient never had a ' bed sore' and was very carefully nursed by a trained nurse

Indwe Cape Colony

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**WORKHOUSE INFIRMARY NURSING ASSOCIATION** —This association which was founded in 1879 with the object of raising the standard of public opinion on the whole question of workhouse nursing of securing the appointment of trained ladies as matrons in all separate infirmaries, and of supplying nurses to workhouse infirmaries in London and the provinces has during the 22 years that it has been in existence received 1391 applications for nurses The number of nurses appointed has been 844 *On March 10th in the* Examination Hall Victoria Embankment London W C, Miss Gibson matron of the Birmingham Infirmary, read a paper entitled 'The Scarcity of Nurses in Country Workhouses, its Cause and Cure interest to find out how far down the nerve this regeneration extended. Certain it was that three months after section of the nerve it did not reach to the finer nerve branches in the muscle. If their view was correct that the nerve was regenerated by the neurilemma cells then it was difficult to see why regeneration should not take place in the finer nerves within the muscle just as it was stated to do in the trunk of the nerve. He would therefore like to ask the authors the following question, How far below the point of section had they traced the regeneration of fibres in cases in which the nerve had been completely divided?

Mr. **BALLANCE**, in replying, referred to a paper published in 1884 by Dr. C. S. Sherrington who had observed that regeneration took place on the peripheral side of the division of a divided nerve. Referring to the return of sensation after division he had often noticed that there was a preliminary return immediately after the operation, then it faded away, and then at the end of a week or 10 days it returned again. Referring to the operation for restoring the facial nerve the procedure suggested by Professor Langley corresponded with Faure's operation. But the best method was that of Manasse which consisted in suturing the facial into an opening of the sheath of the spinal accessory nerve *without injury to the actual nerve fibres of the latter.*

Dr. **STEWART**, in replying, agreed that the Golgi method was apt to be erratic, but when successful it gave all the information which they desired. The nerves had been examined as far as seven inches below the lesion and they had found identically the same changes. The essential fact of their paper was that regeneration occurred in a nerve fibre even when it was permanently cut off from its corresponding nerve cell. Now the neuron theory could not explain this. It did not fit the facts. It did not explain the absence of regeneration in the central nervous elements and its presence in the peripheral part. These facts necessitated a totally different view of function of the nerve cell. The purpose or function of the nerve cell was evidently to direct or to divert the nerve impulses, not to originate them. Thus the central nervous system was really a central exchange. The nerve fibrils were therefore the essential part of the nervous system; and the ganglion cells were only depôts or nerve shunts, so to speak. This, in point of fact, was the explanation offered by Apàthy and supported by Bethe, Nissl, and others. When an outlying nerve-fibre was cut off from the central exchange it was no longer functionally active and therefore degeneration set in. But the central part, which remained connected with its corresponding nerve cell or nerve shunt, still received impulses from other fibrils (through the cell) and did not degenerate. Later, even the detached outlying fibre was regenerated by the activity of the neurilemma cells and was ready to resume its function if linked on to the central nervous system. The essential elements of the nervous system, therefore, were the nerve fibrils. The nerve cells were accessories. But this was not the neuron theory.

## MEDICAL SOCIETY OF LONDON.

### *External Operation on the Larynx.—Gastrotomy for Recent Gastric Ulcer.*

A MEETING of this society was held on March 10th, Dr. F. **DE HAVILLAND HALL** being in the chair.

Mr. A. M. **SHEILD** read a paper on a series of cases of External Operation on the Larynx. Thyrotomy, he said, was an operation of considerable antiquity. The proper administration of chloroform was a factor of success. He advocated that the thyroid and trachea should be exposed by one longitudinal incision instead of making two operations as heretofore. He then proceeded to describe the operation which he was in the habit of adopting. It was generally done for actual or potential epithelioma. It was sometimes remarkable how well the patients recovered their voices. He then proceeded to narrate particulars of a series of cases. The first of these had been recorded in THE LANCET.[1] Another case was operated on for syphilitic stenosis, but the result was not favourable. In four other cases the operation was performed for various forms of neoplasm. The first of these was variously reported upon by three skilled pathologists respectively as papilloma, epithelioma, and a degenerated papilloma, potentially cancer; the next was a case of fibroma of the larynx; the third was a case of "warty papilloma"; and the fourth was a case of papilloma (though again the microscopists differed) which it was impossible to manipulate through the natural passages. In another case the operation was performed for a large foreign body. Mr. Sheild believed that this external operation had a great future before it, not only for malignant disease, but for other conditions unmanageable by way of the rima glottidis.—Dr. **DE HAVILLAND HALL** congratulated Mr. Sheild on the success of the case which had been exhibited before the society and thanked the patient for attending.—Mr. J. **HUTCHINSON**, jun., had assisted at a corresponding operation in 1879 performed by the late Mr. Adams. He was glad that Mr. Sheild had mentioned the failure of relief in syphilitic stenosis. He (Mr. Hutchinson) had just such a case under his care and he would not now think of operating. An important lesson from the paper was that malignant cases must be dealt with in the incipient—the so-called "pre-cancerous"—stage.—Mr. W. G. **SPENCER** referred to the difficulty which sometimes arose by the sudden supervention of difficult breathing in some patients. It was important to make the incision strictly *median in its symmetry, otherwise one cord might be injured.* He did not always think that it was an advantage to get primary union. Some cases of syphilitic stenosis could be operated upon with advantage, and cases were mentioned in illustration. He mentioned other conditions (other than those narrated by Mr. Sheild) in which he (Mr. Spencer) had performed thyrotomy. He advocated the median operation.—Dr. **STCLAIR THOMSON** thought that there was quite a future for this operation for growths in the upper parts of the larynx. However, cases in which thyrotomy was applicable were, he thought, relatively few. In syphilitic stenosis the operation was not suitable, but after a tracheotomy it was wonderful sometimes how the patients improved under iodide—far more readily than before the tracheotomy. He doubted the utility of the steam tent after thyrotomy; he had not found it useful. It was best to get patients up into a sitting posture.—Mr. **SHEILD**, in his reply, thought that possibly some cases of syphilitic stenosis might be suitable for operation. He did not generally advocate a preliminary tracheotomy in such cases provided the external wound was not closed too early. In cases of cancer of the larynx in which the glands of the neck were involved the disease was generally too far advanced for any operation excepting to relieve the dyspnœa. He quite agreed with Dr. StClair Thomson that cases requiring thyrotomy were relatively few.

Mr. C. W. **MANSELL MOULLIN** read a paper on three cases of Excision of Gastric Ulcer. Notes of the cases were read. In two of them the *operation of gastrotomy* with excision of the ulcer was performed for recurrent hæmatemesis, and in the third for persistent pain and vomiting. One of the former patients died on the ninth day after the operation, the gastric wound at the post-mortem examination showing little evidence of repair, being held together only by the sutures. The two others recovered completely. These, with those already published in THE LANCET,[2] made six cases of excision of gastric ulcer, five for hæmatemesis, with one death. It was usually held that the advisability of operating in these cases could be settled at once by comparing the actual mortality arising from hæmatemesis in cases of gastric ulcer with that which it was supposed might follow gastrotomy under similar conditions. But no such comparison was possible. On the one hand, the whole number of cases of hæmatemesis, trivial and severe alike, would be taken; while on the other hand, there would be only those cases which were absolutely desperate, in which the operation was performed as a last resource, after everything else had been tried and had failed. The only comparison that could be made with any fairness was between those cases in which surgical measures were advised and declined and those in which they were advised and accepted. If this were done there could be no doubt as to the results. In three of the five cases quoted the patients were already so bloodless that transfusion had to be performed, and in two others operation had to be declined altogether, as the patients were beyond even transfusion. The mortality of such cases left to themselves without operation would compare very unfavourably with that of *gastrotomy*, even when performed under desperate conditions. Mr. Mansell Moullin had asked Dr. R. C. B. Wall, the medical tumour. On Nov. 10th, the child being in good health, the tumour and surrounding skin were thoroughly cleansed and made aseptic and the child was anæsthetised. Mr. St. George made two horizontal flaps of skin, and having carefully raised them from the tumour down to the base, the tumour was punctured and fluid was allowed to escape. The base of the tumour was grasped with forceps and ligatured with catgut and the tumour was cut off. The skin flaps were then laid down and closed by a continuous suture of silkworm gut and all was dressed with iodoform and collodion and gauze. The child showed no signs of shock after the operation. The temperature rose on the 19th to 100 2° F. but never again above normal. The wound healed rapidly and the child was discharged on Dec. 16th, and was shown with the previous case at the meeting of the British Medical Association (North of Ireland Branch) on Jan. 23rd, 1902 The accompanying illustrations show the case before and after operation.

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[1] THE LANCET, Nov. 14th, 1896, p. 1376.

[2] THE LANCET, Oct. 20th, 1900, p. 1125.

*Remarks by* Mr. ST. GEORGE.—The treatment of cases by Morton's fluid, though in the first case successful, is fraught with great danger and should be avoided if it be possible to operate by excision The injection of an irritating fluid into a sac communicating with the spinal canal must lead to serious consequences as evinced by the shock, &c ; whereas in excision with proper aseptic precautions the position of nerves can be carefully ascertained beforehand and avoided. However, it is not often that two cases showing the different modes of treatment can be so opportunely contrasted and the results compared.

# Medical Societies.

## ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

### *Clinical and Experimental Observations on the Regeneration of Peripheral Nerves.*

A MEETING of this society was held on March 11th, Mr. ALFRED WILLETT, the President, being in the chair.

Professor J. N. LANGLEY (Cambridge) resumed the discussion on the Regeneration of Peripheral Nerves. He remarked that the first and the principal point raised by Mr. C. A. Ballance and Dr. J. Purves Stewart in their opening paper was whether a nerve severed from its central connexions could become regenerated and by what means this was accomplished. In general he agreed that the distal cut end of a nerve could regenerate almost completely by itself, and he mentioned experiments and observations in support. It was, however, very difficult to distinguish for certain non-medullated fibres from strands of connective tissue, and thus unsuspected non-medullated fibres might possibly exist between the central and peripheral ends undiscoverable by the microscope. Histological observations were thus vitiated to a large extent ; but by other experiments he had come to the conclusion just mentioned. The degree of repair might be different in animals and in different kinds of nerves, and probably the peripheral end might not recover to the same extent as the central end As regards the actual manner in which regeneration took place, the view adopted by Mr. Ballance and Dr. Stewart was a new view, but it seemed to him to be perfectly reasonable. He was not, however, quite convinced about the neuroblastic formation of the nerve-fibre It was difficult in cut sections to follow nerve fibrils. It was necessary to tease specimens if it were desired to follow up the fibrils. The Golgi stain was erratic and osmic stains were preferable to the Weigert stain and the Golgi method. The essential point was that a peripheral nerve could regenerate apart from its central connexions. One point not cleared up by the opening paper was the rapid return of sensation in some cases of secondary suture. This might occur in from one hour to 24 hours, and if recovery of function did not correspond with structural regeneration how was it to be explained? He suggested as a hypothesis that the division of one or more nerve fibrils might happen just between two neuroblasts and thus the two in contact end to end might escape injury and being in anatomical continuity might transmit sensory impulses. In the surgical operations for the repair of a divided facial nerve it was usual partially to divide the spinal accessory nerve and to graft the facial on to the central portion of the spinal accessory. But he would suggest that it would be better to cut the spinal accessory quite across, to split it, and to unite one portion to the facial and the other portion to the peripheral cut trunk of the spinal accessory. He paid a high compliment to the thoroughness of the opening paper.

Dr. F. W. MOTT also agreed that nerves could regenerate from the periphery. In his own experiments he had cut both sciatic nerves so that the animal was completely paralysed and at rest. Now, the deposition of myelin depended largely on stimuli, such as muscular movement. This stimulus was therefore wanting in his own observations. He had used the method of teasing to trace the nerve fibrils in his specimens, and this was the only successful method. He illustrated his remarks by lantern slides, showing mitosis of the neurilemma cells and the absorption of fat. He discussed the various methods of staining and could not help regarding the Golgi method as a very unreliable one. The passage of a stimulus was, he believed, a very important one in the regeneration. He doubted if the authors of the paper had sufficiently tested the conductivity of the nerves which they had divided above and below the points of section with faradism. The experiments of Dr. Robert Kennedy of Glasgow had made it clear that regeneration of nerves took place from the periphery and this was confirmed by the researches of Mr Ballance and Dr. Stewart.

A contribution from Mr. A. W. MAYO ROBSON was read, in his unavoidable absence, by the Secretary. Mr. Mayo Robson reminded the society that at the first operation of nerve-grafting performed by himself in 1888 sensation to all the parts supplied by the divided median nerve was good when tested on the day following the operation and remained so, though the motor functions were not restored until later. He suggested that the immediate re-establishment of anatomical continuity of the nerve kept up physiological activity and so prevented degeneration of the distal segment He also referred to other cases.

Dr. W. ALDREN TURNER wished to comment on that portion of the opening paper bearing on the neural theory and asked, Must that theory be discarded? He believed not. There were too many data in support of it. There was not only Wallerian degeneration on the peripheral side and in the cut end of the central segment, but there were also changes which took place in the whole nerve trunk and in the spinal cord. These changes had not received sufficient attention in the paper of Mr. Ballance and Dr. Stewart. These observers stated: "New fibres never reach maturity until suturing is performed." This very statement went to support the neural theory. Turning to the clinical aspect of the subject, severe destruction of a nerve might occur with very little loss of sensation Probably a very few fibrils could supply a very large area of skin. Motion was very late in returning after secondary suture. Evidently the whole motor neuron was affected by section and not a small part of it.

Mr RICKMAN J. GODLEE, adverting to the surgical aspect, said that it was well known how quickly sensation was restored He also referred to the fact that pressure on a nerve produced disturbed function, as when lying on one's arm or leg. Esmarch's bandage might produce similar effects, lasting weeks or months. What were the changes which took place? Possibly it was an anæmia followed by reactionary congestion. For spasmodic tick he had in a good number of cases crushed the nerve by a pair of forceps, producing temporary paralysis. The nerve ultimately and completely recovered and the result had often been very satisfactory.

Dr F. E BATTEN said that while investigating the condition of the muscle-spindle after section of the nerve he had had the opportunity of examining the finer nerves at various periods after division of the sciatic. The operations had been performed by Dr. J. S. Risien Russell and the nerve had been stitched up so as to defeat any possible chance of reunion The nerves had been examined in the gastrocnemius muscle by the Marchi and Weigert-Pal methods at periods of three weeks, two months, and three months after section At three weeks the degeneration was marked, at two months there were still evidences of degeneration, and at three months also evidence of degeneration was still present, but at no period was there any evidence of regeneration of the nerve *Now it had been stated by* Mr. Ballance and Dr. Stewart that regeneration occurred in the stump of the nerve distal to the section. It would be of extreme large intestine about six inches in length, with immediate relief to the symptoms. The patient lived for nearly five months after this event, but finally symptoms of obstruction again appeared, and she died very rapidly. The abdominal tumour was found at the necropsy to consist of a large myomatous uterus and a large solid tumour of the left ovary, to the surface of which was attached what was probably a tubo-ovarian cyst of unusual size. Dr. Bonney remarked on the rarity of primary intussusceptions of the large intestine and the still greater rarity of their spontaneous expulsion. Intussusceptions occurring in persons over 50 years of age were very uncommon. The interest of the solid ovarian tumour centred around the relation between the tumour and its attached cyst, since outward inspection failed to decide as to whether the cyst was a very large hydrosalpinx which had attached itself to the tumour or whether the cyst formed an integral part of the tumour.

Dr. G. H. A. COMYNS BERKELEY showed a Uterus and Appendages removed from a patient who had died 12 hours after the termination of labour from acute peritonitis caused by rupture of an ovarian abscess. The patient, a multipara, had never suffered from any illness except an attack of pelvic inflammation which occurred before her marriage 10 years previously. The pregnancy had been uneventful. Intermittent pains commenced on Jan. 5th. On the 7th the pain became continuous and distressing and the patient began to vomit yellow fluid. Later in the day the labour terminated naturally, but the patient became rapidly worse and much collapsed, death occurring at the end of 12 hours. At the post-mortem examination purulent peritonitis was found to be present with a large amount of semi-purulent fluid in the abdomen. The right ovary and both tubes were healthy, but the left ovary formed an abscess sac which was bound down to the posterior surface of the uterus by old adhesions. There was an opening at the lower part of the abscess, through which pus was escaping. The abscess had also burst into the broad ligament and pus was escaping from an opening in that structure.—The case was discussed by the PRESIDENT, Dr. BOXALL, Dr. M. HANDFIELD-JONES, Dr. T. W. EDEN, Mr. TARGETT, Major H. R. WOOLBERT, I.M.S., and Dr. GRIFFITH.

## CHELSEA CLINICAL SOCIETY.

### *Discussion on the Nature, Origin, and General Principles of Treatment of Cancer.*

THE annual clinical debate of this society was held at the Jenner Institute of Preventive Medicine, Chelsea-gardens, S.W., on March 11th, Dr. C. A. MORRIS, C.V.O., the President, being in the chair.

The PRESIDENT, after a few opening remarks, called upon Dr. JAMES GALLOWAY to open the debate on Cancer, its Nature, Origin, and General Principles of Treatment.

Dr. GALLOWAY said that the present was a good occasion for a revision of the additions to their knowledge on the subject of cancer made during the last eight or 10 years. Renewed investigations were being actively undertaken to solve the great pathological problem of the origin of the disease with every prospect of encouragement and it was well to appreciate the exact state of their pathological knowledge. The last great stimulus to investigation on the subject was the enunciation of the thesis of the parasitic origin of the disease and most of the researches of the last decade had been made as a consequence of this proposition. It must be admitted that the foundations of this hypothesis had been gradually weakened, unfortunately with a corresponding diminution in the activity of researchers. There could be no two opinions that their knowledge of the nature and development of cancer and also of its treatment had much advanced as the result of the investigations to which he had alluded, in spite of their apparently fruitless nature at the time. He hoped that new investigations would add still more to their knowledge of the origin of the disease. Speaking of other hypotheses of the origin of cancer, Dr. Galloway said that they had also been of assistance in advancing their knowledge. Little had been added to strengthen the theory upheld by Cohnheim that tumours were due to the abnormal and late development of remnants of embryonic tissue. As a general explanation the accumulated evidence was much against this hypothesis. That Cohnheim's hypothesis explained the origin of certain varieties of tumours which were perhaps more of the nature of deformities had always been recognised, and recent work as to the development of certain forms of epithelioma from remnants of developmental tissue in nævi had allowed to some extent of its wider application. Unfortunately, the identity of the actual cause of the growth of these tumours originating from nævi was not discovered, and the reason of their assuming malignant characters, the most important of all questions, was not explained. Cohnheim's explanation especially failed in attempting to account for the characters of malignant growths. A certain amount of knowledge had also been obtained by the recognition of the fact that epithelial cells, accidentally transported into tissue of different nature, were capable of multiplication and of the formation of new epithelial masses. The "implantation cysts" described in the eye and certain masses of epithelium in the corium occurring as the result of injury were examples of this process. This new epithelial tissue reproduced the characters of the cells of the region whence it was originally derived; but in cases where malignant features had been assumed they were as much at a loss as ever in accounting for this additional characteristic. A point of the greatest importance to be recollected was that the dangerous attribute of the malignant tumour was not simply the power of multiplication possessed by its cells, but the fact that the cells undergoing multiplication did not content themselves by remaining in their normal position and relation to surrounding tissues within their basement membrane in the case of carcinoma, but consisted of the power which they assumed of passing beyond this limit and of invading the neighbouring tissues where normally they ought not to exist. The malignant element did not consist in the overgrowth but in the assumption of this new power of invasion. Considering next the parasitic hypothesis of the causation of cancer, Dr. Galloway remarked that none of the structures described as parasites of protozoal nature in carcinoma and sarcoma had withstood the test of criticism and could now be reasonably considered to be protozoal parasites. Analogies had been made, which at one time promised important information as to the cause of cancer, between certain diseases characterised by overgrowth of tissue in the lower animals, and undoubtedly due to protozoal infection, and the peculiar overgrowth of tissue which occurred in cancer, but these had turned out to be less informing than had been hoped. One of the most interesting of these was the infection of the liver in rabbits by the coccidium oviforme, which resulted in the appearance of nodules in the course of the bile-ducts consisting of an adenomatous overgrowth of their epithelial lining. But although there was much increase of epithelium in these nodules the epithelium was arranged in the normal fashion, and although the lining membrane became elaborately convoluted the epithelial cells did not overstep their limiting membrane and never assumed malignant characteristics. Indeed, it might be fairly asked whether the intracellular or extra-cellular position of the coccidia directly produced multiplication of the epithelial cells, or whether this multiplication was not rather due to irritation of the epithelium produced by obstruction of the ducts by the parasites and should be considered as a secondary consequence of their presence. A very important point arising from the study of these protozoa was that they were very readily recognised; there could be no question of their existence even on simple microscopical examination, while their processes of reproduction could be readily watched. If they were removed from the liver while living and kept in a moist atmosphere their protoplasm might be seen to divide and the various stages of multiplication external to their host might be readily observed. In none of the supposed protozoal structures seen in cancer had vital changes of this nature been clearly demonstrated. It was noticeable at the present time that observers were inclined to attribute to certain budding fungi a causal rôle in the production of cancer. Two great difficulties stood in the way of accepting this theory—namely, in the first place, that similar bodies had been discovered and had been claimed to be the causative elements in a class of diseases of which the origin, development, and structure were totally different from cancer—namely, the granulomata. Pathologists were familiar with the writings of authors who had described cases of blastomycosis or blastomycetic dermatitis. Some of these observers claimed that the yeast-like fungi which they had found to be present were the actual cause of lesions which in many respects resembled tuberculosis. Of these observations some would not now be claimed to lead to the conclusions originally stated by their authors, but granting that some of the observations and conclusions were to be accepted as correct it was very difficult to believe that similar parasites were on the one hand capable of producing egistrar at the London Hospital, to tabulate for him the tatistics of all the cases of hæmatemesis from gastric ulcer which had been admitted during the five years 1895 to 1899. The total number was 246—202 women and 44 men. Among he women there were only four deaths. Three of these deaths occurred, however, in the 49 women who were over 30 years of age, so that the mortality in women under 30 years of age was less than 1 per cent., while in those over that age it was [illegible] per cent. In the men, on the other hand, taking all the ages together, the mortality from hæmatemesis alone was 14 per cent. When the other causes of death in gastric ulcer were taken into consideration it must be admitted that the death rate due to gastric ulcer, especially in the case of omen over 30 years of age and in men, was very much higher than was usually believed. There was no doubt that he main treatment of gastric ulcer was and must remain in the hands of physicians, but as had been already recognised n the case of perforation it was equally clear that certain contingencies or accidents might arise which could only be met by the adoption of prompt and decisive surgical measures. So far as hæmatemesis was concerned it was clear hat much greater risk could be run in the case of women under 30 years of age than in the case of those over that age and especially in the case of men. But if due allowance were made for this it might be laid down as a general rule that if there was one single severe hæmatemesis in a case in which the previous history suggested the presence of a chronic gastric ulcer (for in this case the bleeding had probably been due to an opening in an artery of some size) or if there had been two separate attacks of severe hæmatemesis at a short interval, or if there were frequent small hæmorrhages so that the patient was becoming seriously anæmic, there was less risk in operating than in leaving the patient to the chance of the hæmorrhage stopping of itself.

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# OBSTETRICAL SOCIETY OF LONDON

*Suppression of Urine after Labour.—Sarcoma of the Ovary.—Exhibition of Specimens.*

A MEETING of this society was held on March 5th, Dr. PETER HORROCKS, the President, being in the chair.

Dr. R. G. McKERRON read a paper on Suppression of Urine after Labour. He at first directed attention to the fact that suppression of urine before and after labour was rare notwithstanding the frequency of pathological changes in the kidneys during pregnancy. From recent experience he was *disposed to believe that as a puerperal compli*cation complete or partial suppression was more common than the small number of recorded cases would suggest. He described three cases which came within his own knowledge, adding short abstracts of three cases of complete anuria found in literature. The causation of anuria after labour was obscure. To assist in the solution of the causal problem an analysis of the leading clinical features of the cases was given, from which Dr. McKerron concluded that several factors were concerned in its production and that these might be variously combined in different cases. The essential causes he believed to be—(1) a nephritis similar to that underlying eclampsia and probably superimposed on kidneys previously defective; *(2) a neurotic temperament; and (3) shock resulting from* precipitate labour or from intense pain accompanying its progress. The paper concluded with a few observations on treatment and on the possible effect of opium in contributing to the suppression.—Dr. R. BONNEY presented the details of two cases in which partial suppression of urine occurred, in one after labour and in the other after a miscarriage in the fifth month. In both cases the patient died and in both disease of the kidneys had previously occurred. Except for persistent vomiting till shortly before death there were no marked symptoms indicative of the grave condition of the kidneys. In the first case the urine was examined soon after labour and active measures, which included saline injections into the bowel and into the veins, were early adopted, but unfortunately these measures failed to re-establish the functions of the kidneys.—Dr. W. GRIFFITH said that there appeared to be two classes of puerperal cases of suppression of urine, one being the common cases of acute nephritis with or without eclampsia, and the other very rare and quite unconnected with this disease. He had seen one of the latter some years ago. The patient was a primipara who was quite clear in her mind, without headache or uræmic symptoms, and with complete suppression of urine; she survived about five days and the treatment adopted failed completely. His recollection of the case was that it was a complication of acute septicæmia.—Dr. W. MURRAY LESLIE *said that he could recall three* cases where, however, the anuria did not prove to be complete, though the daily amount of urine voided was in excessively small quantities and loaded with albumin, and in each of these cases the main factor in setting up the condition proved to be alcohol. The first case seen in consultation had a long history of indulgence and ended fatally after a fortnight with uræmic symptoms. The patients in the other two cases in private practice—primiparæ—recovered. These two latter patients had never been previously suspected of alcoholism, and one had only acquired the habit during the pregnancy. The kidneys were not examined as post-mortem examinations were not obtainable. He emphasised the importance of regular examination of the urine at intervals during the latter part of a pregnancy and of dealing firmly with the question of alcohol should any trace of albumin be found to be present.—Dr. W. W. H. TATE referred to a very remarkable case reported by Bradford and Lawrence in the *Journal of Pathology and Bacteriology* in May, 1898. The patient, a multipara, was delivered of a stillborn child on Feb. 28th, 1896. She was sick after the confinement was over and suffered from headache and slight drowsiness. She said she passed no urine from the time of her confinement until March 2nd, when two teaspoonfuls of urine were drawn off. There were no fits or twitchings; the patient gradually became worse and she died suddenly on March 7th. At the necropsy there was found to be necrosis of nearly the whole cortex of both kidneys. There was widespread endarteritis of the interlobular arteries which were thrombosed and had caused necrosis of the convoluted tubules throughout the cortex. Dr. Tate also reported the following case of anuria following labour. The patient, a primipara, passed through a normal confinement on April 16th, 1899. All went well till the 23rd, when, while having a vaginal douche, the patient had a shivering attack and her temperature rose to 102·5° F. She felt faint and vomited. *On the same day* she complained of sore throat. On the following day the temperature had fallen to normal but she vomited four times during the day. On the 25th at 6 A.M. she began to hiccough and this troublesome symptom continued until death. There was also some diarrhœa. The lochia appeared to be healthy and free from odour. The amount of urine passed was first observed to be below the normal on this day. On the 26th Dr. C. J. Cullingworth saw the patient and curetted the uterus. *On the 28th the hiccough still continued*, the temperature was subnormal, and still no urine had been voided. The patient died suddenly at 6.30 P.M. She complained of sudden pain over the heart and died before the nurse could get to the bedside.

The report of the Teratological Committee upon Mr. Stannus's *specimen of Orbital Tumour in a Fœtus* was read.

The PRESIDENT showed Two Sarcomata of the Ovary, each tumour being of the size of a football. They were removed recently from two patients who presented almost identical symptoms—namely, a large, freely moveable solid tumour together with abundant ascites (necessitating paracentesis in *one case to relieve dyspnœa*), marked wasting, pyrexia, and pleurisy. The latter was thought to be due possibly to secondary growth. Both patients were making a good recovery. It was interesting to note that in one case the small intestines were so intimately adherent as to require a very careful dissection, whilst in the other case there were no adhesions. In the former the sarcomatous elements were most abundant, whilst in the latter the fibrous element predominated. *Both women were multiparous*, the one with the marked sarcoma was under 30 years of age and the other was about 40 years of age.—A discussion followed in which Mr. J. H. TARGETT, Dr. A. CORRIE KEEP, Dr. W. F. VICTOR BONNEY, Dr. TATE, and Dr. AMAND J. M. ROUTH took part.

Dr. TATE having shown a specimen of a Lithopædion, the PRESIDENT and Dr. A. L. GALABIN commented upon the case.

Dr. BONNEY showed two specimens from a patient aged 50 years who had suffered for 12 years from an Abdominal Tumour of large size. Last October she was seized with symptoms of subacute intestinal obstruction and subsequently she spontaneously passed an intussusception of the

It was notorious that in recent years the mortality from cancer had increased very rapidly, not only among females but among males. This was shown by the subjoined figures :—

*Annual Rate of Mortality in England and Wales: Rate per Million Living.*

| Males. | | Females. | | Increase in 1891–1900 per cent. | |
|---|---|---|---|---|---|
| 1861–1870. | 1891–1900. | 1861–1870. | 1891–1900. | Males. | Females. |
| 242 | 597 | 519 | 903 | 147 | 74 |

It thus appeared that although at the present time women suffered much more severely than men from malignant disease, nevertheless the disease during the last 30 years had increased among men much more rapidly than among women.

Dr. G. T. BEATSON (Glasgow) said that they must not lose sight in a discussion of the kind they were engaged in of the subject of tumour formation as a whole, and any theory explaining only one neoplasm was, in his opinion, defective and unsatisfactory. In regard to that there were one or two statements that he thought should be discussed at that time. They must remember that there was undoubtedly a connecting link between malignant and benign growths. This arose from the fact that being composed of the tissues of the body these have all had a common parentage They have all sprung from two epithelial cells, from a male and from a female cell, and these were to all intents and purposes epithelial cells. As a consequence of that, no matter what the ultimate history of a cell might be, it had had in one time of its history an epithelial form. The character of the cell might be altered and the differentiation might be slight in some and in others it might result in the formation of tissue of the highest type. These differentiated tissues as long as they retained their specialised form "bred true"—that is to say, an epithelial cell produced an epithelial cell and a connective tissue cell produced a connective tissue cell. Differentiation lessened the proliferating power of cells and daily proof of that was seen in the amount of regenerative power shown in wounds and injuries, whilst regeneration took place copiously and freely in the lower tissues like epithelial tissue, while those of a higher type like muscles could scarcely be reproduced. Certain facts seemed to show that this differentiation only masked the epithelial type to which he had referred. Less highly specialised cells might revert to their primitive epithelial form, and in no other way could they explain the well-known fact that benign tumours might become malignant. If a benign tumour could become malignant, if it could revert to a lower type, they must not deny to the tissue which it represented the same power. If the influence or influences that caused tumour growth came into play the effects would vary with the tissue involved. If it was a highly specialised tissue they would have a limited growth—i.e., a benign tumour; if the tissue attacked was very little differentiated then they would have an indefinite growth, with great proliferation—that is to say, a malignant tumour. The proliferating power was to be measured by the amount of specialisation to which the cells had attained or which they possessed at the time of the attack, because they might have degenerated. They had then in the body always present a proliferating power in the cells that varied with the natural differentiation of the tissues that might be lessened in amount. The tissues might be thus brought to a lower standard with a consequent increase of proliferating power. That was one factor in tumour growth and the other factor required was the necessary stimulus. Before he discussed that he would like to draw attention to the similarity that existed between cancerous and early embryonic tissue. In the body the tissues that were formed at first were similar in structure to those in cancerous growths, and it was only in connexion with that embryonic tissue and its power of development that they had anything at all approaching the proliferative power of malignant tumours. In connexion with embryonic development there had also to be noted the relation of malformation to neoplasms. Uniovular twins depended on a pathological process, and this was also the case in joined twins, in children with extra limbs or incomplete bodies attached, in children with sacral tumours of fœtal tissue, and in children with dermoids. All these various gradations formed a complete series. Dr. Beatson, after expressing his belief in the local origin of cancer, passed on to the consideration of the factor or factors that started local cell proliferation or the causes of tumour formation. A natural division was into causes from without and those from within. Of those from without the parasitic theory was the only one that required notice. This theory was supported by the discovery of the so-called cancer bodies but the fatal objection to that view was found in the consideration of the conditions observed in congenital tumours and in secondary growths. Another difficulty in this connexion was the absence of toxins. He believed in an intrinsic cause that explained the commencement of local cell proliferation which was based on the results observed in oöphorectomy for mammary cancer. The chief interest in this operation lay in the fact that after its performance there had been a disappearance of cancerous tissue. Others besides himself had obtained that result and various explanations had been given of the circumstance. It had been suggested that it was because of diminished vascularity of the parts, also that the cause was from an increase of resistance on the part of other cells in the body, and another view had been put forward that the effect was due to the opening of the abdomen. In his opinion, however, the above reasons were quite inadequate and he considered that a more potent factor must be sought. He believed that the explanation was to be found in the facts connected with the testes and ovaries. In his original paper he had suggested that these organs might be the exciting cause of cancer in two possible ways, but a third possible explanation was to be found in what happened in connexion with the function of the testes and ovaries. Both these organs had to prepare cells to perpetuate the species; the testes did this by forming spermatozoa out of epithelial cells, the ovaries did it by carrying out those maturation phenomena which enabled certain of the epithelial cells contained in them to perform the function of fecundation. By what agency was this done and what was the stimulus that caused the cellular division in the testes and the cellular activity in the ovary? In his opinion it must be a secretion of some kind, and that being so, where was it elaborated? Was it secreted by the organs themselves or by all the tissues of the body under the stimulus of these organs, or were such organs the instruments for ratifying the work done by the rest of the body? In other words, was the fructifying fluid that gave to the spermatozoa and the female ovary their procreative power the product of the whole of the body and not a local manufacture? Such a view was not altogether unsupported by facts that had been observed in connexion with the thyroid gland and in regard to the subtle influences that the testes and ovaries exerted on the general nutrition of the body. There had also to be considered the profound impression made on the whole fabric of the body by the removal of these organs which was seen in the case of eunuchs and after oöphorectomy. What was the actual relationship between the rest of the body and the testes and ovaries, supposing the condition to be as he suggested? When these organs dwindled with age or became functionless what happened to this body secretion? Did it dwindle also under the lessened influence of these organs ceasing entirely to be given up on their removal or complete atrophy? or did it continue after they were functionless and be then again taken up by the tissues themselves? There was the further problem as to when those organs lost entirely their influence over the functional activity of the body. The impossibility of answering these queries rendered reliable conclusions difficult, but the facts, however, seemed to point to the tissues ceasing to give up this fluid on the removal of the testes and ovaries. They were now in a position to judge what bearing these views had on the causation of the cancerous process. He need hardly point out that the existence of such a fructifying fluid in the body tissues furnished an explanation of many observed facts and opened up also other possibilities. It was of the greatest importance in connexion with cell proliferation and tumour formation. It furnished the factor that was alone wanting to explain the case, for, as they had seen, the tissues already possessed in varying degree the power of cell division or proliferation. If it were granted that such a fluid existed in a granulomatous tumour and were also capable of producing such a totally different growth as a carcinoma of the breast or other glandular organ. In the second place, it was very probable that new growths, including the carcinomata, might be infected occasionally, though rarely, and probably accidentally, with certain fungi producing both hyphæ and spores. These fungi apparently grew readily when introduced into the tumour and in all probability were capable of cultivation outside the body. But it would be unjustifiable to form the conclusion that the fungus found to be present was the cause of the cancerous tumour. If in such a case a culture of the fungus was obtained and inoculated into a susceptible animal and proved to be pathogenic it was much more easy to believe that the growth which would appear as the result of inoculation would have the characters of a granuloma rather than of a cancer. It was from their clinical experience that they were all likely to inquire as to the truth or falseness of a pathological theory, and it must be admitted that clinical evidence gave but grudging and very scant support to the parasitic theory of the origin of cancer. There was a very interesting body of clinical evidence which had not been greatly appealed to as yet in considering this question derived from those diseases in which prodromal morbid states, it might be for years, preceded the development of cancer. In Paget's disease of the nipple they had a prodromal state preceding the development of cancer. But according to the evidence of some observers the prodromal state was in this case too nearly allied to cancer itself to furnish a good example. These authors would call Paget's disease by some such name as "malignant papillary dermatitis." He referred particularly to such conditions as in xeroderma pigmentosa and to certain forms of abnormal pigmentation. In both of these conditions there occurred, possibly for years before the development of a form of carcinoma which proved fatal, an alteration in the texture of the integument. In the case of the former this change was characterised by the development of pigmentation resembling exaggerated freckles and accompanied by atrophy of the skin. In the case of the latter melanin was deposited in such abnormal positions as in the clefts of the fingers or toes, or about the nails, in localised areas with clearly marked margins. It was surely more easy to conceive of these changes as being successive manifestations of a progressive process of degeneration, the earlier signs being alteration of the pigment distribution and the later the disorganisation of the means by which the growth of the epithelium was kept in check and properly distributed and arranged. And if it was conceded that the distribution of pigment was very directly influenced by the nervous system, might not the process continue and the disorganisation of nervous control end in allowing the resistance of the connective tissues to be impaired and the epithelium to escape from control? So, also, in the prodromal conditions, of which senile keratoma was an example, from which arose epithelial cancers of varying degrees of malignancy, was it not an easier conception to hold that the whole course of the disease was continuous than to invoke the action of a parasite when at last the epithelial cells were so affected as to show evidence of the peculiar form of overgrowth which was recognised as "malignant"? Considerations such as these led to discussions on the subject of the "physiological equilibrium" of the tissues and its alteration in disease so interestingly placed before them by Dr. C. P. White in his Erasmus Wilson lectures, but such discussions at the present time were very fruitless because they did not know the factors which maintained and interfered with this condition. It must be the desire of everyone that observation and experiment would in the near future tell them why the balance was upset and why a tissue cell, instead of leading its normal life, suddenly ran riot, penetrating beyond bounds, and multiplying with an energy never approached in its usual normal well-ordered existence.

Dr. JOHN F. W. TATHAM (superintendent of statistics, General Register Office) said that in England and Wales during the last four years the deaths from malignant disease had averaged more than 25,000 a year. In the returns issued from the General Register Office the term "malignant disease" included all the diseases classed as such in the nomenclature of the Royal College of Physicians of London. Hitherto all forms of malignant disease had been grouped together under one heading in their national returns, but with the new century a revised list of diseases had been inaugurated, of which a shortened form was published for London in the weekly return from which he quoted. The table showed that the carcinomata, or true cancers, were distinguished from the sarcomata, and these again were distinguished from the indefinite forms of disease which were ascribed in medical certificates to "malignant disease," or "cancer" merely without further qualification. That medical practitioners appreciated that improvement in the classification of a most important group of diseases was shown by the fact that in London since the beginning of the present year, when the new list of diseases was first published, the deaths from malignant disease, in the aggregate rather more than 800 in number, had been differentiated; thus, in the medical certificates supplied for registration 52 per cent. had been certified as from carcinoma, 6 per cent. from sarcoma, and the remainder, amounting to considerably less than half, to "cancer" or malignant disease. It was highly gratifying to him, as he was sure it would be to them, to note how readily the practising members of their profession had responded to any attempt to secure greater accuracy in the statistical records of the fatal cases coming under their care. He took the opportunity of cordially thanking many of the physicians and surgeons present for the courtesy and kindness with which they had invariably answered his requests for fuller information respecting deceased patients than that which could be got into the ordinary form of certificate. Malignant disease in the aggregate—i.e., without limitation as to organ or part affected—was more fatal to women than to men. According to the latest returns the male death-rate from cancer in England and Wales was equal to 672 in each 1,000,000 living, whilst the female death-rate amounted to not less than 975 per 1,000,000. But this excess was due to the unequal tendency of malignant disease to attack the generative organs of the female than those of the male. On reference to the following table it would be seen that when the deaths from cancerous affections of the ovaries, uterus, and breast were subtracted from the total cancer deaths of females, the remainder gave a death-rate among females which was considerably below that among males. Thus, in the four years 1897–1900 the male deaths from cancer less the deaths from disease of the organs referred to corresponded to a death-rate of 645 per 1,000,000, whilst the female rate with the same limitations did not exceed 568 per 1,000,000.

*Cancer Mortality, 1897–1900: Total Deaths in the four years 102,685.*

| Parts affected. | Deaths. | | Rate per 1,000,000 living. | |
|---|---|---|---|---|
| | Male. | Female. | Male. | Female. |
| All parts ... ... . ... ... | 40,317 | 62,368 | 657 | 952 |
| Lip .. .. ... ... ... | 647 | 74 | 11 | 1 |
| Mouth ... ... .. . ... | 508 | 115 | 8 | 2 |
| Tongue . .. ... | 2,124 | 271 | 35 | 4 |
| Throat .. . ... | 891 | 334 | 15 | 5 |
| Œsophagus .. | 2,358 | 852 | 38 | 13 |
| Stomach .. .. | 8,369 | 8,355 | 136 | 127 |
| Intestines . . . . | 6,312 | 6,731 | 103 | 103 |
| Liver . .. | 5,532 | 8,654 | 90 | 132 |
| Generative and mammary organs ... | 726 | 25,151 | 12 | 384 |

The mortality from cancer was not very excessive until some time after the twenty-fifth year of age. Thus at ages under 35 years it averaged from 44 to 66 per 1,000,000, but as age advanced the mortality increased in both sexes very rapidly until at the more advanced ages it was enormous. The following table showed that.

*Cancer Mortality at Certain Ages, 1900.*

| — | Annual death rate per 1,000,000 living at each age. | |
|---|---|---|
| | Male. | Female |
| All ages .. ... ... | 672 | 975 |
| Under 35 years ... .. ... | 44 | 66 |
| 35–45 years . . ... | 418 | 912 |
| 45–55 ,, . . .. ... | 1423 | 2433 |
| 55–65 ,, .. ... ... . ... .. | 3795 | 4561 |
| 65–75 ,, . .. ... .. ... ... | 5735 | 625 |
| Above 75 years ... ... ... ... | 6715 | 7403 |

bones, and, if so, whether such growths partook of the histological character of the thyroid itself.—Mr. DANIEL, in reply, said that the skin was not pigmented. He showed a specimen in which there were secondary nodules affecting both lobules of the thyroid. With the exception of the spine in one case there had been no tumour of bone or lung in any of the cases, although the walls of the subclavian vein were undoubtedly involved. On section the new growths in the spine were seen to be simply pure sarcomata.

# EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

*Meralgia Paræsthetica.—The Relative Inefficiency of Cacodylates as Therapeutic Agents.—The Coordination of Medical Research in Edinburgh.—Exhibition of Cases and Specimens.*

THE seventh ordinary meeting of this society was held on March 5th, Professor T. R. FRASER, the President, being in the chair.

Dr. EDWIN BRAMWELL showed a case of Meralgia Paræsthetica (Bernhardt's Sensibilitatsstörung). The patient, a miner, aged 43 years, for 18 months had suffered from pain over the right hip and over the lower part of the right thigh anteriorly, also from a feeling of coldness on the outer side of the right thigh. The pain was greatly increased by walking and was so severe that it had incapacitated him from work. In other respects he enjoyed excellent health; he had not had rheumatism or syphilis The condition was attributed to sleeping on hard boards in damp clothes. Upon examination an area of relative cutaneous hyperæsthesia was found on the outer side of the right thigh, while there was marked tenderness on pressure over a point one and a half inches below and just external to the right anterior superior iliac spine. An exhaustive examination failed to elicit any other objective signs of disease; the patient's symptoms were obviously referable to the right external cutaneous nerve. Since no improvement resulted from rest in bed and faradism Dr. H. Alexis Thomson cut down upon the nerve at the level of Poupart's ligament and excised three inches. The nerve and its relations appeared to be normal. As an immediate consequence of the operation the pain which had previously been present, even when the patient lay in bed, disappeared. Dr. Bramwell showed photographs to illustrate the area of anæsthesia produced by division of the nerve. For two or three weeks after the operation the patient complained of a feeling of tenderness on deep pressure over this area. Four weeks after the operation he was quite free from pain but still had a feeling of stiffness about the front of the right thigh. The excised nerve was placed directly in 5 per cent. formalin. No degenerated fibres were to be seen in sections stained by Busch's method. Sections taken from pieces of the nerve hardened in chrome alum did not stain with Weigert's method: Was this to be accounted for by the fact that the nerve had been taken from the *living* body and placed directly in formalin? Dr. Bramwell considered meralgia paræsthetica to be a distinct clinical entity, probably not uncommon, Roth having recorded 15 personal observations. The condition was well worthy of notice for purposes of exclusion in differential diagnosis, while cases occurred where the pain was so severe as to unfit the patient for work. The pathology was obscure. It might be that in some cases it was merely a neuralgia, in others a neuritis. Faradism appeared to have been efficacious in the treatment of several of the reported cases. Resection of the nerve was only justifiable in severe and persistent cases.

The PRESIDENT read a paper entitled, "The Relative Inefficiency of Cacodylates as Therapeutic Agents," with lantern illustrations. He stated that compounds of cacodylic acid [As $(CH_3)_2O(OH)$] had of recent years been largely used as substitutes for the commoner forms of arsenical compounds. It was asserted that new preparations had certain advantages over the older preparations of that element which were usually employed. A considerable amount of clinical experience had already been accumulated regarding the actions of several of the cacodylates, especially that of sodium and iron. The cacodylate of sodium had been administered in almost every disease where the ordinary preparations of arsenic had been usually employed—as, for example, anæmia, leukæmia, pseudo-leukæmia, many skin affections, phthisis, leprosy, bronchitis, chorea, and neurasthenia. Almost everyone who had experimented chemically with the cacodylates had expressed themselves most favourably with regard to their value.' Dalché of Paris stated that of 11 cases of pulmonary tuberculosis treated with sodium cacodylate injected subcutaneously three patients were undeniably cured, four were greatly improved, two showed no results, and two (very advanced) became worse. Dr. Anelli had described a case of severe pulmonary tuberculosis in which remarkable success was attained by the intravenous injection of 0·8 grain daily. Rocax treated 80 cases of tuberculosis and stated that except in very advanced cases the cough, night-sweats, and pyrexia disappeared in cases of pulmonary tuberculosis and that the body weight was increased. He made the remarkable statement that in cases of "latent, suspected, or threatened tuberculosis cacodyl triumphs." Gallois, who had given sodium cacodylate by the mouth, claimed that chronic bronchitis with asthmatic paroxysms of elderly people was the disease which was chiefly benefited by the new drug. Ewart noted the "brilliant effects [of cacodylates] in all cases where arsenic was indicated, especially in chorea, malaria, pernicious anæmia, and Basedow's disease; also in the hectic fever and the cough and expectoration of phthisis, and in all nervous exhaustions.' Bormans summarised his experience with cacodylate of sodium as follows: "It is a remedy which may be tolerated in much larger doses than those usually given and therefore is valuable in all cases where large doses of arsenic are indicated, as in anæmia and chlorosis, especially where iron is not tolerated. Burlureaux had good results in neurasthenia and chlorosis, Doulos in pseudo-leukæmia and psoriasis, and Reynard in psoriasis, lupus erythematosus, cutaneous tuberculosis, sarcoma of the skin, and leprosy. Gautier stated that the salts of cacodylic acid did not act in any special disease but in all weakened conditions, and the success was the more remarkable in that it was free from risk. He stated that the daily quantity of subcutaneous injection was 0 05 gramme, equal to 0·37 grain of arsenicum, or 51 minims of liquor arsenicalis. The President pointed out that the employment of cacodylates was based on the supposition that these compounds, though rich in arsenic, were almost inert, and so large quantities of arsenic might by their use be introduced into the body with safety and advantage, but he thought that if they were not capable of causing toxic effects when given in quantities relatively far larger than those of the usually employed compounds of arsenic, they must to a corresponding degree be pharmacologically inert and therapeutically inefficient. To test this opinion he had administered cacodylate of sodium and cacodylate of iron in several of those diseases where arsenic was commonly employed. Taking first the disease chorea, in which the value of preparations of arsenic had been abundantly proved, cacodylate of sodium was given to three patients with the following results:—

CASE 1.—The patient was a girl, aged nine years, ill for 10 days, who was treated for 45 days. The minimum and maximum doses were three quarters and four and a half grains in 24 hours. As there was no improvement liquor arsenicalis was substituted in doses varying from nine to 12 minims in 14 hours. In seven days marked improvement was noted, and in 10 days no choreic movements were present.

CASE 2.—The patient was a boy, aged nine years, ill for four weeks, who was treated for 23 days. The doses of cacodylate varied from three quarters of a grain to 11⅓ grains. After 20 days improvement began, when the dose was seven and a half grains in 24 hours, and continued so until recovery, which was delayed by diarrhœa.

CASE 3.—The patient was a boy, aged 13 years, ill for 10 days, who was treated for 52 days, the daily dose varying from one and a half grains as a minimum to 10½ grains as a maximum. There was hardly any improvement until the twenty-eighth day and then very slight until the fifty second day. On the substitution of liquor arsenicalis in doses of from six to 12 minims per diem there was a marked improvement in seven days; this was great in 14 days, and he had entirely recovered by the twenty-first day.

In one case of acute eczema affecting the whole surface of the body except the scalp cacodylates were tried. During 17 days previously to this drug being given material improvement with disappearance of the acute symptoms had occurred under mere regulation of diet, purgatives, and exalgine Sodium cacodylate was given for 23 days and then intermitted for four days because of nausea and vomiting and again given for other two days. There was slight improvement in the skin condition in six days and this continued gradually. The dose varied from three to 15 grains in 24 hours. One case of spleno-medullary leucocythæmia was treated with sodium cacodylate for a period of 12 days with doses of from one to three grains in 24 hours. Neither in this case nor in six cases of simple anæmia was any the body it was likely to influence those cells the proliferating power of which was greatest. Special proliferating power might exist under two conditions, natural and acquired. By acquired he meant loss of differentiation; in other words, loss of functional activity, so that such cells were no longer of any service in the economy and reverted practically to their embryonic state. When dealing with conditions where they could only theorise any explanation put forward could be judged in one of two ways. It could be disproved by facts or strengthened if supported by facts on which there was agreement. Applying the latter test to his theory he selected a few well-accepted facts—namely, the connexion of cancerous growths with long-continued irritation and with organs where senile changes were occurring—namely, physiological atrophy. He quoted the incidence of cancer in those whose natural body powers were declining through age. He discussed Cohnheim's conclusions, Ribbert's isolations, and Adami's groups. He cited also the influence of heredity, the conditions connected with cancer houses, the occurrence of carcinoma during pregnancy, and the mammary recurrences after long intervals. Dr. Beatson then went on to say that his views on the cancer process were as follows: that it could only develop in tissues that had special proliferating power, either natural, as in Cohnheim's "rests," or acquired in one of many possible ways. Further, the actual exciting cause of the cell proliferation was a secretion from all the tissues of the body and possessed of fructifying powers. A mutual relationship also existed between the character and amount of this secretion and the testes and ovaries. Another factor in connexion with it was the inherent vitality of the tissues themselves In that way alone could the disappearance of cancerous tissue under oöphorectomy be satisfactorily explained That was an instructive and important clinical fact which was altogether apart from the question of cure. Such a view of carcinoma was apparently a return to the old spermatic theory, but it differed from it in a very important point, because it did not imply a conversion of the normal tissue into another kind of tissue. Cancerous tissue was composed of ordinary body cells and all that the body secretion he had discussed did was to furnish a stimulus for proliferation when the condition of the cells allowed. The late Dr. C. G. Ritchie, whose work on ovarian physiology and pathology was full of interest, wrote the following suggestive remark: "Perhaps by the careful study of ovarian growths our knowledge of the nature of malignancy may some day be signally increased." Dr. Ritchie also said: "It is well to bear in mind what Dr. Bright enunciates so well that the ovaries in their natural structure seem to present a prototype of that involved system of cellular enlargement observed in malignant growths" Dr. Beatson concluded his remarks by discussing the general principles of treatment, in which he laid stress on oophorectomy and the administration of thyroid extract, in moderate doses, especially in connexion with inoperable mammary cancer with no visceral complications.

The meeting was then adjourned to March 18th.

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## HARVEIAN SOCIETY OF LONDON.

*Exhibition of Cases.—Some Rare Cases of Sarcoma of the Thyroid Gland.*

A MEETING of this society was held on March 6th, Mr. W. Watson Cheyne, the President, being in the chair.

Dr. C. J. N. Longridge showed a girl, aged seven years, with an Irregular Temperature of three months' duration for which no obvious cause could be found Typhoid fever had been eliminated by repeated non-reaction to the Widal-Grunbaum test. No evidence of tubercle could be detected. It was not considered desirable to apply the tuberculin test on account of the irregularity of the temperature The only evidences of disease that could be detected were König's sign, which had lasted for six weeks, a transient erythematous rash, some pain and swelling of both wrists, and the temperature and wasting.—Dr. Penrose considered the case to be an obscure rheumatic condition.—Dr. E Cautley thought that this might be an early case of osteo-arthritis, and he believed that there was a little swelling about the wrist-joint. If so, that would support the view, and febrile attacks were a feature of some such cases. He had never seen a case of such long duration without definite joint change.—Dr. G. A. Sutherland agreed that there were cases of osteo-arthritis associated with high temperature. He thought that wasting was a striking feature in the case and agreed that there were wrist changes. Cardiac rheumatism was a possibility. He also thought that it might be a case of periodic paralysis and periodic vomiting, which cases were not generally well understood but seemed to be associated with a family complaint. He asked whether there was a history of a similar condition in other children of the family and what other illnesses the present patient had had.—Dr. Longridge, in reply, said that he had seen cases of osteo-arthritis in which the causal factor seemed to be a septic condition of the teeth, but the condition cleared up when the teeth were purified. The present child had bad teeth, but they were not septic The family history was good. She had two brothers older than herself and a younger sister, all robust. The only diseases which the present child had had were whooping-cough and measles.—In answer to the President he said that the red blood corpuscles were normal in number, but there was some leucocytosis, which had increased.

Dr Cautley showed a case of Disease of the Cauda Equina. The patient, aged 26 years, had a chancre eight years ago and presented a scar on his penis He was quite well until last October, when he had a sudden retention of urine. Four days later he could not hold his motions. He was treated by catheterisation and aperients, both as an out-patient and as an in-patient, at a hospital, but the disease was not diagnosed. Later the actual cautery was freely applied to the sacral region when he was in the infirmary. In December he began to have some loss of power in the left leg and numbness in the buttocks. At present he exhibited some loss of power in the extensors of the left leg. The cremasteric and patellar reflexes were very active, while the plantar reflex was lost. The sphincter ani had lost power and did not grasp the finger on examination. There was diminution of sensation to touch, pain, and temperature, with a feeling of numbness over a considerable area of the buttocks, the perineum, the penis, and the scrotum. Testicular sensation was impaired. He could not pass urine at first but now had partially regained control over the bladder. Stools were occasionally passed unconsciously. The probable diagnosis was syphilitic disease of the cauda equina, that part from which the second, third, and fourth sacral nerves arose He was treated with mercury and iodide of potassium.

Dr Cautley also showed a typical instance, clinically, of Primary Lateral Sclerosis in a man, aged 25 years. No possible exciting cause had been found except gonorrhœa about two years before the onset, which took place three years ago

Mr. P. L. Daniel read a paper on Some Rare Cases of Sarcoma of the Thyroid Gland and exhibited a large number of pathological and microscopical specimens from cases which had suffered from this disease.—The President said that sarcoma of the thyroid was apparently not very common. He was interested in the statement that out of six cases of malignant disease of the thyroid at Charing Cross Hospital four were sarcomata He had not generally examined such cases histologically, but had accepted the statement of the books as correct that sarcoma was much more rare than carcinoma. He had not yet encountered a case of malignant disease of the thyroid which he felt justified in operating upon; and those cases which did not seem to benefit under treatment were not kept in hospital, so that no opportunity of post-mortem examination was afforded The most interesting question was that of treatment, because malignant disease of the thyroid was one of the most terrible forms, on account of the great distress which it caused. In one case which was diagnosed as sarcoma of the thyroid a good deal of benefit resulted from the use of Coley's fluid. One case went on for more than a year; the patient was injected with Coley's fluid, and apparently there was a complete cessation of the growth But the patient had influenza and it lighted up again.—Mr Campbell Williams asked whether there was any pigmentation in the skin in these cases. He agreed that primary sarcoma or epithelioma of the thyroid was excessively rare.—Dr. Cautley asked whether in any of the cases the growths in the thyroid were secondary. Occasionally in cretins who were improving under thyroid treatment, if the treatment was stopped the thyroid began to enlarge, but it would go down again on the resumption of the treatment There was no doubt a connexion between the thyroid gland and the sexual functions.—Dr. Longridge asked whether there were any secondary growths in the of the ratepayers and necessitated hospital accommodation in excess of the real needs of the district. This view was accepted without any qualification by the committee of the Clinical Society of London[1] for the investigation of incubation periods and the duration of infectivity in 1892 on, Dr. Millard held, insufficient evidence, desquamation having been mentioned in no more than three of the 209 cases of scarlatinal infection recorded in their report edited by Dr. Simpson, and they admitted that infection might occur long after desquamation had ceased. With a view to elicit the opinions of the most competent authorities he had sent a number of questions to 25 medical superintendents of fever hospitals, some of whom were also medical officers of health; 16 of these expressed in decided and almost identical terms their disbelief in the old doctrine, while nine gave a more or less uncertain and qualified adherence thereto. Dr. Millard believed that not only was there no ositive evidence in favour of the old doctrine, but that there as much direct evidence against it. The streptococcus con- omeratus of Klein, which was very generally regarded as e specific microbe of scarlet fever, though present in the o-pharyngeal mucus and in the urine, had not been cted in the cast off cuticle, and the "striking distance" carlet fever was very short, though the dusty desquamation must be diffused far and wide through open windows; but there was no excessive incidence of scarlet fever in the vicinity of isolation hospitals, so that there was a strong contrast in this respect with the experience of small-pox hospitals. The supposed analogy between the scabbing of small-pox and the desquamation of scarlet fever was fallacious; pustulation, like suppuration, was evidence of the presence of bacteria, whereas erythema pointed to the action of a poison produced by bacteria in the organism rather than to that of the bacteria themselves, and erythemata produced by drugs were sometimes followed by similar desquamation. In his experience of several thousands of cases at Birmingham, and subsequently at Leicester, where the average period of detention did not exceed one month, the percentage of return cases following the discharge of patients still desquamating, though otherwise healthy, was certainly no greater than among others in whom it had ceased Recrudescence of infectivity did not accompany a secondary desquamation, but it often followed the occurrence of a naso-pharyngeal catarrh induced by an rdinary chill, when the microbes were doubtless still resent in the tonsils though until this accident in a dormant d inactive condition It might be advisable to avoid this shap by detaining patients for a day or two after their last infecting bath —Dr F F Caiger mentioned an instance of two return cases sent in 10 days after the discharge of a patient apparently perfectly well after eight and a half weeks in hospital.—Dr. C. B Ker said that at Edinburgh patients were sometimes sent out after six weeks, but he preferred to keep them for eight weeks The non-extension of the disease from hospitals as centres was, he thought, a very strong argument against the old view as to the infectivity of the desquamation.—Dr. F. M Turner acquiesced in the traditional notion from prudential motives Dr. Simpson's report appeared to be vitiated by his want of hospital experience and by his ignoring deferred infection —Dr. J W. Washbourn believed that there was no evidence whatever of the infectivity of the desquamation but that the period of infectivity of the patient might vary between three and eight weeks or more —Dr. E. W. Goodall, Mr Shirley Murphy, Dr. W. A. Bond, Dr. E. F. Willoughby, and the President also took part in the discussion

**Manchester Medical Society.**—A meeting of this society was held on March 5th, Dr Thomas Harris, the President, being in the chair —Dr J Dreschfeld made some observations on Hodgkin's Disease and on Splenic Anæmia He exhibited some patients to show the difficulty of clinically distinguishing between lymphadenoma and lymphosarcoma and drew special attention to the proportionate increase of lymphocytes in the former disease, though there might be no leucocytosis, as a distinguishing feature between the two As regards splenic anæmia, this term included a number of affections which had only two symptoms in common—namely, anæmia and enlarged spleen The splenic anæmia of children was often either a syphilitic or tuberculous affection, at other times the blood showed the character of pernicious anæmia The splenic anæmia of adults, in which besides the anæmia and the large spleen there was usually severe and repeated hæmorrhage (epistaxis, hæmatemesis, melæna), was often only the early stage of Banti's disease, marked enlargement of the liver at a later stage, though in several of the cases of anæmia which were evidently cases of Banti's disease which were fatal during the early stage, as shown by fibrosis of the spleen, the liver showed on examination distinct signs of cirrhosis. Dr. Dreschfeld exhibited a male patient, aged 26 years, as a good example of Banti's disease. There was marked anæmia, the spleen and liver were very much enlarged, there was as yet no ascites, the patient suffered from repeated epistaxis which was checked quickly by adrenalin, and lately he had developed purpuric spots on the legs. Analysis of the blood gave the following result: erythrocytes, 3,540,000; hæmoglobin, 66 per cent.; leucocytes, 4200, with polynuclear neutrophile cells, 58·8 per cent.; large lymphocytes, 7·6 per cent.; small lymphocytes, 32 per cent.; and eosinophile cells, 1 2 per cent. The blood in this case showed, as in many of the reported cases of Banti's disease, a marked increase of the lymphocytes, though the total number of leucocytes was diminished as compared with normal blood. The increase of the lymphocytes might be of some use in distinguishing Banti's disease from other forms of anæmia. Attention was also directed to the splenic anæmia due to the malarial parasite, to the splenic form of Hodgkin's disease, and to the remaining small group of cases of anæmia in which the spleen was enlarged and the blood showed the character seen in chlorosis.—Dr. Charles H. Melland agreed, as the result of a considerable number o blood examinations in cases of Hodgkin's disease, including those shown by Dr. Dreschfeld, that the characteristic blood condition was one in which there was absence of leucocytosis, or even slight leucopenia, with, however, a relative increase in lymphocytes. There had been at least three cases of the type of splenic anæmia described by Osler in the infirmary within recent years, with the typical symptoms of enlarged spleen, anæmia, and profuse recurrent gastric hæmorrhages. Whether these should now be called Banti's disease he was not prepared to say. There was no evidence of any affection of the liver in any of them.—Dr. A. Hill Griffith made some remarks on the diagnosis and surgical treatment of Front ethmoidal Mucocele and showed four patients who ha recovered from this condition and had had displacemen of the eyeball with diplopia and long-standing pain.—Mr. J. W. Smith showed a man, aged 35 years, on whom Excision of the Right Clavicle had been performed 13 months previously for a growth involving the inner two-thirds of the bone which had existed for five months. There was a history of precedent injury. At the operation adhesions between the posterior surface of the bone and the deeper structures presented the only difficulty. There were no signs of recurrence at the present time. As was usual in such cases the loss of the clavicle had made very little difference in the range of movement of the limb or in the symmetry of the shoulder, and the patient was now working as a labourer The growth was a chondro-sarcoma, showing areas of hyaline cartilage of a cellular type separated by strands of fibro-cartilage and small cell infiltration, other portions consisting entirely of small round sarcomatous cells

**Otological Society of the United Kingdom.**—A meeting of this society was held on March 3rd, Dr. Urban Pritchard, the President, being in the chair.—Mr. Hugh Jones (Liverpool) exhibited a Brain from a case of Cerebr Abscess in which a hernia cerebri developed three days afte the abscess was opened; a fortnight later a portion of the hernia was removed and the abscess was again explored, but no pus was found Death occurred three months after the operation —Mr Fagge suggested that the condition was not due to the removal of either too much or too little bone He thought that it was accepted as being due to a local and spreading infection, either another abscess or a diffuse infection of cerebral tissues. In two cases of failure he thought that the best line of treatment by which he might have saved his patient would have been to have removed all the area of the brain superficial to the abscess, leaving the bottom of the wound simply the bottom of the abscess cavity, thus making a funnel-shaped excision of the brain tissue.—Mr. Jones also showed a Microscopic Section of a Neoplasm from the External Auditory Meatus He considered the growth to be of the nature of a fibro-sarcoma He also exhibited some Foreign Bodies removed from the Middle Ear; one was a piece of coal removed from the ear of a collier, who material increase produced in the hæmocytes. Even if cacodylates were effective preparations of arsenic such an increase would not be anticipated, for he (the President) had more than 15 years ago convinced himself definitely that arsenical preparations were incapable of increasing either the red cells or the hæmoglobin in this disease. When cacodylate of iron was given in anæmia the condition was unmistakeably benefited, but this therapeutic effect was much the same as might at any time be obtained by administering any of the efficient iron preparations. It thus appeared that the arsenic in cacodylic acid and in its salts was almost inert when regarded either as a therapeutic or as a poisonous substance, but that when certain bases having therapeutic properties, such as iron, were united with cacodylic acid, these bases were capable of producing their special curative *effects. These results* were, the President considered, rendered intelligible when the chemical properties of cacodylic acid and its compounds were considered. He suggested that when a cacodylate was administered the arsenic remained locked up in it, in so far as its pharmacological energies were concerned. It thus remained inert pharmacologically, and, if so, necessarily also therapeutically, and it probably passed through the body without undergoing dissociation To determine the last point the urine of several of the patients who were receiving cacodylates was examined chemically with reference to the presence and form of the arsenic contained in it. Gautier had already shown that the arsenic in cacodylates could not be isolated by Marsh's process until the organic constituent had been destroyed by a very prolonged oxidation process devised by him. The result of the analyses of the urine in the President's patients was that arsenious acid dissolved in urine gave up the arsenic when treated with Marsh's process without any preliminary oxidation or destruction of the organic matter, whereas cacodylic acid failed to do so until the organic matter had been destroyed by a very prolonged and elaborate process of oxidation. The conclusions arrived at were the following. Clinical observations and chemical analyses agreed in showing that when a salt of cacodylic acid was administered to a patient it was absorbed and was eliminated, but with the arsenic which it contained so firmly combined with the other constituents that it did not become dissociated and was therefore incapable of forming any compound in the body which could produce the well-known pharmacological activities of the compounds of arsenic usually employed for therapeutic purposes. While, however, cacodylates were to be regarded as useless therapeutic agents in so far as they were compounds of arsenic, it might finally be observed that they were likewise inconvenient substances to administer to patients. In all the cases in which they were given by the mouth disorders of the alimentary canal—such as nausea, vomiting, and diarrhœa—were induced by them long before the maximal doses were attained, and in some cases these disagreeable effects required the administration to be suspended. Only when the administration was by subcutaneous injection did these disorders fail to be produced, but this was a method of administration which could rarely be continued over the long periods of time which were most usually required in the therapeutic use of arsenic preparations Further, even by subcutaneous injection, as by oral administration, the less important, though highly obnoxious, garlic-like odour of cacodylic oxide was always early produced, and it constituted an additional obstacle to the prolonged use of cacodylate These objections and inconveniences were, however, of secondary importance in view of the main result which had been arrived at—namely, that the compounds of cacodylic acid were apparently useless for producing the therapeutic effects of arsenic.

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[1] THE LANCET, May 6th (pp 1066 and 1080) and 13th (p 1145), 1893.

Dr. D. **Noël Paton** contributed a paper on the Coördination of Medical Research in Edinburgh in which he noted the present waste of clinical material and the fragmentary character of the work done by individuals. He advocated the advantages of combination on definite lines of investigation with coördinated coöperation in supplying material and in prosecuting particular lines of work.

Mr. F. M. **Caird** showed (1) a girl after removal of an Intracranial Tumour; (2) a woman after partial removal of an Intracranial Tumour, and (3) a male patient, aged 68 years, after removal of a Portion of the Small Intestine for Tuberculous Intestine.

Dr. **Byrom Bramwell** showed (1) a case of Tabes with acutely developed ataxia in which great improvement had resulted from Frenkel's exercises; and (2) a case of Consolidation of the Left Lung, &c.

Mr **Miles** showed a Splint which could be adapted for use as single or double inclined plane.

Card specimens were exhibited by Mr. **Caird**, Mr. **Wallace**, Mr. **Miles**, and Dr. **Fleming**.

# ROYAL ACADEMY OF MEDICINE IN IRELAND.

## SECTION OF STATE MEDICINE.

### *Presidential Address.—Disposal of Old Surgical Dressings in Hospitals.*

A MEETING of this section was held on Feb. 14th, Dr. **Ninian Falkiner**, the President, being in the chair.

The **President** in his opening address gave a summary of the work of the Section of State Medicine for the 10 years during which he had acted as secretary. He then gave a short sketch of the birth and progress of the history of notification of diseases in England and presented a summary of the notification of certain infectious diseases in the cities of Dublin and Belfast, in the urban district of Rathmines, and the Pembroke urban district as published in the weekly reports of the Registrar-General for the year 1901.—Dr. J. **Craig** said that phthisis ought to be included in the list of infectious diseases to be notified to the public health authorities —Mr. J. P. **Doyle** said that syphilis ought to be included in the list of diseases to be notified for it was both contagious and infectious and modified all other diseases.—Mr. D. E **Flinn**, Dr. T. **Donnelly**, Dr. F. C **Martley**, and others also took part in the discussion.

Mr. H. **Gray Croly** read a paper on the Disposal of Surgical Dressings and other Refuse Matter in Hospitals. He considered that although surgeons took every care of the dressings that were put on their patients only a very small percentage asked what became of the used dressings. When many years ago he commenced practice, poultices, tow, and used dressings were too often pushed down the pan of the water-closet, and not infrequently they blocked the pipes, so that the closets were constantly being repaired. Some nurses stuffed them into unused corners until the morning cleaning came about, when they were carried off to the dust-bin to ferment and to rot until a scavenger carted them off. Every used dressing ought to be put into a covered bucket to be immediately destroyed in a quick-burning furnace. Lieutenant-Colonel J Backhouse, I.M.S., informed him that in the military hospitals of Calcutta, Madras, and Bombay, all used dressings were placed in a pail which had a concave perforated lid covered with fresh carbon, and were at once carried out beyond the hospital grounds and burnt in a quick furnace. In the Rotunda Hospital and some others in Dublin the furnace was used, but it ought to be used in all hospitals —Mr. R. F. **Tobin** said that years ago, when he was at Netley Hospital, a farmer contracted for the hospital refuse and utilised it as a top dressing for his land. On one occasion when hunting he was thrown off his horse in a field so manured and fell into some of their old dressings.—Dr. **Craig** said that a used poultice that a nurse had left lying in one of the wards in the Meath Hospital was eaten by a child. There was the further risk of flies carrying the infection from old dressings.—The **President**, Dr. H. **Potter**, and Mr. **Doyle** also discussed the paper.

**EPIDEMIOLOGICAL SOCIETY.**—A meeting of this society was held on Feb. 21st, Dr. Patrick Manson, the President, being in the chair.—Dr. C. Killick Millard, medical officer of health of Leicester, read a paper on the Supposed Infectivity of Desquamation in Scarlet Fever. He said that the belief that infection persisted so long as desquamation was present on any part of the body was firmly held by the general public, by nearly all medical practitioners, and by many medical officers of health. On no other evidence than the mere fact of peeling and in the absence of any actual infection parents had been prosecuted for allowing convalescent children to be at large and hospital authorities had been charged with spreading infection by the premature discharge of patients, such accusations being always supported by the family attendant and often by the medical officer of health, though mostly avoided by the detention of patients for needlessly long periods, a system which increased the burdens of the ratepayers and necessitated hospital accommodation in excess of the real needs of the district. This view was accepted without any qualification by the committee of the Clinical Society of London[1] for the investigation of incubation periods and the duration of infectivity in 1892 on, Dr. Millard held, insufficient evidence, desquamation having been mentioned in no more than three of the 209 cases of scarlatinal infection recorded in their report edited by Dr. Simpson, and they admitted that infection might occur long after desquamation had ceased. With a view to elicit the opinions of the most competent authorities he had sent a number of questions to 25 medical superintendents of fever hospitals, some of whom were also medical officers of health; 16 of these expressed in decided and almost identical terms their disbelief in the old doctrine, while nine gave a more or less uncertain and qualified adherence thereto. Dr. Millard believed that not only was there no positive evidence in favour of the old doctrine, but that there was much direct evidence against it. The streptococcus conglomeratus of Klein, which was very generally regarded as the specific microbe of scarlet fever, though present in the naso-pharyngeal mucus and in the urine, had not been detected in the cast-off cuticle, and the "striking distance" of scarlet fever was very short, though the dusty desquamation must be diffused far and wide through open windows; but there was no excessive incidence of scarlet fever in the vicinity of isolation hospitals, so that there was a strong contrast in this respect with the experience of small-pox hospitals. The supposed analogy between the scabbing of small-pox and the desquamation of scarlet fever was fallacious; pustulation, like suppuration, was evidence of the presence of bacteria, whereas erythema pointed to the action of a poison produced by bacteria in the organism rather than to that of the bacteria themselves, and erythemata produced by drugs were sometimes followed by similar desquamation. In his experience of several thousands of cases at Birmingham, and subsequently at Leicester, where the average period of detention did not exceed one month, the percentage of return cases following the discharge of patients still desquamating, though otherwise healthy, was certainly no greater than among others in whom it had ceased. Recrudescence of infectivity did not accompany a secondary desquamation, but it often followed the occurrence of a naso-pharyngeal catarrh induced by an ordinary chill, when the microbes were doubtless still present in the tonsils though until this accident in a dormant and inactive condition. It might be advisable to avoid this mishap by detaining patients for a day or two after their last disinfecting bath.—Dr. F. F. Caiger mentioned an instance of two return cases sent in 10 days after the discharge of a patient apparently perfectly well after eight and a half weeks in hospital.—Dr. C. B. Ker said that at Edinburgh patients were sometimes sent out after six weeks, but he preferred to keep them for eight weeks. The non-extension of the disease from hospitals as centres was, he thought, a very strong argument against the old view as to the infectivity of the desquamation.—Dr. F M. Turner acquiesced in the traditional notion from prudential motives. Dr. Simpson's report appeared to be vitiated by his want of hospital experience and by his ignoring deferred infection —Dr. J. W. Washbourn believed that there was no evidence whatever of the infectivity of the desquamation but that the period of infectivity of the patient might vary between three and eight weeks or more.—Dr E. W. Goodall, Mr. Shirley Murphy, Dr. W. A. Bond, Dr. E. F. Willoughby, and the President also took part in the discussion.

**MANCHESTER MEDICAL SOCIETY.**—A meeting of this society was held on March 5th, Dr. Thomas Harris, the President, being in the chair —Dr J. Dreschfeld made some observations on Hodgkin's Disease and on Splenic Anæmia. He exhibited some patients to show the difficulty of clinically distinguishing between lymphadenoma and lymphosarcoma and drew special attention to the proportionate increase of lymphocytes in the former disease, though there might be no leucocytosis, as a distinguishing feature between the two As regards splenic anæmia, this term included a number of affections which had only two symptoms in common—namely, anæmia and enlarged spleen. The splenic anæmia of children was often either a syphilitic or tuberculous affection; at other times the blood showed the character of pernicious anæmia The splenic anæmia of adults, in which besides the anæmia and the large spleen there was usually severe and repeated hæmorrhage (epistaxis, hæmatemesis, melæna), was often only the early stage of Banti's disease, marked enlargement of the liver appearing at a later stage, though in several of the cases of splenic anæmia which were evidently cases of Banti's disease which were fatal during the early stage, as shown by the marked fibrosis of the spleen, the liver showed on post-mortem examination distinct signs of cirrhosis. Dr. Dreschfeld exhibited a male patient, aged 26 years, as a good example of Banti's disease. There was marked anæmia, the spleen and liver were very much enlarged, there was as yet no ascites, the patient suffered from repeated epistaxis which was checked quickly by adrenalin, and lately he had developed purpuric spots on the legs. Analysis of the blood gave the following result: erythrocytes, 3,540,000; hæmoglobin, 66 per cent.; leucocytes, 4200, with polynuclear neutrophile cells, 58·8 per cent.; small lymphocytes, 32 per cent.; large lymphocytes, 7·6 per cent.; and eosinophile cells, 1·2 per cent. The blood in this case showed, as in many of the reported cases of Banti's disease, a marked increase of the lymphocytes, though the total number of leucocytes was diminished as compared with normal blood. The increase of the lymphocytes might be of some use in distinguishing Banti's disease from other forms of anæmia. Attention was also directed to the splenic anæmia due to the malarial parasite, to the splenic form of Hodgkin's disease, and to the remaining small group of cases of anæmia in which the spleen was enlarged and the blood showed the character seen in chlorosis.—Dr. Charles H. Melland agreed, as the result of a considerable number of blood examinations in cases of Hodgkin's disease, including those shown by Dr. Dreschfeld, that the characteristic blood condition was one in which there was absence of leucocytosis, or even slight leucopenia, with, however, a relative increase in lymphocytes. There had been at least three cases of the type of splenic anæmia described by Osler in the infirmary within recent years, with the typical symptoms of enlarged spleen, anæmia, and profuse recurrent gastric hæmorrhages. Whether these should now be called Banti's disease he was not prepared to say. There was no evidence of any affection of the liver in any of them.—Dr. A. Hill Griffith made some remarks on the diagnosis and surgical treatment of Fronto-ethmoidal Mucocele and showed four patients who had recovered from this condition and had had displacement of the eyeball with diplopia and long-standing pain.—Mr. J. W. Smith showed a man, aged 35 years, on whom Excision of the Right Clavicle had been performed 13 months previously for a growth involving the inner two-thirds of the bone which had existed for five months. There was a history of precedent injury. At the operation adhesions between the posterior surface of the bone and the deeper structures presented the only difficulty. There were no signs of recurrence at the present time. As was usual in such cases the loss of the clavicle had made very little difference in the range of movement of the limb or in the symmetry of the shoulder, and the patient was now working as a labourer. The growth was a chondro-sarcoma, showing areas of hyaline cartilage of a cellular type separated by strands of fibro-cartilage and small cell infiltration, other portions consisting entirely of small round sarcomatous cells.

**OTOLOGICAL SOCIETY OF THE UNITED KINGDOM.**—A meeting of this society was held on March 3rd, Dr. Urban Pritchard, the President, being in the chair.—Mr. Hugh E Jones (Liverpool) exhibited a Brain from a case of Cerebral Abscess in which a hernia cerebri developed three days after the abscess was opened; a fortnight later a portion of the hernia was removed and the abscess was again explored, but no pus was found. Death occurred three months after the operation.—Mr. Fagge suggested that the condition was not due to the removal of either too much or too little bone. He thought that it was accepted as being due to a local and spreading infection, either another abscess or a diffuse infection of cerebral tissues. In two cases of failure he thought that the best line of treatment by which he might have saved his patient would have been to have removed all the area of the brain superficial to the abscess, leaving the bottom of the wound simply the bottom of the abscess cavity, thus making a funnel-shaped excision of the brain tissue —Mr. Jones also showed a Microscopic Section of a Neoplasm from the External Auditory Meatus He considered the growth to be of the nature of a fibro-sarcoma. He also exhibited some Foreign Bodies removed from the Middle Ear; one was a piece of coal removed from the ear of a collier, who claimed compensation for injuries to his left ear whilst at work. As he professed to be totally deaf it was clear that he was exaggerating his symptoms. A few days after this piece was removed another piece of coal, which was not there on the first occasion, was found in the other meatus. Another case was that in which a man was absent-mindedly playing with a collar-stud while reading, and allowed it to slip into the ear. When seen it was completely jammed in the meatus, and an incision had to be made behind the ear in order to remove it.—The President remarked upon the damage done at times by the introduction of instruments into the meatus to remove foreign bodies.—Dr. Cresswell Baber showed a case of Malformation of the Auricle associated with Asymmetry of the Eustachian Tubes.—Dr. Herbert Tilley showed a girl, aged 15 years, in whom a large Exostosis of the Left Auditory Meatus had been removed, revealing extensive destruction of the left tympanum and mastoid antrum, although no urgent symptoms had at any time been complained of. The complete post-aural operation and ultimate skin-grafting had been carried out. Pus was also present in the right maxillary antrum.—Mr. Arthur H. Cheatle showed a case of Tuberculosis of the Temporal Bone in an adult. The operation wound had quite healed, but there had subsequently developed a tuberculous elbow and a tuberculous abscess in the back.—Mr. P. R. W. de Santi exhibited a case of Jacksonian Epilepsy following operation for temporo-sphenoidal abscess of otitic origin, and also a case of Complete Bilateral Deafness with Left Facial Paralysis due to syphilitic intra-cranial mischief of the nature of basal meningitis.—Mr. Macleod Yearsley exhibited two specimens of Pedunculated Exostoses. One was removed from the meatus of a man, aged 45 years, by means of a cold wire snare, and the other from the meatus of a woman, aged 21 years, with a pair of dental stump forceps.

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[1] THE LANCET, May 6th (pp. 1066 and 1080) and 13th (p. 1145), 1893.

Midland Medical Society.—A meeting of this society was held on Feb. 19th, Mr. Arthur Oakes, the President, being in the chair.—Dr. J. Martin Young showed a case of Angeioma of the Eyeball occurring in a child, aged 14 years. Two and a half years ago the right eye presented a leash of deep-coloured vessels on the nasal side of the cornea under the conjunctiva. The nasal half of the retina was detached and very black. The condition was diagnosed as one of melanotic sarcoma and excision was advised, but *the parents refused their consent. At the present time there* was externally a large vascular dark-blue mass on the nasal side of the eyeball. There was only light perception. The patient had suffered no pain at any time. The left eye was normal. The long history was held to negative the diagnosis of sarcoma and the condition was now thought to be nævus of the choroid. There was no history of tuberculosis in the family. The child was well in other respects.—Mr. Jameson Evans showed a case of Mooren's Ulcer of the Cornea. The patient, a woman, aged 49 years, came under his care in March, 1901, suffering from marginal ulceration of the cornea in each eye. As the ulcers resisted all the usual topical and constitutional remedies it became necessary to cauterise them. At the end of two months and after three cauterisations the right eye was completely cured except for a diffuse marginal opacity of the cornea. The left eye, though subjected to varying treatment, including periodical cauterisations, had steadily, though somewhat slowly, progressed until only a central piece of cornea of about the size of the pupil was left uninvolved.—Mr. J. Furneaux Jordan showed a specimen of Myoma of the Uterus removed by supra-vaginal hysterectomy. The patient, aged 40 years, had been married 14 years. She had had no children and no miscarriages. Menstruation had been regular and the quantity was not excessive. Six months ago she had noticed a lump in the abdomen which had rapidly increased in size, especially during the first two months after she had come under observation. The specimen was a multinodular myoma. It was removed by Kelly's method, the broad ligament tumours being enucleated, one from above downwards, and the other from below upwards. The cervix was divided at the level of the internal os. The operation was performed on Jan. 15th, 1902, and the recovery had been good except for the formation of a stitch abscess at about the eleventh day.—Dr. F. Edge read a paper on the Treatment of Abortion.

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# Reviews and Notices of Books.

*Anticipations of the Reaction of Mechanical and Scientific Progress upon Human Life and Thought.* By H. G. Wells. London: Chapman and Hall, Limited. 1902. Pp. 318. Price 7*s.* 6*d.*

*The Discovery of the Future.* A discourse delivered to the Royal Institution. By H. G. Wells, B.Sc. London: T. Fisher Unwin. 1902. Small 8vo, pp. 95. Price 2*s.*

Whither? This question, applied to the individual man and his destiny, has proved from the earliest historic time to be of absorbing interest, but as applied to the genus man, so far as we can judge, it has attracted, until quite recent times, but little notice and has awakened hardly any interest. Here and there a patriot has worked for the future of his country, now and again a philanthropist has taken a long look ahead at the wellbeing of posterity, but intellectual curiosity has seldom in the days before our own found scope for its exercise in the shadowy future, not of a free imagination, but of a fettered and strictly scientific forecast. Mr. Wells has made the experiment of a dip into futurity upon these terms and his success amply justifies his ambition. We speak in this connexion of his success without in any sense subscribing to his conclusions. It would be difficult either to endorse or to repudiate them in a word. They are so many and so diverse that unreserved acquiescence and uncompromising divergence of view are equally out of the question, nor, indeed, is the conclusion which is reached along any of the many lines which Mr. Wells follows in our opinion a matter of great consequence. We find ourselves differing from him and agreeing with him with equal composure. The mental exercise is the delightful thing and of this Mr. Wells gives us abundance. His argument is always ingenious, his information is copious, and his conclusions, right and wrong, are all suggestive and of the thought-compelling order. It is both a refreshing and an invigorating exercise to turn our history upside down and to argue in inverse order from the earlier to the later stage, from cause to consequence.

But while Mr. Wells gives us the impression of a very ingenious and powerful writer who has much to say that merits consideration he gives us an impression also of the inadequacy of the scientific method to the creative task of working down, as we have said, from cause to consequence.

It is like navigation upon what sailors call dead reckoning. In working up from ascertained facts to their causes we have the lode-star always in view, a fixed point by which we can at any moment try our course and ascertain our position. But working the other way we soon feel how low is the measure of certainty to which it is possible to attain when every deduction takes us further from, not nearer to, our ascertained facts. For this reason those parts of Mr. Wells's book appear to us to be of least interest in which he seeks to draw a moral and to prescribe an object to our collective action. For example, he is very urgent that we should take measures to extend in India and elsewhere the use of the English tongue. His intention is admirable, his discussion of the possibilities of what we may perhaps call "linguistic preponderance" is very illuminating, but he has not even considered the elementary question whether effort intentionally and manifestly directed to that end would not defeat its own object. There is something a little German, if we may say so without offence to him or to our continental neighbours, about the directness and simplicity of his method of influencing his fellow-men. It hardly seems to have occurred to him that where the voluntary action of free men is concerned the art of moulding their conduct consists largely in concealing the artifice by which it is done.

In "The Discovery of the Future" Mr. Wells continues to anticipate His theories are very plausible and it will be interesting for those who are here now when they enter upon the next life to see, if it be possible for those who have passed from this world to know what happens in it, the fulfilment or otherwise of Mr. Wells's speculation.

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*A Manual of Practical Anatomy.* By the late Professor A. W. HUGHES, M.B., M.C. Edin., F.R.C.S. Eng. Edited and completed by ARTHUR KEITH, M.D. Edin., F.R.C.S. Eng. In Three Parts. Part I.: The Upper and Lower Extremities, pp. 274, with 38 Coloured Plates and 116 Figures in the Text, price 10*s.* 6*d.* Part II.: The Abdomen and Thorax, pp. 308, with Four Coloured Plates and 151 Figures in the Text, price 8*s.* 6*d.* London: J. and A. Churchill. Demy 8vo. 1901.

THE authors have wisely determined to issue this manual in three volumes of very convenient size. Two of these, dealing respectively with the Upper and Lower Extremities and with the Abdomen and Thorax, are now issued. The work, which bears the name of the late Professor A. W. Hughes, was incomplete at his death and has been ably completed by Dr. Arthur Keith.

The book is profusely illustrated. Some of the illustrations are old friends and are much the worse for wear, whilst others are quite new. The first part contains a large number of process reproductions of coloured drawings of the dissections in the Alfred Hughes collection at King's College. These are very disappointing, and being printed on thick paper they materially add to the weight and size of the volume. Perhaps this accounts for the absence of similar illustrations in Part II. The osteological plates showing muscular attachments are most useful and complete; they are erroneously attributed in the preface to Holden, whereas they are really woodcuts prepared under the supervision of Professor H. E. Clark, C.M.G., for Wilson's "Anatomist's Vade Mecum." Such illustrations as these are undoubtedly a great convenience to the student. Some diagrammatic outlines, showing the relations of the abdominal viscera and the vessels, nerves, and fasciæ of the pelvis, will prove particularly useful and are quite one of the best features of the book. We notice, however, that the position of the splenic vein in Fig. 166 does not correspond with that more correctly given in the text.

The various sections of the book are well arranged and e directions for dissections are lucidly given. The style is very terse, and in some places we are sure that the first year's student will not grasp the authors' meaning. Brevity can be cultivated at the expense of lucidity. But on the whole the brevity of description is a good point, as books of this description should only be guides to what the dissector must see for himself. Considerable care has evidently been taken in the description of the soft parts of the pelvis. The method of description of the pelvic fascia is clear but too concise; it departs in method somewhat from the description usually in vogue. An instructive diagram of the ovarian triangle has been inserted and particular care has been taken in giving the relations of the ureter.

When will pure anatomists begin to give a rational description of the actions of muscles? What the student and the clinician want to know is not what a muscle might conceivably do under inconceivable conditions but what it does in everyday life. There is no excuse for the continued ignorance manifested on this subject. The foundation for an accurate knowledge was laid by Duchenne in 1867 and a wealth of clinical material has accumulated since. This book perpetuates many of the old misstatements on this subject.

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*The War Against Consumption.* By E DENNIS VINRACE, M.R.C.S. Eng., L.S.A.; Revised by JOHN H. VINRACE, M.B., M.R.C.P. Lond. London: Century Printing Co., Limited. 8vo. Pp. 178. 1901.

THIS is a popular handbook of the proceedings of the British Congress on Tuberculosis which was held in London in the latter part of July, 1901. The author was the representative of the Kensington Royal Borough Council. The book is a *résumé* of the opinions expressed by some of the authorities at the congress, with comments and explanations by the author, and it is intended to propagate among the general public accurate information concerning the present state of medical knowledge as to the origin and treatment of tuberculous disease. We wish the book a wide circulation, for it is certainly suitable for general reading, and can be understood by all. We are pleased to find that Dr. John Vinrace strongly discourages the idea that a suitable climate for every consumptive patient cannot be found in our own country. "I may assert," he writes, "without fear of contradiction that in a very large proportion of cases it is greatly to the patient's advantage to be treated here, rather than in some foreign land." We believe the information to be accurate and sound, and no one will fail to remark the unassuming modesty and quiet firmness of the author's views. We quite agree with all that is here advanced on the subject of climatic treatment, and we think that the chapter on the Open-air Sanatorium is excellent. The last chapter in the book is devoted to a consideration of the advantages that may be expected to accrue from the results of the deliberations of the congress. "There could be no greater mistake than to suppose that the discussions . .... are not likely to have any practical outcome, and that its work has been merely of academic importance." What the directions are which our efforts to suppress the disease should take are summed up under 12 headings, and the author really seems to think that the *laissez-faire* attitude so general in this country is being abandoned, and that the whole nation will take up arms in the war against tuberculosis. We only hope that it may be so, for the time for action is surely now.

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*The Theory and Practice of Medicine.* By HENRY WALTER SYERS, M.A., M.D. Cantab., &c., Senior Physician to Outpatients to the Great Northern Central Hospital. In two volumes. Vol. I London: Rebman, Limited. 1901. Pp. 633. Price 15*s.*

THE author informs the reader in the preface that in this work he has attempted to describe the chief facts which underlie a knowledge of the principles and practice of compensation for injuries to his left ear whilst at work. As he professed to be totally deaf it was clear that he was exaggerating his symptoms. A few days after this piece was removed another piece of coal, which was not there on the first occasion, was found in the other meatus. Another case was that in which a man was absent-mindedly playing with a collar-stud while reading, and allowed it to slip into the ear. When seen it was completely jammed in the meatus, and an incision had to be made behind the ear in order to remove it.—The *President* remarked upon the *damage done at times* by the introduction of instruments into the meatus to remove foreign bodies.—Dr. Cresswell Baber showed a case of Malformation of the Auricle associated with Asymmetry of the Eustachian Tubes.—Dr. Herbert Tilley showed a girl, aged 15 years, in whom a large Exostosis of the Left Auditory Meatus had been removed, revealing extensive destruction of the left tympanum and mastoid antrum, although no urgent symptoms had at any time been complained of. The complete post-aural operation and ultimate skin-grafting had been carried out. Pus was also present in the right maxillary antrum.—Mr. Arthur H. Cheatle showed a case of Tuberculosis of the Temporal Bone in an adult. The operation wound had quite healed, but there had subsequently developed a tuberculous elbow and a tuberculous abscess in the back.—Mr. P. R. W. de Santi exhibited a case of Jacksonian Epilepsy following operation for temporo-sphenoidal abscess of otitic origin, and also a case of Complete Bilateral Deafness with Left Facial Paralysis due to syphilitic intra-cranial mischief of the nature of basal meningitis.—Mr. Macleod Yearsley exhibited two specimens of Pedunculated Exostoses. One was removed from the meatus of a man, aged 45 years, by means of a cold wire snare, and the other from the meatus of a woman, aged 21 years, with a pair of dental stump forceps.

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*Anticipations of the Reaction of Mechanical and Scientific Progress upon Human Life and Thought.* By H. G. WELLS London: Chapman and Hall, Limited. 1902. Pp. 318. Price 7*s.* 6*d.*

*The Discovery of the Future.* A discourse delivered to the Royal Institution. By H. G. WELLS, B.Sc. London: T Fisher Unwin. 1902. Small 8vo, pp 95 Price 2*s.*

WHITHER? This question, applied to the individual man and his destiny, has proved from the earliest historic time to be of absorbing interest, but as applied to the genus man, so far as we can judge, it has attracted, until quite recent times, but little notice and has awakened hardly any interest. Here and there a patriot has worked for the future of his country, now and again a philanthropist has taken a long look ahead at the wellbeing of posterity, but intellectual curiosity has seldom in the days before our own found scope for its exercise in the shadowy future, not of a free imagination, but of a fettered and strictly scientific forecast Mr. Wells has made the experiment of a dip into futurity upon these terms and his success amply justifies his ambition We speak in this connexion of his success without in any sense subscribing to his conclusions It would be difficult either to endorse or to repudiate them in a word. They are so many and so diverse that unreserved acquiescence and uncompromising divergence of view are equally out of the question, nor, indeed, is the conclusion which is reached along any of the many lines which Mr. Wells follows in our opinion a matter of great consequence. We find ourselves differing from him and agreeing with him with equal composure. The mental exercise is the delightful thing and of this Mr Wells gives us abundance. His argument is always ingenious, his information is copious, and his conclusions, right and wrong, are all suggestive and of the thought-compelling order. It is both a refreshing and an invigorating exercise to turn our history upside down and to argue in inverse order from the earlier to the later stage, from cause to consequence

But while Mr. Wells gives us the impression of a very ingenious and powerful writer who has much to say that merits consideration he gives us an impression also of the inadequacy of the scientific method to the creative task of working down, as we have said, from cause to consequence blissful future before them. For the rest, women in love seem to have anything but a good time. Mr. Sutro's little sketches are pleasantly written and if there is nothing very new about his presentment of a theme as old as the world yet his book affords half an hour's interesting reading.

*The British Sanatoria Annual.* London: John Bale, Sons, and Danielsson, Limited. 1902. Pp. 158. Price 2*s.* 6*d.*—This little book, now in its third year of publication, gives an account of the various sanatoriums existing in the British Isles for the open-air treatment of tuberculosis. To judge by the many communications which are addressed to us upon this matter the existence and whereabouts of sanatoriums in Britain are but little known. The current issue of the book contains some abstracts of papers read at the Congress on Tuberculosis held in London in July, 1901. Altogether the compilation will be found very useful.

*The Fish River Bush, South Africa.* By W. T. BLACK, M.R.C.S., L.S.A. Edinburgh and London: Young J. Pentland. 1901. Pp. 55.—This volume is a reprint of articles contributed by the author to the *Edinburgh New Philosophical Journal* for July and October, 1853. They are founded on personal observations made by him when serving as assistant surgeon in the Caffre wars of 1847 and onwards. Everything about South Africa is of interest at the present time, and though no doubt vast changes have occurred in the country which Mr. Black describes, yet a detailed account of such a curious country is well worth reading. The bush as described is an almost impenetrable jungle consisting of thorny shrubs and small trees. Probably there is but little left of it now. Mr. Black gives some notes of the commoner animals which were found at the time of his observations within its fastnesses. As a record of, we should imagine, an almost vanished state of things we are glad to see these papers reprinted in an accessible form.

*Radiothérapie et Photothérapie.* By Dr. L. R. RÉGNIER. Paris: J. B. Baillière et Fils. 1902. Price 1 franc 50 centimes. Pp. 92.—This is a volume of the excellent little series of books known as "Actualités Médicales." Dr. Régnier commences by a survey of the theories of light and the various observers who have contributed to the solution of the problem. Though he mentions Huyghens and Fresnel we notice that he omits the name of Thomas Young who confirmed the wave theory of the former and discovered interference some 14 years before Fresnel wrote upon the subject. The author then considers the relations between energy existing as light, heat, and electricity. The more purely medical part of the book deals with the physiological effects of light-rays and of x rays. The various apparatus for applying these remedial agents are described and finally Dr. Régnier deals with the therapeutics of radiant energy in its different forms. The book is a simply and plainly written statement of the main facts of our knowledge of the subjects contained in it.

*Burdett's Hospitals and Charities, 1902.* London: The Scientific Press, Limited. Price 5*s.* Pp. 992 text; indices, viii.—This valuable compilation is quite up to its usual form and we need say little more. One new feature is a list of private sanatoriums for the treatment of tuberculosis. Another feature special to this year is the introductory chapter headed "Monarchy People and Hospitals." In this Sir Henry Burdett lays stress upon a point too often forgotten, that the London hospitals are not merely metropolitan institutions but Imperial institutions in that they receive patients from all districts of the Empire. Hence the Coronation gift should be contributed to by all classes and nationalities of the Empire.

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VACCINATION GRANT.—Dr. P. L. Benson, Steeple Claydon, Bucks, has obtained the Local Government Board grant for successful vaccination for the eighth time in succession.

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# Analytical Records

FROM

# THE LANCET LABORATORY.

### NEWSHOLME'S PORTABLE AMMONIUM CHLORIDE INHALER.

(G. T. W. NEWSHOLME, 27, HIGH-STREET, SHEFFIELD.)

THIS handy little apparatus is constructed on simple lines It is easily charged and easily kept clean. It consists simply of a wide glass tube closed at one end and fitted with a rubber cork at the other. A thistle-shaped funnel is fitted into the cork, the funnel being inverted and being suspended over a sponge at the bottom of the tube. A glass tube also fitted into the rubber cork serves as the inhaler tube. The funnel contains glass wool for absorbing the hydrochloric acid and the sponge is to be moistened with ammonia. On exhausting the inhaler tube air enters the thistle funnel and leaves the glass wool saturated with hydrochloric acid; it then impinges upon the ammonia sponge so that fumes of chloride of ammonium are formed which may be inhaled. Simplicity of construction is a decided advantage in an inhalation apparatus in order that it may be kept clean and in a satisfactory working state, and this is so with Newsholme's inhaler.

### VIROL.

(VIROL, LIMITED, 152 TO 166, OLD-STREET, LONDON, E.C.)

Virol is now manufactured on the large premises of the Bovril Co. We have submitted it to analysis on a previous occasion, but it has recently been improved in certain important respects. It is essentially a preparation of marrow fat and active malt extract, the fat not existing apparently as a separate entity until water is added, when an emulsion is formed exhibiting fat in an exceedingly fine state of division—a form in which it is readily absorbed and appropriated. Marrow fat, as is well known, contains natural glycero-phosphates which exercise a remarkably favourable effect upon the nutritive processes, especially in wasting diseases. Virol readily digests starchy compounds. According to our analysis it has the following composition: water, 29·37 per cent.; fat, 10·98 per cent.; proteids, 3·78 per cent.; malt extractives, 54·32 per cent.; and mineral matter, 1·64 per cent. The mineral matter proved to be rich in phosphates. The substitution of virol for cod-liver oil is grounded on a reasonable basis, considering its nourishing and tonic constituents and the particular way in which they are combined. Moreover, the flavour is attractive and the ingestion of virol is not followed by disagreeable eructations, as is the case with ordinary cod-liver oil.

### CASUMEN BREAD.

(PRIDEAUX'S PURE CASEIN AND LIFE FOOD CO., LIMITED, MOTCOMBE, DORSET.)

The addition of soluble milk casein to bread must necessarily raise its food value in direct relationship to the amount added. We have examined specimens of bread containing respectively 5 per cent and 10 per cent. of casumen. The bread was of excellent texture and of good flavour and possessed remarkable keeping qualities. The casumen loaves kept moist and plastic for over a week and after that time were still "new" as regards flavour. The casumen is dissolved out easily by hot water. In experiments directed to the determination of the digestibility of the bread, using acid pepsin, the percentage amount of total proteids digested was the same in regard to ordinary bread and casumen bread, but the actual gain of proteid is as much as 65 per cent. when bread containing 10 per cent. of casumen is substituted. This, of course, is an indisputable dietetic gain, the flesh-forming constituents medicine. We have carefully perused this volume, but we cannot say that we have been favourably impressed. We perfectly agree with Dr. Syers that in a book dealing with the principles of the subject all matters which are superfluous should be omitted, and that amongst such matters are long disquisitions on morbid anatomy which it is impossible for the student to understand unless he has large post-mortem experience. Dr. Syers has, however, gone too far in this curtailing process, with the result that in our opinion the book will be of little use to the student in preparing for examination, and the practitioner will find little to guide him in the conduct of an obscure case, especially if the diagnosis is in doubt. The subject of differential diagnosis is but very briefly touched upon. Take, for instance, the chapters on small-pox and chicken-pox, some of the most important diagnostic differences are omitted, whilst in a doubtful or modified case of small-pox we are afraid that Dr. Syers's observations would not be of much value to the perplexed practitioner.

The author acknowledges that but brief attention has been devoted to treatment by drugs, but he excuses the omission by stating that the proper details of therapeutics should be sought in books devoted to that subject. We do not agree altogether with this statement. The busy practitioner does not wish to search through a volume on therapeutics in which several methods of treatment are suggested for any one disease, but he requires a volume on medicine stating the opinion of a physician of experience who has already tried the various plans suggested and has come to a conclusion as to which is most likely to give satisfactory results. Further, Dr. Syers entitles his book "the Theory and *Practice* of Medicine," which surely includes a knowledge of drugs.

We regret that we cannot congratulate Dr. Syers on the results of his labours The book is lacking in the details which are necessary in a text-book on general medicine.

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## LIBRARY TABLE.

*The Literary Year-Book and Workman's Directory, 1902.* Edited by HERBERT MORRAH. London: George Allen —The sixth issue of the "Literary Year-Book" shows a considerable advance upon previous issues. The directory of authors, which forms the bulk of the book, is a valuable compilation It is a long list containing the names of the best known writers and of many others accompanied by a certain amount of authentic information as to their work. The directory is, of course, not complete, and it never will be complete, for the difficulty of defining what constitutes an author is considerable and there are sure to be regrettable omissions and inclusions. Some writers, also, are much more communicative than others as to their personal affairs, so that the assistance received by the editor has been, and will be in all future editions, very capricious. We notice that a few medical writers find a place in the directory, but here no principle seems to have been followed, for we looked in vain for the names of Sir Lauder Brunton, Sir Frederick Treves, Professor Osler, Dr. F. Taylor, Dr. Playfair, Dr. Galabin, Mr. Henry Morris, Mr. William Rose, and Mr. D'Arcy Power—to mention a few whose literary work is familiar to our readers The editor's summary of the year's work of 1901, which is written in the confident manner of an able man, contains much that is true and much that is debateable, but medical authors are not largely concerned in the conditions of general authorship. If they require advice as to the best methods of publishing, as to the meaning of their agreements, or as to the fairness of any royalty that is offered to them, they will do well to consult the Society of Authors.

*The Climate and Mineral Waters of Caledon, South Africa.* By G. W. B. DANIELL, M.R.C.S. Eng., L.R.C.P. Lond., Medical Superintendent, Caledon Mineral Baths Sanatorium. London: John Bale, Sons, and Danielsson. 1902. 8vo, pp. 54. Illustrated.—This is a reprint, with additional matter, of a paper published in our contemporary the *Journal of Balneology and Climatology* in October, 1901. The book is well bound and clearly printed and contains six photographic views of Caledon and the sanatorium. Caledon is a village situated on the southern aspect of a range of mountains within easy distance of Table Mountain and Cape Town There is at present no railway from Cape Town, and this is a great disadvantage, as it renders a five hours' drive in a Cape cart necessary, and Cape carts are not the most comfortable of vehicles. Still, it is possible to hire a better carriage for the drive, and it must be conceded that the roads are good The village itself is at an elevation of about 850 feet above the sea-level. The climate of this neighbourhood is equable and dry; the mean annual temperature is 62 3° F. and the mean annual rainfall is 20 inches There are no "dust-storms" in this part of the colony and frost is almost unknown even in winter nights. It is claimed for the climate of Caledon and its neighbourhood that it is bracing and never too hot, as is Cape Town, which lies, of course, on the sea-level. The springs of Caledon, seven in number, are thermal and chalybeate, rich in ferrous carbonate, and unusually free from organic impurities. Professor P. D. Hahn and Professor J. Attfield have made analyses which will be found recorded in detail in the book The total yield of water every day is about 180,000 gallons, and at the mouths of the springs the temperature of it is about 120° F. We are glad to be able to record that we know people who have been greatly benefited at Caledon Baths, and from a knowledge of the local climate we are quite in agreement with Mr. Daniell that patients with rheumatism and Bright's disease may expect to do well there. The waters are not unduly astringent, though chalybeate, and are non-irritating to the digestive tract. "It has been remarked," writes the author, "that there is quite a 'boom' in sanatoriums at the Cape. Show me a country more in need of such establishments, and one of more natural advantages, and I will admit that the 'boom' should not exist." This is all very well, but a sufferer need not go so far as South Africa to be relieved of rheumatism or Bright's disease, of anæmia, or the malarial cachexia. There is too much going abroad to seek after health and we too often ignore the natural resources of our own little island. There are thermal chalybeate springs in Great Britain every whit as good as those anywhere in Cape Colony, if chemical analyses and records of improved health are anything to go by.

*Woman's Best Work and Latent Capabilities* By FREDERICK JAMES GANT, F.R.C.S *Eng.* London: Elliot Stock. 1902. Pp. 107. Price 2*s*. 6*d*.—Those familiar with Mr. Gant's former works, "Perfect Womanhood" and "The Latest Fruit is the Ripest," will find in the little book now before us some further details as to Sister Eva. We somehow have not much faith in spiritual unions between two ordinary carnal mortals such as were Algernon and Eva. However, Algernon did not survive very long, which was, perhaps, the best way out of the difficulty. Eva and Algernon are considered in Chapter I. The rest of the book is taken up by remarks upon woman's work in the spheres of hospital nursing, rescue work, and the like, and Mr. Gant writes with all his well-known heart-whole enthusiasm as to women medical practitioners.

*Women in Love.* By ALFRED SUTRO. London: George Allen. Pp. 284 1902. Price 6*s*—The sub-title of Mr. Sutro's book is "Eight Studies in Sentiment" and the tendency of six studies out of the eight is to show that happiness is not acquired by going outside the conventional bounds set for the regulation of sexual relations. From our narrow point of view as medical journalists we are glad that of the two couples who seem likely to be happy Dr. Rogers and Vivien Meadows have to all appearances a

THE LANCET.

*LONDON: SATURDAY, MARCH 15, 1902.*

# The Leicester Guardians and Vaccination.

THE appeal in the case of MOORE *v.* KEYTE disposed of by the Divisional Court last week was of importance because if the contention of the Leicester Guardians, whose conduct was in issue, had been held to be correct, the Vaccination Acts would have been liable to be abrogated in any locality at the pleasure of the guardians of the poor for that locality. This result, it will be remembered, the Leicester Guardians endeavoured to bring about in 1899 by appointing as vaccination officer a person holding their own views as to the undesirableness of vaccination. The Local Government Board refused to sanction the appointment and the intervention of the court compelled the appointment of a person who would carry out the duties of his position, and eventually such a person was duly appointed and approved by the Board. The policy since adopted by the Leicester Guardians was exhibited in a resolution passed by them condemning the action of their new vaccination officer in prosecuting offenders under the Vaccination Acts without the guardians' instructions, and instructing him in future to report defaulters to the Board so as to afford them an opportunity to offer a reasonable excuse. Section 29 of the Vaccination Act of 1867 provides that "every parent or person having the custody of a child who shall neglect to cause it to be vaccinated . .... and shall not render a reasonable excuse for his neglect shall be guilty of an offence, .... .." but the view that the excuse might be offered to guardians and not to the magistrates hearing summonses for neglect to vaccinate was, we believe, first suggested by the ingenious guardians of Leicester whose resolution referred to went on to say that the authority to prosecute, if given by them, would be given under their common seal. On two occasions, in compliance with the terms of this resolution, the Leicester vaccination officer presented lists to the guardians of persons whom he deemed it desirable to prosecute, and on each occasion resolutions promptly followed instructing him to take no further steps with regard to the institution of proceedings until instructed by the guardians. No instructions to prosecute were ever given, but the vaccination officer took proceedings nevertheless and secured the conviction of an offender, the appellant in the present case. The ground of appeal was not only the absence of authority from the guardians to prosecute, but also the absence of proof by the vaccination officer that the public vaccinator had given the prescribed notice of his intention to visit the house of the person summoned, and that he had, in fact, so visited and offered to vaccinate the child.

Mr. RAWLINSON, K.C., argued the appeal from the point of view of the Leicester Guardians and their supporters. The Attorney-General claimed to be heard on behalf of the Local Government Board on the ground of the important public interests involved, affecting the duties of that department. The court heard Sir ROBERT FINLAY on these grounds, expressly intimating that it did not do so on account of any serious doubts felt by it on the subject of the appeal, and counsel for the respondent was not called upon to argue. There were two points, as we have indicated, for decision, the first and most important being, as expressed in the case stated by the magistrates, whether the vaccination officer by virtue of his appointment as such, without directions, general or special, from the guardians, at any time and notwithstanding the guardians' direction not to prosecute in certain specified cases, could institute proceedings under the Vaccination Acts of 1867 to 1898 as vaccination officer of the guardians. On this point the judgment delivered by Lord ALVERSTONE was clear and decisive. He held that it was for the magistrates when the case came before them, and not for the guardians, to decide what was a reasonable excuse for the non-vaccination of a child, and he had no doubt whatever that it was the duty of the vaccination officer to take proceedings independently of the wishes or instructions of the guardians. To this conclusion his lordship would have come under the wording of the Vaccination Act of 1898, but he added that the wording of the order of the Local Government Board published since the passing of the Act made the matter more abundantly clear. The case of BRAMBLE *v.* LOW decided a similar point under Section 31 of the Vaccination Act of 1869 and the orders of 1874 in similar fashion. The true view was that the vaccination officer was bound to obey the order of the Local Government Board and that any order of the guardians contrary to that order would not be a legal order or one that the vaccination officer would be bound to obey. On the second question—namely, whether it was a condition precedent to a prosecution by a vaccination officer under Section 29 of the Vaccination Act, 1867, that due proof must be given of the public vaccinator having previously given notice of a visit and having visited the house—the Lord Chief Justice held that the absence of the visit and notice might well be urged before the magistrates on the hearing of a summons and might be treated by the magistrates as a reasonable excuse for non-compliance with the Act, but that this was a long way from the proposition that the onus of proving the performance of such matters lay upon the prosecution.

With regard to both questions involved in the case of MOORE *v.* KEYTE there is, therefore, direct judicial authority unless and until some new Act of Parliament intervenes. We say this because we notice that a private Member, with a promptitude worthy of a better cause, has already introduced a Bill in the House of Commons which provides that no prosecution under the Vaccination Acts shall be commenced without the authority of the guardians. Fortunately, in some cases at all events, the efforts of the private Member to legislate are not frequently or rapidly crowned with success. That which has not been decided, but will, we apprehend, some day occupy the courts, is whether guardians are liable to pay the costs of unsuccessful prosecutions instituted without their sanction and contrary to their instructions by their vaccination officer. If it is decided that the guardians are so liable the whole matter will be concluded.

in casumen bread being nearly double those contained in ordinary bread.

### CASUMEN BISCUITS.

(W. DUNMORE AND SON, MIDLAND BISCUIT WORKS, SOUTH WIGSTON, NEAR LEICESTER.)

It is stated that these biscuits contain 10 per cent. of soluble milk casein (casumen). This statement is completely confirmed by our results of analysis which showed the presence of 19·33 per cent. of proteid. Since biscuits made with ordinary flour contain about 10 per cent. of proteid, the addition of absolute casein to the bread amounts to 9·33 per cent. Warm water easily dissolves the added casein which readily yields to the digestive action of pepsin. The biscuits are somewhat dry to the taste but are crisp and of good texture. They have, however, a decided tendency to crumble. According to analysis they are 100 per cent. more nourishing than the ordinary milk biscuit, while they are better entitled to the name since they contain pure milk proteid in rich proportion.

### ROWNTREE'S ELECT COCOA AND SWISS MILK CHOCOLATE

(ROWNTREE AND CO, LIMITED, COCOA WORKS, YORK.)

We have examined this cocoa and find it to be of excellent quality with more than half of the indigestible cocoa fat removed and possessing a maximum degree of so-called "solubility." It leaves little or no sediment in the cup as the result of a special method of manufacture. On account of this method the mineral matter was rather excessive, showing a degree of alkalinity equivalent to 2·77 per cent. potash ($K_2O$). The cocoa possesses a fine aromatic flavour. The moisture amounted to 5·3 per cent and the fat to 29·25 per cent. We have received also specimens of Swiss milk chocolate from this firm. The combined flavour of cream and cocoa is agreeable. The chocolate is very nourishing and is a useful and portable article of food.

### TABLOID ASPIRIN.

(MESSRS. BURROUGHS, WELLCOME, AND CO, SNOW HILL-BUILDINGS, LONDON, E C)

Aspirin is an acetyl derivative of salicylic acid which is said to offer advantages over the acid or its salts in the treatment of rheumatic conditions. The tabloid contains five grains of aspirin, a white crystalline compound.

### PURE FRUIT SYRUPS.

(JOH. STORKHUYZEN, HOLLAND, LONDON AGENCY, S. DUSSIISMA, CENTRAL CHAMBERS, 17, CHEAPSIDE, E C.)

As might be expected, these syrups consist chiefly of sugar varying in amount from 74 per cent. to 85 per cent. According to some tests which we made we believe them to be genuine fruit syrups without foreign colouring matter. Moreover, they possess the true flavour and aroma of the respective fruits. We examined the cherry, strawberry, and raspberry syrups. In spite of the preponderance of sugar the manufacturers evidently find the addition of a small quantity of salicylic acid for preserving purposes necessary.

### TOILET REQUISITES.

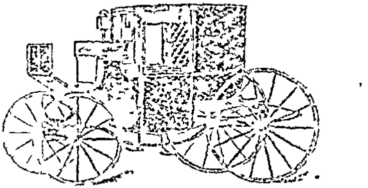
(THE TOILET NOVELTIES CO, BRISTOL)

These "requisites" are important to personal hygiene. The aseptic handkerchiefs in the large form are composed of Japanese paper, the material being known as silky fibre, a by no means inappropriate term They are beautifully soft and possess the important quality of being highly absorbent. They are strongly bibulous—a property which renders them well adapted for the reception of sputa or mucus, as in infectious colds or tuberculosis. The handkerchiefs are bordered with a pattern resembling the embroidery of an ordinary pocket-handkerchief. Other toilet requisites consist of sanitary paper in the form of a household toilet-book, or of a toilet pocket-book, containing readily detachable papers made, it is said, from chemically pure paper. Several sizes of pocket-book are made supplied with a stiff cover, fastening much in the same way as an ordinary leather pocket-book. Each leaf may readily be withdrawn without disturbing the remainder. These requisites will be appreciated by travellers and especially by those who travel abroad. They are inexpensive and add little to impedimenta. The use of any common paper for toilet purposes is an objectionable and insanitary practice

# New Inventions.

### THE "CORTLAND BROUGHAMETTE."

THE day of the general adoption of the motor-car for professional requirements being not yet, we still are dependent mainly upon horse traction to supply our needs The Cortland Wagon Company, of Henrietta-street, Covent Garden, W.C, are not, apparently, impressed with the idea that we shall quickly see a change in this latter method, as they have invited us to inspect their "Cortland Broughamette," which they have specially designed for the medical profession, and in the construction of which they have endeavoured to combine all the best English and American features The broughamette is hung on highly-tempered steel springs of a special character and is tyred in solid rubber. Every effort has been made to prevent vibration and "chattering," with excellent results, and both hum and rattle are banished. The body is very roomy and comfortable, its upholstering is in good taste combined with utility, and the fittings are in keeping with those obtaining in the best vehicles. The new broughamette is extremely light, weighing but five and a half hundredweight, this lightness being attained by the use of special materials in its construction which insure the strength as well as lightness of the vehicle.



The "Cortland Broughamette."

# ASYLUM REPORTS.

*London County Asylum, Cane-hill (Report for the year ending March 31st, 1901).*—The average number of patients resident during the year was 2215, including 947 males and 1268 females The admissions during the year amounted to 440—viz, 264 males and 176 females. Of these 370 were first admissions Mr. James M. Moody, the medical superintendent, states in his report that "a large proportion of the admissions were unsatisfactory in regard to the prospect of recovery—viz, 50 per cent. of the females and 67 per cent of the males" The number of patients discharged as recovered during the year amounted to 150—viz, 80 males and 70 females, or 6·8 per cent. of the average number resident. The deaths during the year amounted to 190—viz, 130 males and 60 females, or 8·5 per cent. as calculated on the same basis. 15 males and 88 females died from pulmonary tuberculosis. "Endeavours are now being made," adds Mr. Moody, "to isolate phthisical cases, and the open-air treatment will be carried out as far as possible." The general health of the institution has been satisfactory during the year, no epidemic or zymotic disease having prevailed. 11 patients escaped, and of these nine were re taken and brought back. Two female patients admitted while pregnant were safely delivered, one prematurely and the other at full term. New works have been undertaken in connexion with softening of the water-supply and the drainage of the isolation hospital, attendants' cottages, and farm. The Commissioners in Lunacy state in their report that the general condition of the asylum was very satisfactory, the wards and day-rooms were bright, cheerful, and comfortable, the dress of the patients was neat and tidy, and that the medical case-books were well kept and illustrated with excellent photographs of patients. The expenditure on repairs and alterations during the year amounted to £5343.

molecular granulations possessing great refractive power placed between the cells, and in this opinion he is supported by Professor Virchow, Professor Dressler, and Professor Chiari. Dr. Dock, whilst giving his adherence to the fatty theory, considers that it is simply an exaggeration of the greenish tint so common in the neoplasms of leukæmia. Dr. Dunlop opposes this theory on good grounds—namely, that the colour quickly disappears on exposure to air and on immersion in fluids that have no solvent action on fats. He believes that the colour is more probably due to some chemical product, hitherto undiscovered, allied to lipochrome, which on exposure to light becomes oxidised and in the process of oxidation loses its colour. Dr. Bramwell stated that in the case recorded by him the change in colour which the cutaneous lesions went through during life was suggestive of a blood change, and the marked increase of the green colour which was noticed at the post-mortem examination in the skin lesions in the upper part of the body seemed to be suggestive, in part at least, of a post-mortem change (? decomposition). It is obvious, therefore, that observers are far from being unanimous in determining the nature of the green colour seen in chloroma, and there is an interesting field open for further investigations. It is possible, as Dr. Bramwell suggests, that the colour may be due to different causes in different cases, but we think that this theory tends only to complicate matters and we deem it more probable that a similar cause will be found to be acting in all cases. Dr. Bramwell introduced another point in regard to the colour. He was disposed to think that the green discolourations, though they had hitherto been considered to be essential and characteristic features of the disease, might in some undoubted cases of chloroma be absent. We are not aware that this question has been raised by other observers; if Dr. Bramwell is correct in his supposition the term "chloroma" will have to be altered.

The histological nature of the growths was discussed at length by both speakers. Dr. Dunlop was of opinion that "lympho-sarcoma" was probably the best definition of their structure, resembling on the one hand lymphoma in their histological characteristics, and on the other sarcoma in the fact that they arose from the periosteum and that they spread by metastasis. Dr. Bramwell also brought forward arguments in favour of the lympho-sarcomatous nature of the growths He pointed out, however, that the condition of the blood was highly suggestive of lymphatic leukæmia, and in Dr. Dunlop's case the changes in the blood might well have led to a diagnosis of acute lymphatic leukæmia had it not been for the appearance of the green growths. The question then arises whether chloroma is a definite and distinct disease or merely a variety of lymphatic leukæmia Probably more than one disease are included under this term; varieties certainly have been shown to occur, and as the knowledge of pathological conditions of the blood becomes greater a more definite differentiation will be possible. All that has hitherto been demonstrated is that cases of lymphatic leukæmia present considerable differences in their clinical history and course and in the relative intensity of the lesions found after death in the bone-marrow, the spleen, and the lymphatic glands respectively. It is evident that there is a large field for investigation in these varying conditions of the blood. The knowledge of the corpuscles of the blood in health and more particularly in disease has been greatly added to during recent years. Improved methods of staining have indicated pathological changes hitherto unknown. Valuable aids to diagnosis and prognosis have been demonstrated, and as the methods of examination are elaborated more clear and definite views of the pathology of the blood will be obtained.

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# The Choice of a Disinfectant.

The question as to what is the most convenient, and at the same time most effective, disinfectant for practical purposes is one, of course, of the utmost importance to the medical officer of health, to the general practitioner, and to the public. We have often wished that some definite, and preferably official, pronouncement, based upon trustworthy practical tests, could be made once for all, if only to show that the choice of an efficient disinfectant lies between only a few substances. The list of disinfectants which are urged upon the notice of the practitioner by those interested in their sale is a never-ending one and only bewilders him. Chemists in their untiring search for new compounds frequently succeed in discovering one which is a more powerful germicide than many of its antecedents, while it is a less powerfully poisonous substance, but some of the new discoveries are certainly not in the nature of improvements. We think, therefore, that in the practical experiments on disinfection recently undertaken for the London County Council by Dr. E. Klein, Dr. A. C. Houston, and Dr. M. H. Gordon these gentlemen were wise in limiting their investigations to those disinfectants most commonly in use. The results of the trials have just been published in an official paper issued by the London County Council. The disinfectants tested were (1) carbolic acid; (2) permanganate of soda; (3) bleaching powder; and (4) corrosive sublimate, all of which were used dissolved in water in suitable proportion. In addition, and as examples of gaseous disinfectants, formaldehyde and sulphur dioxide were tried, Dr. G. Newman, the medical officer of health of Finsbury, being responsible here for a share of the experimental work.

The microbes experimented with were (*a*) the spores of bacillus anthracis; (*b*) the staphylococcus pyogenes aureus; (*c*) the bacillus of typhoid fever; (*d*) the bacillus of diphtheria; (*e*) the bacillus pyocyaneus; (*f*) the vibrio of cholera; and (*g*) the bacillus of human tuberculosis. The above list represents a selection of microbes which are met with and which *need to be destroyed* practically every day. Moreover, the species chosen for investigation have this great advantage;—their survival or destruction could be easily ascertained, some developing colours, others cultural characters, and the rest exerting a specific action when injected. We need not enter into the details of the experiments; suffice it to state that as far as possible practical conditions were imitated. The materials infected were wood, cloth, linen, and paper. With regard to the results, Mr. Shirley F. Murphy, the medical officer of the Council, states in his summarising preface to that body, that it was found that both formaldehyde and sulphur dioxide failed in the case of wood and cloth

# A Plea for the Study of Minor Ailments.

THERE are several striking features by which the medical and surgical practice of hospitals is contrasted with what is called private practice. At first sight it might seem strange that where the aim in each instance is the same the conduct should often be so different. To the hospital physician and surgeon, as to the general practitioner, the first object is the improvement of the patient's malady. How comes it, then, that the means by which improvement is secured are often so far removed in the institution from those which prevail outside it? A main cause for this difference is at once apparent when we consider the patient's malady. No revelation is more perplexing to the young practitioner fresh from hospital work than this—the majority of his patients seek his aid on account of ailments which were not seen, or were thought of little account, in hospital work. Instead of finding that for every case with which he is confronted he can at once remember a parallel supplying him with confidence in his treatment of his patients, he realises to his surprise that now for the first time he is called upon to deal with some common ailment of which he has often heard, from which, indeed, he may have suffered, but to which he has never had his attention directed during his days of pupilage. His ingenuity in devising suitable treatment becomes at once subjected to a severe test. Qualities are asked of him for which he has hitherto had little need, and thus it happens often that coolness and tact, if based on sufficient knowledge, may lead the practical young man to early success that may be denied to the "best man of his year" who, with a large amount of definite knowledge, lacks the accessory qualities which permit this to be brought into play in private practice

Recent correspondence in our columns on the treatment of the common cold and the removal of the unsightly wart would in itself suffice to show how great an interest for practitioners may centre round a subject which the text-book or the lecturer on medicine passes by with a word or two. Minor ailments are common ailments. Common ailments provide the bulk of practice; while it is rare cases that loom large in the student's eye, and it is mainly from the exceptional instances that his teachers provide their lectures and demonstrations. Yet these common ailments should provide as much food for reflection as the most elaborate medical problem. The common cold is not more easily explained than the etiology of pernicious anæmia, and Friedreich's hereditary ataxia is almost as amenable to treatment as a simple headache in certain persons. Yet hundreds of pathologists and bacteriologists probably busy themselves about the more high-sounding diseases, for every one who attempts to unravel the equally obscure problems of a so-called simple complaint. This is a practical error, for surely that disease which affects the largest number ought to be grappled with first. The grave diseases have, of course, grave results—a fact which gives them their appearance of overwhelming urgency—but the results of the lesser maladies when they become recurrent in the same individual, as they so often do become, are not to be despised. From the point of view purely of the medical man minor ailments have a peculiar interest denied to the rarer or more serious classes of disease. The latter may be met with in hospital and out of it, but are best studied by those in attendance in institutions where in a few weeks as many instances may be seen as a general practitioner would meet in his lifetime. With the common and slight ailments just the reverse is the case These are, so to speak, the general practitioner's field. It behoves him, then, who has charge of this estate to reap from it a harvest of information whereby his own patients may gain in treatment and the whole profession in accurate knowledge. The common cold, the "bilious attack," the mild "rheumatism"—these and a hundred other common affections await the close, constant, and scientific study of the general practitioner.

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# Chloroma.

THE meeting of the Edinburgh Medico-Chirurgical Society[1] held on Feb. 5th proved of unusual interest. The chief subject brought before the notice of the society was the rare condition known as chloroma. Papers were read on this subject by Dr. G. H. MELVILLE DUNLOP and Dr. BYROM BRAMWELL.

Chloroma has always been considered a very rare disease, only some 25 cases having been recorded, but Dr. BRAMWELL suggests that it is probably much more common than is usually supposed. He referred to cases in which no definite diagnosis had been made, but which from the descriptions he judged to be cases of chloroma. Dr. BRAMWELL is very probably correct. A similar course of events has not infrequently happened in connexion with other conditions. For instance, it has been clearly shown that actinomyces is more common than was at one time thought, and as soon as the true characteristics of the disease became known it naturally was more frequently recognised. Dr. BRAMWELL very lucidly pointed out the principal features of chloroma, which are: (1) the presence of lymphoid deposits in the orbits, temporal fossæ, and periosteum of the bones of the skull, and the symptoms and signs resulting therefrom; (2) the green colour of the lesions, this being the remarkable peculiarity of the disease; (3) a profound blood change, characterised by anæmia, cachexia, hæmorrhages into the skin, bleedings from the mucous membranes, especially epistaxis, and petechial extravasations into the retinæ and internal surfaces; and (4) changes in the bone-marrow, the spleen, the lymphatic glands, and the organs throughout the body similar to those found in lymphatic leukæmia, that is to say, infiltration with lymphoid deposits.

The term "chloroma" or "green cancer" sufficiently indicates one of the above characteristics. As Dr. DUNLOP stated, the cause of the green colour is unknown. No bile pigment has ever been discovered in any of the tumours. Professor DITTRICH has suggested that it is due to decomposition, but as the colour is confined to the tumour and appears during life, this view is hardly tenable. Professor HUBER made an elaborate investigation on fresh tumours to discover the source of the colour. He ascribed it to minute over those of last year. The receipts are exclusive of the amounts collected by the Coronation Gift Committee. The League of Mercy had contributed £7000, being an increase of £1000 on the contribution for 1900. Excluding the Jubilee year the total receipts of the Fund were: for 1898, £39,272; 1899, £48,536; 1900, £51,549; and 1901, £53,188. With the exception of the £1000 entrusted to the Fund by the London parochial charities for distribution among convalescent homes the grants had been confined to hospitals, and it had still been deemed necessary to restrict the operations of the Fund to institutions situated within the seven-mile radius of Charing-cross. The total cost of collection and distribution for the year 1901 amounted to less than £1800, or under 3½ per cent. of the total collected. £51,000 were distributed, which sum is £1000 more than that distributed last year. It is satisfactory to know that, as His Royal Highness pointed out, the income of the Fund for the last four years has shown a steady increase. Nevertheless, the income is far short of that hoped for by the King when he first inaugurated the Fund in 1897, and the Prince of Wales hopes that the permanent income of the Fund will be increased to £40,000 or £50,000 a year.

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[1] See THE LANCET, Feb. 15th (p. 451) and 22nd (p. 520), 1902.

## THE INSTITUTE OF CHEMISTRY ON THE APPOINTMENT AND QUALIFICATIONS OF PUBLIC ANALYSTS.

AT the twenty-fourth annual general meeting of the Institute of Chemistry of Great Britain and Ireland held at 30, Bloomsbury-square, London, W.C., on March 3rd, Professor J. Millar Thomson, LL.D., F.R.S., the President, delivered an address dealing with the work of the Institute during the past year. From this it appears that the roll of members has increased by 36, making a total of 1040 Fellows and Associates at present on the register, while there are 130 students in course of training at the colleges and institutions recognised by the council of the Institute. An examination in biological chemistry has been established by means of which the council hopes to encourage analytical chemists to pursue the study of bacteriology and thus be able to deal with chemical work involving bacteriological knowledge. The examination is suited for such as intend to enter the practice of chemistry in its relationship to the chemistry and bacteriology of food, water, sewage, and effluents, and the practical applications of biological chemistry to such industries as brewing, tanning, &c. During the past year the council has ceased to recognise the junior, second class, and lower grade professional preliminary examinations of various examining bodies, and it has now under reconsideration the subjects which shall be compulsory for persons intending to proceed to the examinations of the institute. The council also reported to the members that during the past year it had addressed communications to the Local Government Board and to various county and borough authorities with reference to the combination of the two appointments of medical officer of health and public analyst. The Council maintains that a public analyst requires special training and experience in analytical chemistry far beyond that which is usually acquired by medical practitioners in the course of their professional education. It is true, it is argued, that medical men who take a diploma in Public Health have to undergo a four months' course in physics, chemistry, and microscopy; but while they possess a general knowledge of these subjects considerably greater than that of those medical men not possessing the diploma, yet this knowledge in no way corresponds with that required by the Institute of Chemistry for the Fellowship—viz., a course of two years in the laboratory of an analyst who is a Fellow of the Institute. The council holds the opinion that under the provisions of the Sale of Food and Drugs Act of 1875 it was intended that the medical officer of health and the public analyst for a borough or district should be two distinct persons, inasmuch as the medical officer is one of those officers empowered by the Act to submit suspected samples for analysis. The qualifications and examinations of the Institute are accepted by the Local Government Boards for public analytical appointments, and it is the desire of the council that no lower standard of chemical training and experience than that prescribed by the Institute of Chemistry should be accepted for such important and responsible public appointments as those of public analysts under the Sale of Food and Drugs Act—a desire which we share.

## THE NAVAL ESTIMATES.

AN examination of the Naval Estimates shows that it is proposed substantially to increase from April 1st the pay of all naval medical officers except deputy inspectors-general (why are they neglected?). The old and new scales of pay are as under:—

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Thus all below the rank of deputy inspector-general get a satisfactory increment of £50 a year when on full pay. "Half-pay" remains at its old figure. We hope that this change will secure for the navy a sufficient supply of competent surgeons to make up the difference between the 301 who are needed and the 283 already in the service.

## A CORONER ON PROPRIETARY MEDICINES: "MRS. WINSLOW'S SOOTHING SYRUP."

MR. A. BRAXTON HICKS, coroner for Mid-Surrey, who is also the honorary secretary of the Coroners' Society, held an inquest at Kingston recently on the body of Alice Thurley, aged one year and seven months, daughter of Ernest Thurley, a licensed victualler, of Canbury-passage, Kingston. The mother said that the child had been healthy until recently when she was troubled with her teeth; she had also had two convulsions from which she had recovered. Witness had occasionally given her a little of "Mrs. Winslow's soothing syrup" and some of "Dr. Stedman's teething powders." She had not observed that there was a notice on the bottle of the former stating that it was poison. The coroner then sent his officer to borrow a bottle of the medicine from a druggist. The coroner: "You followed what is in the advertisements?" The witness: "Yes." The coroner: "I know. 'And the little cherub wakes up as bright as a button.'" Continuing, the coroner said that it was hard for him to have to drive such things into people, but he had to do it. The mixture contained morphine. The label said that it was a blessing to mothers and good for teething. The coroner (reading the circular wrapped round the bottle): "Oh, this is disgraceful. 'Mrs. Winslow, an experienced nurse and female physician, presents to the attention of mothers her soothing syrup for children teething, which greatly facilitates the process of teething and will allay pain.' I do not know how old Mrs. Winslow is now, but this has been going on for some years, and she ought to be dead and buried by this time. Oh, here we are: 'We have put up and charged with spores. The contrast observed between wood and thick cloth on the one hand, and linen and paper on the other, probably finds explanation in the fact that the *materies morbi* soaked into the fabrics first named, whereas in the case of linen and paper the organisms were limited to the surface and were therefore more exposed to the action of the disinfectant. Apparently in one experiment the feebly resistant bacillus typhosus exposed on wood or cloth was not destroyed by formaldehyde, although it is suggested that some experimental error might have occurred. The organism, however, was destroyed under similar conditions of experiment by sulphur dioxide. We cannot quite gather whether moisture was used in conjunction with this gas which was obtained by burning ordinary sulphur. It is a question whether dry sulphur dioxide could be expected to act upon dried infectious matter, whereas in the case of wet cultures it would be almost certain to succeed in destroying the organism In the case of tuberculous sputum dried on linen and paper formaldehyde showed to greater advantage than sulphur dioxide. Was the formaldehyde accompanied by water vapour? With regard to fluid disinfectants corrosive sublimate (1 in 1000) with 24 hours' exposure destroyed all microbes, including the spores of anthrax and the tubercle bacilli; a 5 per cent. solution of carbolic acid with the same exposure failed to destroy anthrax spores but was destructive to all others; and Condy's fluid (permanganate of soda) failed even when a solution was used containing five teaspoonfuls to the pint. Bleaching powder, "generally speaking" (to use the words of Mr. SHIRLEY MURPHY's summary), only destroyed the less resistant form of microbes, though in the case of anthrax spores on paper and on linen this substance proved more effective than carbolic acid In regard, however, to the experiments in which bleaching powder failed we think that this result is possibly discounted by the fact that though a solution containing a known quantity of bleaching powder was employed yet nowhere can we find that the actual strength of the bleaching powder in terms of available chlorine was ascertained. This is important, for commercial bleaching powder frequently consists of little else than inert chloride and carbonate of calcium, the active chlorine being spent

Coming to specific instances of germicidal power it may be stated that the typhoid bacillus was killed by all the disinfectants except Condy's fluid and bleaching powder. Condy's fluid gave a negative result in each experiment, and bleaching powder used for the disinfection of wood and cloth infected with this organism failed with one hour's exposure but was efficacious on 24 hours' exposure. The bacillus diphtheriæ was killed by formaldehyde and sulphur dioxide. The vibrio of cholera was in each experiment destroyed by all the disinfectants except by Condy's fluid and bleaching powder. Condy's fluid was practically of negative value, and bleaching powder was not always efficacious on one hour's exposure but was successful with 24 hours' exposure. Bacillus pyocyaneus was acted upon in much the same way. It was killed in each experiment by all except Condy's fluid and bleaching powder. Staphylococcus aureus was also killed in each experiment by all except Condy's fluid and bleaching powder. Anthrax spores were only destroyed with certainty by perchloride of mercury, the other disinfectants either failing on each occasion or being uncertain, and almost invariably failing when wood and cloth were the materials to be disinfected. For tubercle bacilli carbolic acid and perchloride of mercury proved to be the only real germicides on each occasion. Condy's fluid and sulphur dioxide were of negative value and the other disinfectants were uncertain. These results are obviously of great importance, for they have an official standing, and they should raise the actual practice of disinfection to a much more satisfactory position.

# Annotations.

"Ne quid nimis."

## THE FOURTEENTH INTERNATIONAL CONGRESS OF MEDICINE.

WE understand that rapid progress is being made with the preliminaries of the Fourteenth International Congress of Medicine, which will be held in Madrid under the patronage of the King and the Queen Regent from April 23rd to the 30th, 1903. The Spanish Minister of Foreign Affairs has invited all the Governments of other countries to send representatives, and an invitation of a like nature has been sent to all universities and schools of medicine and to the principal medical societies of all countries. The work of the Congress will be distributed over the following 16 Sections: Anatomy (descriptive, comparative, &c.), Physiology (including Biology), General Pathology (including Bacteriology), Therapeutics (including Hydrology and Pharmacy), Internal Pathology, Nervous Disorders (including Insanity and Criminal Anthropology), Diseases of Children, Dermatology (including Syphilography), General Surgery, Ophthalmology, Oto-Rhino-Laryngology, Odontology, Obstetrics (including Gynæcology), Military and Naval Medicine, Public Health, and Legal Medicine (including Toxicology). The President is Dr. Julián Calleja, and the general secretary is Dr. Angel Fernández-Caro. Medical practitioners, pharmaceutical chemists, and veterinary surgeons are eligible as members of the Congress. Applications should be sent as early as possible to the general secretary at the Faculty of Medicine, Madrid. It is requested that they may be clearly written, and they should give the names, titles, qualifications, and addresses of the writers; a cheque on Madrid for 30 pesetas (from 19*s.* to 20*s.*, according to the current rate of exchange) should accompany them. Intending members are at the same time requested to specify the section which they wish to join; they will be entitled to receive a copy of the Transactions of this section, and will at the same time be at full liberty to take part in the business of any other section. For 12 pesetas ladies accompanying members may obtain a special card of admission to official entertainments Communications relating to the work of the Congress should reach the executive committee before Jan 1st, 1903. The official languages will be Spanish, French, English, and German.

## KING EDWARD'S HOSPITAL FUND FOR LONDON.

THE Prince of Wales presided at the annual meeting of King Edward's Hospital Fund for London, held at York House, St. James's, on March 7th. The report of the General Council, which on the motion of His Royal Highness was adopted, stated that steady and continuous progress marked once again the result of the past year's work. The total receipts for the year had again shown an increase over those of last year. The receipts are exclusive of the amounts collected by the Coronation Gift Committee. The League of Mercy had contributed £7000, being an increase of £1000 on the contribution for 1900. Excluding the Jubilee year the total receipts of the Fund were: for 1898, £39,272; 1899, £48,536; 1900, £51,549; and 1901, £53,188 With the exception of the £1000 entrusted to the Fund by the London parochial charities for distribution among convalescent homes the grants had been confined to hospitals, and it had still been deemed necessary to restrict the operations of the Fund to institutions situated within the seven-mile radius of Charing-cross. The total cost of collection and distribution for the year 1901 amounted to less than £1800, or under 3½ per cent. of the total collected. £51,000 were distributed, which sum is £1000 more than that distributed last year. It is satisfactory to know that, as His Royal Highness pointed out, the income of the Fund for the last four years has shown a steady increase. Nevertheless, the income is far short of that hoped for by the King when he first inaugurated the Fund in 1897, and the Prince of Wales hopes that the permanent income of the Fund will be increased to £40,000 or £50,000 a year.

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## IS THE MUSHROOM NUTRITIOUS?

THE notion has long been held that the mushroom presented the composition of animal flesh, which led to it being called the "vegetable beef-steak." It appears, however, that this conclusion has been based on some analyses made many years ago when analytical methods were not as exact as they are now and when the chemistry of food was not so well understood. In one regard, at any rate, the mushroom does resemble a beef-steak—in that it contains practically the same amount of water. But the dry solid constituents of the mushroom differ very materially in kind from the solids of meat. The most important difference is due to the rich proportion of proteids—the so-called flesh-formers—in meat as compared with the feeble amount in the mushroom. This fact, as ascertained by recent analyses, hardly justifies the mushroom being regarded as a "vegetable beef-steak." It may be a blow to the vegetarian, but he would have to consume at least 10 pounds of mushrooms in order to gain the equivalent of a little over one pound of prime beef. Indeed, in the light of modern inquiry there seems to be no reason for believing that mushrooms possess any greater food value than other ordinary fresh vegetable foods, and in many respects they compare unfavourably with them. Still, the fresh tender mushroom is undoubtedly easily digestible, and as it contains carbohydrates in addition to some proteid it is obvious that it is of some dietetic value. This value is not comparable with that possessed by essential foods such as meat, milk, and eggs. The mushroom, however, contains an unusual proportion of potassium salts. Few will deny that the mushroom is an excellent adjunct to many dishes; it has an appetising flavour, and this quality alone makes it dietetically valuable.

## MEMORIAL TO THE LATE SIR WILLIAM MAC CORMAC, BART., K.C.B., K.C.V.O.

AT a meeting of the members of St. Thomas's Hospital and Medical School held on March 11th, the Treasurer of the hospital in the chair, it was decided that steps should be taken to institute a permanent memorial of the connexion of the late Sir William Mac Cormac with the institution. A general committee of the members of the hospital and medical school has been formed and already consists of 250 St. Thomas's men. An executive committee was selected from this body, empowered to solicit subscriptions, its first object being to arrange for the production of a bust of Sir William Mac Cormac to be placed in the central hall of the hospital. It was further decided that in the event of the amount of money collected being in excess of the sum requisite for the bust a special meeting of the general committee should be called in the future to decide in what manner the surplus should be applied. The executive committee selected consists of the Treasurer of the hospital, Mr. J. G. Wainwright; two governors, Mr. Henry Bonham-Carter and Mr. T. Du Buisson; the senior physician, Dr. S. J. Sharkey; the senior surgeon, Mr. H. H. Clutton; the dean of the medical school, Dr. H. G. Turney; and four representatives of the school from London and the provinces, Mr. Thomas Wakley, jun., Mr. S. Osborn, Mr. George Wherry, and Mr. G. C. Franklin. Mr. G. H. Makins, C.B., and Mr. F. C. Abbott will act as secretaries to the committee.

## VACCINATION AT HELSTON, CORNWALL.

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## THE ESSAYS AND ADDRESSES OF SIR JAMES PAGET.

ALL men of science will be glad to hear that a collection of selected essays and addresses by the late Sir James Paget has just appeared. The collection is edited by his son, Mr. Stephen Paget, and the publishers are Messrs. Longmans, Green, and Co. Some of the essays are apparently hitherto unpublished. The others have appeared in our own columns, in those of the *British Medical Journal*, in St. Bartholomew's Hospital Reports, in the "Clinical Lectures and Essays," in "Studies of Old Case-books," in the Transactions of the Royal Medical and Chirurgical Society, and in monthly reviews. There are also addresses, such as the Presidential Address at the International Medical Congress of 1881, the sold this article for over 50 years and can say in confidence and truth of it what we have never been able to say of any other medicine—never has it failed in a single instance to effect a cure.' That is a good drug, that is. 'Never did we know an instance of dissatisfaction by anyone who used it. All speak in terms of highest commendation of its magical effects and medical cures. This valuable preparation is the prescription of one of the most skilful nurses in America.' Oh, it comes from America, does it; well, I am glad to hear that." Continuing, the coroner said that he had had an analysis made of the stuff. In the old days it was the habit in Lincolnshire for mothers to give their children opium to keep them quiet. Magistrates had put a stop to that, and then some ingenious persons invented some stuff which contained morphia and called it soothing syrup. They sold it for a long time till he was able to get an analysis and then it was found to contain morphia and the company had to put a "poison" label on the bottle. It was done in small letters which could hardly be seen. It was a question whether it was not wrong to give children a narcotic at all. After reading the directions for administering the medicine the coroner said that seeing that a teaspoonful was prescribed for a baby six months old an adult would want a whole bottle. "Gentlemen," said the coroner to the jury, "we suffer from dyspepsia and other complaints, why cannot we have a cure like this?" adding that if anyone took the trouble to read the advertisements they would see that they were rubbish. He did not blame the mother of the child but the people who advised her to use the syrup. Dr. Yeo stated that death was due to heart failure brought on by acute pneumonia. Replying to the coroner he said that morphia would have the effect of depressing the heart's action, and anything containing it would be a bad thing for children with lung trouble. The coroner, in summing up, said that it was a very curious thing that the last time he held an inquest in Kingston he had before him a case in which patent medicines were concerned. This was a proprietary medicine, the contents of which could only be ascertained by analysis, as he had had done in the case of "Mrs. Winslow's soothing syrup." Long advertisements were to be found in the papers of these medicines, and he could only say that they were a fraud on the people who read them. The jury returned a verdict of "Death from natural causes," and added a rider to the effect that these medicines which contained poison should be marked in red ink. The coroner said that the jury did not wish to blame the parents. He would keep pegging away about medicines of that sort until something was done.

## IS THE MUSHROOM NUTRITIOUS?

THE notion has long been held that the mushroom presented the composition of animal flesh, which led to it being called the "vegetable beef-steak." It appears, however, that this conclusion has been based on some analyses made many years ago when analytical methods were not as exact as they are now and when the chemistry of food was not so well understood. In one regard, at any rate, the mushroom does resemble a beef-steak—in that it contains practically the same amount of water. But the dry solid constituents of the mushroom differ very materially in kind from the solids of meat. The most important difference is due to the rich proportion of proteids—the so-called flesh-formers—in meat as compared with the feeble amount in the mushroom. This fact, as ascertained by recent analyses, hardly justifies the mushroom being regarded as a "vegetable beef-steak." It may be a blow to the vegetarian, but he would have to consume at least 10 pounds of mushrooms in order to gain the equivalent of a little over one pound of prime beef. Indeed, in the light of modern inquiry there seems to be no reason for believing that mushrooms possess any greater food value than other ordinary fresh vegetable foods, and in many respects they compare unfavourably with them. Still, the fresh tender mushroom is undoubtedly easily digestible, and as it contains carbohydrates in addition to some proteid it is obvious that it is of some dietetic value. This value is not comparable with that possessed by essential foods such as meat, milk, and eggs. The mushroom, however, contains an unusual proportion of potassium salts. Few will deny that the mushroom is an excellent adjunct to many dishes; it has an appetising flavour, and this quality alone makes it dietetically valuable.

## MEMORIAL TO THE LATE SIR WILLIAM MAC CORMAC, BART., K.C.B., K.C.V.O.

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Hunterian Oration of 1877, and the Bradshaw Lecture of 1882, which are familiar to a good many who were present at their delivery or who have seen reprints of them, but Sir James Paget is an author who will bear much re reading There is no doubt that the book will be a memorial not only of a great but of a lovable man, such as all who knew him either personally or by repute will be glad to possess In an early issue we hope to give an extended review of the work

## THE PREVALENCE OF SMALL-POX

THE returns of small pox in London for the past week are as follows on Saturday and Sunday, March 8th and 9th, 57 fresh cases in all were notified and removed, on Monday the 10th there were 67 fresh cases, on Tuesday, the 11th there were 76 fresh cases, and on Wednesday, the 12th, there were 52 fresh cases In Glasgow 11 new cases of small pox were admitted to the hospital at Belvidere on March 9th and 9 on the 10th On the same dates 26 patients were dismissed leaving a total of 202 cases still under treatment

## THE TREATMENT OF CUTANEOUS EPITHELIOMA BY THE X RAYS

DR CHARLES WARRENNE ALLEN, Professor of Dermatology in the New York Post-Graduate Medical School, writing in the *New York Medical Record* of Jan 25th expresses the opinion that the x rays will eventually be made serviceable in the treatment of cutaneous epithelioma but at the same time he admits that the method is as yet only in its infancy At present he considers that the proper place of the rays is in the after treatment or as a means of checking extension of the disease In dealing with epithelioma he therefore prefers in the first place to follow the ordinary rules of surgical practice and after an operation has been performed either with the knife or with caustic he strongly recommends that the rays should be applied, not however, to the extent of producing a so called "burn *For the application of the rays, especially to the mouth,* throat uterus, and rectum, he has suggested a funnel shaped metallic cone, into the flare of which the x ray tube is inserted As a source of electrical energy a static machine is preferable for use in an institution or a consulting room but in a patient's house an induction coil is obviously more convenient although, perhaps, inferior from a therapeutic point of view As to the dangers to be apprehended from the application of the x rays he believes them to have been over estimated although it is unquestionable that in incompetent hands much damage may be done by this method of treatment and quacks may be the means of bringing it into some degree of disrepute He dismisses as mistaken the idea that applications of methylene blue used concurrently with x ray treatment interfere with the action of the latter

## THE SALARIES OF ASSISTANT MEDICAL OFFICERS OF THE METROPOLITAN ASYLUMS BOARD

AT a meeting of the Metropolitan Asylums Board held on March 8th the Hospitals Committee sent in a report on the matter of the salaries paid to assistant medical officers The present scale of pay was adopted some eight years ago and the committee considered that the time had arrived for revision All assistant medical officers started at a salary of £160 per annum, increasing by annual rises of £20 per annum to £200 together with board, washing, and attendance The committee now recommended that the salaries should be raised owing to the increase in the cost of medical education and other reasons The senior assistant medical officer should be paid at a higher rate than the junior Their recommendations which were unanimously adopted, may be summarised as follows 1 Senior assistant medical officers to be paid at the rate of £280 per annum for the first year and at the rate of £300 per annum for the second and subsequent years with board, lodging, washing, and attendance. 2 In future all junior assistant medical officers shall be appointed on probation for not more than six months, such appointment to be subject to confirmation or revocation by the Hospitals Committee Salary during this period to be at the rate of £180 per annum, with board, lodging, washing, and attendance If the appointment be confirmed the salary is to be at the rate of £180 per annum, commencing from the beginning of probation and to rise by £20 per annum or at longer intervals to £240 per annum with board, lodging, washing and attendance 3 Assistant medical officers already in the service of the Board are to be classified *according to length of service and from March 25th, 1902* they shall be paid under the new scale

## THE DANGERS OF ACETYLENE

AN important report dealing with the apparatus and material used in the generation of acetylene has recently been printed in a Parliamentary paper The members of the committee seven in number, were all experts—some in regard to explosives others to petroleum, and others to coal gas Of the generators examined not one appeared to be unsatisfactory under the conditions of the test, but, as is pointed out this does not necessarily mean that all the types of generators on the market were safe, for some appliances were withheld because it was felt that they would not pass the test and in some instances serious defects in the design were made good before the generator was submitted to the test The committee states that attention should be given to the following five points in regard to the construction of the generator (1) it should be simple in action and design (2) it should be strongly constructed, (3) it should give a high efficiency as indicated by the yield of gas per unit of carbide, (4) the pressure of gas in the generator should always be low, and (5) *the residue of lime in the generator* should be easily removeable There is obviously no reference here to the purity of the carbide This, it seems to us is an important point, for the ordinary impurities of carbide are compounds which when moistened with water yield two poisonous gases—namely, phosphoretted hydrogen and sulphuretted hydrogen Moreover, it is possible that the presence of impurities in carbide might render the gases generated from it spontaneously inflammable

## THE SYMPTOMATOLOGY OF SYPHILITIC SPASMODIC PARAPLEGIA

AT the meeting of the Société Médicale des Hôpitaux of Paris on Feb 14th Dr Pierre Marie pointed out that th symptoms of syphilitic spasmodic paraplegia are characteristic—a fact which despite the numerous works on th affection particularly that of Erb has not been sufficiently brought into prominence (*mis en relief*) Though the gait is spastic it is not only spasm which prevents the patients from walking, but also paralysis of the flexors of the lower limbs This paralysis is remarkably localised, the power of the psoas and iliacus muscles is always diminished in a more or less marked *fashion flexion of the thigh on the pelvis* is performed with great difficulty, or at least with considerably less force than in a normal individual. Similarly, there is feebleness of flexion of the knee and of dorsal flexion of the foot but this is generally much less than that of the psoas muscle There is a curious difficulty of adduction of the thighs If the patients are told to press the knees together the latter can almost without effort usually be separated by the hand to a distance of seven or eight centimetres, but no further in consequence of the muscular resistance of the patient. Thus adduction is enfeebled only when the knees are close together. Adopting the suggestion of his pupil, M. Goulden, Dr. Marie thinks that this phenomenon is due to paralysis of the pectineus muscle. The sphincter troubles are also peculiar. There is not incontinence in the ordinary sense, but an imperious desire to micturate and to defecate which must be satisfied at once. Sensory affections are rare. Genital troubles, on the contrary, are common; both sexual desire and power are affected and the cremasteric reflex is often abolished. All the patients', symptoms are not necessarily paraplegic. There may be paræsthesia or weakness of the muscles of the upper limbs, more often of one upper limb. Frequently there is increased susceptibility to emotion—a spasmodic tendency to laugh or to cry; more rarely there is slight loss of memory. Dr. Marie insists that the symptoms on which stress has been laid are so constant that they constitute a well-marked type. The morbid anatomy of the affection he is unable to define. This lucid description well illustrates Dr. Marie's clinical acumen—his power of discovering types where others only observe cases. But while freely admitting the great value of his latest contribution to clinical medicine we venture to think that his description applies to a particular type of syphilitic spasmodic paraplegia rather than to the affection in general.

## ANNAMESE MEDICINE.

"BETTER fifty years of Europe than a cycle of Cathay," sang Lord Tennyson, and in so far as regards Annamese medical practice the late Laureate's dictum would seem to be fully justified. According to a writer in the *Archives de Médecine Navale* for January no native of Annam is allowed to practise medicine or surgery unless he has studied under a recognised master for at least 10 years, but notwithstanding this prolonged curriculum the results, measured by Western standards, are simply deplorable. It is not that the Mongoloid medical students are accused of abnormal idleness or of excessive stupidity, for, on the contrary, they are said to be very industrious and, according to their lights, by no means devoid of intelligence. From their earliest days, however, they become imbued with the grossest superstition, complicated by a firm belief in astrology, and naturally it is next to impossible for genuine knowledge to attain to any useful dimensions in the midst of such exuberant weeds. The Annamese Pharmacopœia is made up of an immense number of exceedingly complex formulæ, and before the simplest of the medicaments can be prepared the compounder has to perform the most perplexing ceremonies in order to insure its efficacy. Amongst metals gold, silver, and iron are in high repute as remedies, but the writer does not make the mode of their administration clear. Iron, he tells us, is used for wounds caused by cutting instruments. In the same connexion it may also be noted that zinc is employed for combating colic as well as for assisting parturition. In the latter case, however, the attendant nails the metal to the threshold of the patient's room. Earth is freely administered in many diseases. When freshly stirred up by rats it is believed to cure paralysis, cramps, and beri-beri, and it is likewise thought capable of preventing the crying of infants in utero. As a comestible earth is freely consumed by well-to-do people throughout the country, but its votaries acknowledge that it has no taste or nourishing properties whatever. Habit, they say, is responsible for the practice, but pregnant women have been known to declare that the "little cats'-ear tiles," as the earth tablets are called, have as good a flavour as pig's liver. The Annamese do not hesitate to consume the flesh of cattle that have died from infectious diseases, and also freely eat fowls that have died from cholera or diphtheria. One of their most cherished drugs consists of small-pox crusts which are given internally as a prophylactic when the disease is exceptionally prevalent. Hydrophobia in Annamese estimation can be communicated to a human being if a mad dog should bite his shadow, but happily the liver of the animal is a sovereign cure! The "stercoraceous" remedies used by the Annamese are more repulsive, if possible, than those of the Honourable Robert Boyle, to which we recently alluded[1]; but, on the other hand, it is pleasant to find that strawberries fortify the five organs of the circulation, cure consumption, and restore youth to old people.

## PROPOSED MEMORIAL TO THE LATE SURGEON-GENERAL W. NASH, A.M.S.

FOR the purpose of placing a memorial brass in the church of the Royal Victoria Hospital at Netley to the memory of the late Surgeon-General W. Nash, A.M.S., a committee has been formed consisting of Deputy Surgeon-General J. Meane, A.M.D. (ret.), Colonel W. F.-Stevenson, C.B., R.A.M.C., and Colonel W. L. Gubbins, R.A.M.C. It is also proposed to place a portrait of the deceased officer in the headquarters mess of the Royal Army Medical Corps. Subscriptions, which are invited from members of the Army Medical Service and the Royal Army Medical Corps both on the active and retired lists, should be remitted by cheque to 28, Charles-street, St. James's-square, S.W., payable to Major B. M. Skinner, R.A.M.C., and crossed "Sir C. R. McGrigor and Co., Memorial to Surgeon-General Nash." The following subscriptions have already been received: Surgeon-General W. Taylor (Director-General of the Army Medical Service), £2 2*s.*; Surgeon-General A. H. Keogh (Deputy Director-General of the Army Medical Service), £1 10*s.*; and Deputy Surgeon-General J. Meane, £2 2*s.*

## THE CASE OF THE MILE END INFIRMARY.

CERTAIN letters have recently appeared in the *Times* in which Dr. J. Harley Brooks, medical superintendent of the Mile End Infirmary, has explained the circumstances in which seven nurses at that institution declined revaccination and became infected with small-pox introduced into the hospital by a patient in whom its presence was not recognised. In reply to these Mr. Bernard Shaw, the well-known author, who appears to take a praiseworthy interest in the sanitation and health of the metropolitan borough in which he lives and of the community in general, has written criticising the statements and deductions of Dr. Harley Brooks. In a letter which appeared on March 1st Mr. Shaw, who is nothing if not original, propounded the suggestion that "the presence in the Mile End Infirmary of a number of nurses suffering from variolous eruptions on the arm produced not only the outbreak of small-pox among the unrevaccinated nurses but also among the patients." To this Dr. Harley Brooks has replied by pointing out among other things that the revaccination of the nurses who escaped small-pox took place at the end of October and at the beginning of November in last year, while the outbreak of small-pox (apart from its being directly traceable to a patient who died from it) occurred in the following January. Mr. Bernard Shaw does not seem to have very carefully ascertained his facts before propounding deductions to be founded on them. Nor does he explain how if his theory were to be upheld, small-pox would ever be absent from the community. Vaccinated infants suffering from what Mr. Bernard Shaw calls variolous eruptions are not infrequently found in crowded rooms where other persons, vaccinated and unvaccinated, would be far more exposed to the infection of vaccination if it existed than the nurses were at the Mile

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[1] THE LANCET, Feb. 22nd, 1902, p. 566.

Hunterian Oration of 1877, and the Bradshaw Lecture of 1882, which are familiar to a good many who were present at their delivery or who have seen reprints of them; but Sir James Paget is an author who will bear much re reading. There is no doubt that the book will be a memorial not only of a great but of a lovable man, such as all who knew him either personally or by repute will be glad to possess. In an early issue we hope to give an extended *review of the work.*

## THE PREVALENCE OF SMALL-POX.

THE returns of small-pox in London for the past week are as follows: on Saturday and Sunday, March 8th and 9th, 57 fresh cases in all were notified and removed; on Monday, the 10th, there were 67 fresh cases; on Tuesday, the 11th, there were 76 fresh cases; and on Wednesday, the 12th, there were 52 fresh cases. In Glasgow 11 new cases of small-pox were admitted to the hospital at Belvidere on March 9th and 9 on the 10th. On the same dates 26 patients were dismissed, leaving a total of 202 cases still under treatment.

## THE TREATMENT OF CUTANEOUS EPITHELIOMA BY THE X RAYS.

DR CHARLES WARRENNE ALLEN, Professor of Dermatology in the New York Post-Graduate Medical School, writing in the *New York Medical Record* of Jan. 25th, expresses the opinion that the x rays will eventually be made serviceable in the treatment of cutaneous epithelioma, but at the same time he admits that the method is as yet only in its infancy At present he considers that the proper place of the rays is in the after-treatment or as a means of checking extension of the disease. In dealing with epithelioma he therefore prefers in the first place to follow the ordinary rules of surgical practice, and after an operation has been performed either with the knife or with caustic he strongly recommends that the rays should be applied, not however, to the extent of producing a so called "burn." For the application of the rays, especially to the mouth, throat, uterus, and rectum, he has suggested a funnel-shaped metallic cone, into the flare of which the x-ray tube is inserted. As a source of electrical energy a static machine is preferable for use in an institution or a consulting-room, but in a patient's house an induction coil is obviously more convenient, although, perhaps, inferior from a therapeutic point of view. As to the dangers to be apprehended from the application of the x rays, he believes them to have been over estimated although it is unquestionable that in incompetent hands much damage may be done by this method of treatment, and quacks may be the means of bringing it into some degree of disrepute. He dismisses as mistaken the idea that applications of methylene blue used concurrently with x-ray treatment interfere with the action of the latter.

## THE SALARIES OF ASSISTANT MEDICAL OFFICERS OF THE METROPOLITAN ASYLUMS BOARD.

AT a meeting of *the Metropolitan Asylums Board held on* March 8th the Hospitals Committee sent in a report on the matter of the salaries paid to assistant medical officers. The present scale of pay was adopted some eight years ago and the committee considered that the time had arrived for revision. All assistant medical officers started at a salary of £160 per annum, increasing by annual rises of £20 per annum to £200, together with board, washing, and attendance. The committee now recommended that the salaries should be raised owing to the increase in the cost of medical education and other reasons. The senior assistant medical officer should be paid at a higher rate than the junior. Their recommendations, which were unanimously adopted, may be summarised as follows 1. Senior assistant medical officers to be paid at the rate of £280 per annum for the first year and at the rate of £300 per annum for the second and subsequent years, with board, lodging, washing, and attendance. 2 In future all junior assistant medical officers shall be appointed on probation for not more than six months, such appointment to be subject to confirmation or revocation *by the Hospitals Committee. Salary during this period to be* at the rate of £180 per annum, with board, lodging, washing, and attendance. If the appointment be confirmed the salary is to be at the rate of £180 per annum, commencing from the beginning of probation and to rise by £20 per annum or at longer intervals to £240 per annum, with board, lodging, washing, and attendance. 3. Assistant medical officers already in the service of the Board are to be classified according to length of service and from March 25th, 1902, they shall be paid under the new scale.

## THE DANGERS OF ACETYLENE.

AN important report dealing with the apparatus and material used in the generation of acetylene has recently been printed in a Parliamentary paper. The members of the committee, seven in number, were all experts—some *in regard to explosives, others to petroleum, and others to* coal gas Of the generators examined not one appeared to be unsatisfactory under the conditions of the test, but, as is pointed out, this does not necessarily mean that all the types of generators on the market were safe, for some appliances were withheld because it was felt that they would not pass the test, and in some instances serious defects in the design were made good before the generator was submitted to the test. The committee states that attention should be given to the following five points in regard to the construction of the generator: (1) it should be simple in action and design: (2) it should be strongly constructed; (3) it should give a high efficiency *as indicated by the yield of gas per unit of* carbide; (4) the pressure of gas in the generator should always be low; and (5) the residue of lime in the generator should be easily removeable. There is obviously no reference here to the purity of the carbide. This, it seems to us, is an important point, for the ordinary impurities of carbide are compounds which when moistened with water yield two poisonous gases—namely, phosphoretted hydrogen and sulphuretted hydrogen. Moreover, it is possible that the presence of impurities in carbide might render the gases generated from it spontaneously inflammable.

## THE SYMPTOMATOLOGY OF SYPHILITIC SPASMODIC PARAPLEGIA.

AT the meeting of the Société Médicale des Hôpitaux of Paris on Feb 14th Dr. Pierre Marie pointed out that the symptoms of syphilitic spasmodic paraplegia are characteristic—a fact which, despite the numerous works on the affection, particularly that of Erb, has not been sufficiently brought into prominence (*mis en relief*). Though the gait is spastic, it is not only spasm which prevents the patients *from walking*, but also paralysis of the flexors of the lower limbs This paralysis is remarkably localised; the power of the psoas and iliacus muscles is always diminished in a more or less marked fashion: flexion of the thigh on the pelvis is performed with great difficulty, or at least with considerably less force than in a normal individual. Similarly, there is feebleness of flexion of the knee and of dorsal flexion of the foot, but this is generally much less than that of the psoas muscle There is a curious difficulty of adduction of the thighs: if the patients are told to press the knees together the latter can, almost without effort, usually be separated by the hand to a distance of seven or eight centimetres, but no farther in consequence of the despatch of the relief ship, besides subscribing to the fund. It would be a deplorable thing if from want of funds proper precautions for the safety of the explorers were not taken and a second Franklin disaster should occur. To medical men the undertaking will specially appeal, for more than one member of our profession has taken part—notably John Rae, to mention one name only—in Polar research; but the expedition is really a national one, as its funds were raised by public subscription, supplemented by a Government grant. Moreover, valuable work has already been performed by Captain Scott and his party, and there is every reason to hope that the expedition will be successful if it is properly supported. We sincerely trust that for our own national honour, as well as for the sake of the brave men who volunteered for service in the expedition, the money required will at once be forthcoming.

THE committee appointed by the Lord President of the Council to inquire into the Pharmacy Act, 1868, has been sitting at Whitehall this week under the chairmanship of Sir Herbert Maxwell. The special object of the committee is to decide upon the modifications necessary in the list of poisons referred to in Schedule A of the Act.

Dr. Louis Cobbett and Dr. E. S. St. Barbe Sladen have been appointed by the Royal Commission on Tuberculosis to assist in the experimental work of the Commission to be carried out at Stansted. They will reside at the farms and will devote the whole of their time to the investigations of the Commission.

THE Midwives Bill, as will be seen by our report of the proceedings on page 784, is now being fought out in Committee. An important amendment, moved by Sir John Tuke, to the effect that only certified midwives should be able to sue for fees was carried by 21 votes to 10.

MR. WALTER OTTO GOLDSCHMIDT has presented a cast of the bust of his late mother to the Jenny Lind Infirmary at Norwich. The bust was executed by the late Mr. Joseph Durham, A.R.A., in 1848. It was the only one for which the famous singer ever sat.

THE death is announced at Redhill, on March 7th, of the Rev. William de Lancy West, D.D. He was educated at St. John's College, Oxford, and from 1870 to 1885 was head-master of Epsom College.

HIS MAJESTY THE KING has promised his patronage and that of the Queen to the grand bazaar which is to be held at the French Embassy on June 10th and 11th next for the benefit of the French charities in London.

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THE ROYAL INSTITUTION.—In a lecture on Some Developments of Electricity delivered on March 8th Lord Rayleigh showed the well-known phenomenon of the luminosity of a fluorescent screen exposed to the Roentgen rays. He then discussed at some length the remarkable effect of these rays in promoting the condensation of aqueous vapour. It has long been known, he said, that if damp air be suddenly expanded—as, for instance, by sucking air from a flask with the mouth—fog is formed in the air thus expanded. The explanation is that the air becomes cooled by the expansion and water vapour becomes condensed. Aitken discovered some years ago that the presence of nuclei of some kind, such as suspended atmospheric motes or dust, was essential to the formation of fog. In course of time the fog disappears by subsidence of the motes which are thus got rid of and the expansion may be repeated without the production of fog. Exposure to the Roentgen radiation greatly heightens the effect. The probable explanation is that this radiation causes the formation of nuclei in large numbers, these nuclei not being motes but molecules of the nature of the ions which are assumed to be formed in the transmission of electricity through solutions capable of electrolysis.

# Looking Back.

FROM

## THE LANCET, *SUNDAY, MARCH* 14, 1824.

*To the Editor of The Lancet.*

SIR,—As I feel not the slightest hesitation to believe that the publication of THE LANCET was intended for the advancement of the Surgical art, as well as for the improvement of medical science in general, so also am I of opinion that the result will realize every expectation which has been entertained of its utility. The very accurate detail of the lectures alone, cannot fail to impress the juvenile reader with an increased degree of understanding of the subjects of which they treat, and will enable him to exercise his talents with the best effects to his future reputation, as well as to society at large.—It has ever been a subject of remark and regret, that Lectures are generally given with a rapidity too great to permit the audience to give them the perfect attention they require to receive from them the information they were intended to convey. These objections are now removed, and the consequences will be important as well as permanent. In reading with attention the Hunterian Oration, which was published in THE LANCET a little time since, I had an opportunity of attentively considering the contents, and through the medium of your paper of this week, I beg leave to say, that although the gratification I enjoyed in hearing the oration delivered by Mr. CLINE, (whom I have ever held in high estimation) exceeded beyond any comparison the pleasure I felt in hearing that delivered by Sir EVERARD HOME in 1822, yet as some observations and statements which fell from the learned orator, were I think rather objectionable, and such as I have no hesitation to believe, would have been so considered by the excellent and meritorious subject of the oration, whom I had the felicity personally to know, I trust I shall be pardoned in taking the liberty to declare them. I profess myself to entertain an opinion somewhat different from many others upon the existence and nature of what is termed genius, and am inclined to impute much more of the discoveries which he made, and the knowledge which he acquired to the enthusiastic ardour (the language of the elegant orator) with which he prosecuted his investigations, than to any independent act of genius alone. Indeed, if we advert to the statement of the worthy President, we shall find that for the first twenty years of Mr. Hunter's life, no particular disposition was discovered denoting a preference for medical subjects, and that it was not till after twenty-seven years of additional application and study that he felt himself qualified to begin his course of lectures, a period which I shall be justified in declaring, is quite sufficient, connected with assiduity like his, to attain a knowledge of any subject, in a very superior degree. If genius were indispensably necessary to the attaining of an art evidently intended for the possession of many, deplorable would be the state of those, who are now sufficiently suffering from the combined influence of inattention and ignorance, and it would also reflect, in a measure, on Providence itself for withholding, from us, generally speaking, those abilities and powers without the possession of which, the practice of the art of surgery cannot be successfully carried on. I by no means intend to deny that genius has often existed, but it was under circumstances very different from the present; for as it is clear that the productions of the earth, matured as they were intended to be, by the industry and labour of man, are given him to relieve his wants and support his personal existence, so the arts and sciences were equally designed to be the food and support of his mental faculties; and as it has but too frequently occurred that the indolence of his disposition, and ingratitude of his nature have prevented him from cultivating them, to the extent they are entitled to, in order to prevent them from falling into a state of total oblivion, (which in justice to futurity cannot be permitted to take place), Providence has been repeatedly called upon to raise up characters possessing more than common propensities to cultivate and perfect any particular art or science, and this is what might properly be deemed genius, conspicuous in its commencement, vigorous in its growth, and expanding to an

End Infirmary, while maternity hospitals would become centres for the dissemination of the disease. In short, Mr. Bernard Shaw can hardly be congratulated upon initiating a discovery likely to bear serious results, while the case of the nurses at Mile End is an excellent example of the protective power of revaccination.

## DINNER OF THE MEDICAL SOCIETY OF LONDON.

THE 129th anniversary dinner of the Medical Society of London was held on March 8th at the Whitehall Rooms, Dr. W. H. Allchin, the President, being in the chair. The guests of the society were Sir William S. Church, Bart. (President of the Royal College of Physicians of London), Mr. H. G. Howse (President of the Royal College of Surgeons of England), Dr. T. Clifford Allbutt (Regius Professor of Physic at the University of Cambridge), Surgeon-General W. Taylor (Director-General of the Army Medical Service), Mr. Alfred Willett (President of the Royal Medical and Chirurgical Society), Mr. Howard Marsh (President of the Clinical Society of London), Mr. Herbert W. Page (President of the Neurological Society), Dr. P. Horrocks (President of the Obstetrical Society of London), Dr. Urban Pritchard (President of the Otological Society of the United Kingdom), Dr. T. E. Burton Brown (Master of the Society of Apothecaries of London), and Dr. Patrick Manson, C.M.G. After the toasts of "The King" and of "The Medical Society of London" the President presented the Fothergillian gold medal to Dr. Manson in recognition of his work on tropical diseases. Dr. Manson replied. Mr. A. Pearce Gould then proposed "Our Fellow Societies," to which Mr. Willett replied. Mr. Edmund Owen proposed the health of "Our Visitors," which was responded to by Sir William Church. Dr. Frederick T. Roberts proposed "The Health of the President," who replied. This terminated a most successful dinner, at which over 100 Fellows of the society and their guests were present.

## "INTERNAL DERANGEMENT" OF THE KNEE-JOINT.

THE cases designated by the above title are of particular importance because they most commonly occur in active youthful or middle-aged subjects, and thus the condition disables a person in other respects especially able so far as his physical powers are concerned. With modern surgery a great advance has been made in the treatment of these cases, the classical description of which was given in a paper by Hey. This surgeon, however, appears to have considered the symptoms which he so well described to be always due to dislocation of a semilunar cartilage. That this is by no means always the case we are now certain and the variety of lesion which may cause frequent attacks of inability to extend the knee and of pain and weakness in the joint is well shown in the paper which we publish by Mr. Herbert Allingham at p. 731 of our present issue Mr. Allingham certainly includes some conditions which have not hitherto often been recognised as giving rise to the same symptoms as those occasioned by injury to the semilunar cartilages, but he also shows the different conditions in the cartilages themselves which cause Hey's symptoms of "dislocation." His series of cases is very instructive from this point of view and the loose bodies and various splittings and separations from attachments which his cases illustrate were paralleled by the examples recently given in our columns by Mr A. E. Barker[1] and Mr. J. M. Cotterill.[2] It is interesting to note that Mr. Barker does not seem to consider splitting of a semilunar cartilage across at any point between its two ends at all probable on scientific grounds and he had not met with such a condition. His paper, however, did not put forward a large number of cases, and Mr. Allingham's wider series includes examples apparently of this lesion which Mr. Cotterill also states that he has found. An instructive feature is the case with which displacement of a semilunar cartilage appears to occur in certain subjects, particularly those who for any reason have suffered from chronic synovitis of a knee-joint. As regards treatment Mr. Allingham lays especial stress on the value of massage and exercises, and there is no doubt that the condition of the ligaments and muscles accessory to the joint plays an important part in the prevention of the attacks caused by internal derangement. Cases in which there are frequent recurrences, however, and those where there is a perfectly free piece of cartilage, are not satisfactorily treated without operation

## HUNTER AND URINARY SURGERY.

IN his recent Hunterian Lecture before the Hunterian Society Mr. Reginald Harrison claimed that in many points the teaching of John Hunter might be said to represent even the most advanced teaching of the present day. Urinary fistulæ in the perineum are often exceedingly troublesome, for they may refuse to heal in spite of much energetic treatment. Hunter showed by the analogy of a lithotomy wound that the non-healing was not due merely to the fact that urine was passing over the wound. There must therefore be some other cause for the lack of healing. The essential provision for the closing of these urinary fistulæ is a perfectly free channel for the escape of the urine, and, as Mr. Harrison pointed out, it may be even at the present time the best treatment to perform a perineal section to allow the urine to escape freely, and he quoted a case in which five urinary fistulæ were in this manner induced to close, although for 18 months previously many other forms of treatment had been employed in vain. Again, with regard to vesical hæmorrhage, Hunter advised perineal section for cases in which profuse hæmorrhage occurred into the bladder with the formation of large clots. In this way the bladder is thoroughly rested and the clots are easily removed. Mr. Harrison cited many other instances of the value of Hunter's practice and suggestions in this department of surgery; many of them are of great interest, but all who have studied Hunter's work will know that it was founded on a firm basis of pathology; and though as our knowledge surpasses that which he possessed we can accomplish more than was possible to him, yet much that he taught will be of value as long as surgery shall endure

## THE NATIONAL ANTARCTIC EXPEDITION RELIEF FUND.

IT is not at all creditable to the people of a country which has produced so many daring sailors and whose history is so closely associated with maritime adventure that any very great efforts should be required to find the money necessary to equip a relief ship in order to render assistance to Captain Scott who left London on July 31st last on a voyage of antarctic research. Captain Scott of the *Discovery* in a letter to Sir Clements R. Markham, President of the Royal Geographical Society, dated Lyttelton, Dec. 17th, 1901, expresses his confidence that a relief ship will be sent to him, but only a little more than £8000, including a magnificent subscription of £5000 from Mr. L. W. Longstaff, have been as yet subscribed towards this object, or less than half the £20,000 required for the purpose of equipping the relief vessel. His Majesty the King is patron of the expedition, and H. R. H. the Prince of Wales, the vice-patron, has expressed himself very strongly as to the urgent necessity for the

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[1] THE LANCET, Jan 4th, 1902, p. 7.
[2] THE LANCET, Feb. 22nd, 1902, p. 510.

Thames was in flood. At length we are glad to see that this for once has been done. During the month of December two analyses were made of the water supplied by the Grand Junction Company. The results are given in the following table :—

TABLE III.—*Giving the Results of the Analyses, expressed in parts per 100,000, of Two Specimens of the Water supplied by the Grand Junction Waterworks Company in December, 1901. (From the report of analyses of the metropolitan water-supply undertaken by Dr. T. E. Thorpe, F.R.S., on behalf of the Local Government Board.)*

| Date. | Place of collection. | Organic carbon. | Organic nitrogen. | Ammonia. | Chlorine. |
|---|---|---|---|---|---|
| Dec. 9th, 1901. | Cab rank, Piccadilly, opposite Bolton-street ... ... ... | 0 129 | 0 014 | 0 0 | 1·9 |
| ,, 31st,* ,, | Cab rank, Shepherd's Bush Green . ... | 0 287 | 0 032 | 0 014 | 2 2 |

* The Thames water was in a "bad" state from and including Dec. 26th to the end of the month.

In his remarks on the results of the analyses Dr. Thorpe says: "The Grand Junction Company's supply on Dec. 31st, ...... contained a considerable proportion of organic impurity, chiefly of vegetable origin. ......" Dr. Thorpe also makes some remarks on the presence of ammonia, which he found in comparatively large quantity in the water supplied on Dec. 30th and 31st: "The supply of these companies" (the Southwark, Grand Junction, and Lambeth), he says, "on several occasions in the latter part of the month contained sensible amounts of free ammonia, the largest proportion (0 023 part per 1000) being found in the Grand Junction Company's water on Dec. 30th. As free ammonia in more than minute traces is only exceptionally found in the filtered waters, it appears that this constituent must have been present in more than usual proportion in the raw Thames water during the recent floods." This hypothesis is, perhaps, not of much importance The fact on which we would insist is that ammonia should not be distributed in the drinking-water supplied to the people of London. Enough has been said to prove that the water supplied by the Grand Junction company gives conclusive evidence to show that the method in which it is treated is defective.

Is the President of the Local Government Board aware that the capacity of the storage and subsidence reservoirs of the Grand Junction Waterworks Company is insufficient in amount?

Is the President of the Local Government Board aware that the quality of the water supplied by the Grand Junction Waterworks Company gives conclusive evidence that the manner in which it is treated is defective?

If the President of the Local Government Board is not aware of these facts, will he make himself acquainted with the reports of the Water Examiner and of the analyst who are appointed by the Local Government Board?

If the President of the Local Government Board is aware of the facts, has he made any communication to the directors of the Grand Junction Waterworks Company with reference to them? If he has not done so, why has he not done so? If he has done so, when did he do so and with what result?

## VITAL STATISTICS.

### HEALTH OF ENGLISH TOWNS.

In 76 of the largest English towns 9143 births and 5835 deaths were registered during the week ending March 8th. The annual rate of mortality in these towns, which had been 24 4 and 23·3 per 1000 in the two preceding weeks, further declined last week to 20·5 per 1000. In London the death-rate was 24·6 per 1000, while it averaged 18·8 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 10·1 in Smethwick, 11·0 in Hornsey, 11·4 in Wolverhampton, 12·4 in Walthamstow, 12·8 in Middlesbrough, 13·1 in Great Yarmouth, and 13·7 in Plymouth and in Swansea; the highest rates were 25·2 in Preston and in Huddersfield, 25·5 in Warrington, 26·0 in Bury, 27·0 in Burnley, 27·4 in Blackburn, 27·6 in Stockport, and 30·4 in Barrow-in-Furness. The 5835 deaths in these towns last week included 600 which were referred to the principal zymotic diseases, against 582 and 570 in the two preceding weeks; of these 600 deaths 167 resulted from measles, 120 from whooping-cough, 92 from small-pox, 89 from diphtheria, 52 from scarlet fever, 42 from "fever," and 38 from diarrhœa. No death from any of these diseases occurred last week in Hastings, Bournemouth, Great Yarmouth, Hanley, Burton-on-Trent, Kings Norton, Smethwick, or Tynemouth; in the other towns they caused the highest death-rates in Willesden, Tottenham, Northampton, Leicester, Bootle, Wigan, Burnley, and Blackburn. The greatest proportional mortality from measles occurred in Tottenham, Willesden, Southampton, Northampton, Leicester, Stockport, Burnley, and Huddersfield; from scarlet fever in Wigan and in Handsworth; from diphtheria in Portsmouth, Bristol, and Derby; from whooping-cough in Devonport, Walsall, and Leicester, from "fever" in St. Helens and in Bolton; and from diarrhœa in Bootle. 92 fatal cases of small-pox among persons belonging to these 76 towns were registered last week; of these, 80 belonged to London, six to West Ham, and one each to Croydon, Tottenham, East Ham, Reading, Leicester, and Swansea. The number of small-pox patients under treatment in the Metropolitan Asylums hospitals, which had been 1185, 1321, and 1309 on the three preceding Saturdays, had risen to 1512 on Saturday, March 8th; 555 new cases were admitted during the week, against 390, 502, and 379 in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital at the end of the week was 2283, against numbers decreasing from 3137 to 2307 on the 10 preceding Saturdays; 277 new cases were admitted during the week, against 260, 219, and 215 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 885 and 733 in the two preceding weeks, further declined last week to 590, but were 53 above the corrected average. The deaths directly attributed to influenza numbered 89, having been 51. 107, and 103 in the three preceding weeks. The causes of 76, or 1·5 per cent., of the deaths in the 76 large towns were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Leicester, Salford, Leeds, Newcastle, and in 41 other smaller towns; the largest proportions of uncertified deaths were registered in Reading, St. Helens, Warrington, Preston, Sheffield, and South Shields.

### HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 25·3 and 22·6 per 1000 in the two preceding weeks, rose again to 25 4 per 1000 during the week ending March 8th and exceeded by 4·9 the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 15 6 in Perth and 19 2 in Paisley to 26 9 in Edinburgh and 29 8 in Dundee. The 820 deaths in these towns included 20 which were referred to whooping-cough, 17 to diarrhœa, 14 to measles, seven to scarlet fever, seven to diphtheria, two to small-pox, and two to "fever." In all 69 deaths resulted from these principal zymotic diseases last week, against 81 and 75 in the two preceding weeks. These 69 deaths were equal to a annual rate of 2·1 per 1000, which corresponded wit the mean rate last week from the same diseases i the 76 large English towns. The fatal cases of whooping-cough, which had been 20, 20, and 23 in the three precedin weeks, declined again last week to 20, of which eight occurre in Glasgow, five in Aberdeen, three in Edinburgh, and tw in Dundee The deaths from diarrhœa, which had been and 13 in the two preceding weeks, rose again to 17 last wee and included nine in Glasgow and five in Edinburgh. T fatal cases of measles, which had been 12, 17, and 19 in t three preceding weeks, declined again last week to 14, which nine were registered in Glasgow and three in Dund The deaths from scarlet fever, which had been three a four in the two preceding weeks, further rose to seven last week and included four in Glasgow. The fatal cases of diphtheria, which had been three, six, and one in the three preceding weeks, rose again last week to seven, of which two occurred in Dundee and two in Greenock The deaths from small-pox, which had been two, seven, and extent which throws at a distance all impediments arising from the imperfections of our nature Another objection, which I feel to enthusiasm, such as was possessed by the individual so justly and universally admired, being imputed to genius alone is, that independently of the derivation from his energy and zeal, he is held up to posterity more as a subject of admiration for his genius (if such it must be *deemed*) *than imitable for his talents, industry, and knowledge*, and thus rendered at one moment elevated, but useless, a point of view, in which to have been considered by after ages, that would have rendered him truly miserable Inquiries into the arcana, the principles and perfections of nature, aided by investigation so accurate as was his will ever from nature receive information and instruction and among many other advantages, which would certainly accrue, a release from the prevailing influence of the liver humbuggery would be one inevitable and invaluable result the liver being an organ more connected with, than productive of, the diseases of the digestive organ more sinned against than sinning, the means employed for the removal of which have been productive of distress disease, and destruction to thousands It is a well known fact that many of the islands in the intertropical seas are formed by the association and combination of animalculæ of the Polypi description, thus interminably forming a perfect separation between land and water Surely therefore the combination of human talent if energetically exerted can separate knowledge from ignorance and science from quackery

I am, Sir,
Your obedient servant,
GEORGE WILKINS,
Surgeon

36, York place City road,
March 10 1824

# THE METROPOLITAN WATER SUPPLY

## III [1]

### THE GRAND JUNCTION WATERWORKS COMPANY SOME QUESTIONS FOR THE PRESIDENT OF THE LOCAL GOVERNMENT BOARD

THE arrangements of the Grand Junction Waterworks Company are in one respect more unsatisfactory than are those of any of the other metropolitan water companies

1 There is a great deficiency in reservoir capacity

2 The water supplied by the company gives evidence of the defective method in which it is treated

1 The marked deficiency in the capacity of the storage reservoirs of the Grand Junction Company is very clearly seen by comparing it with that of the West Middlesex Company and for this purpose a table has been compiled from the monthly report of the Water Examiner for December 1901 The West Middlesex company is taken for purposes of comparison for reasons which were given in the second of these articles [2] which were, briefly stated that the arrangements of the company were put into a moderately efficient state by the directors as soon as the shareholders of the company had received their back dividends and their future full statutory dividends appeared to be secure Table I shows the daily average amount of water supplied by the West Middlesex and the Grand Junction companies for the month of December 1901 (the latest available statistics) It gives also the estimated population supplied the area and capacity of the storage and subsidence reservoirs of the two companies and the area of their filter beds

This table speaks for itself Whoever has eyes to see can see if he chooses to look The West Middlesex Company which was distributing something less than 21 000 000 gallons of water, has a storage area of 117 acres and the Grand Junction Company, with a storage area of only 15 acres was distributing nearly 19 000 000 gallons daily The storage capacity of the Grand Junction Company would have to be increased more than sixfold to equal that of the West Middlesex Company No amount of expert evidence can alter this fact No truthful man could deny that the reservoir capacity of the Grand Junction Company is extremely inadequate, and as a tree is known by its fruit so the imperfections in the arrangements of a water company are shown by the quality of the water which it supplies

TABLE I.—*Showing the Daily Average Amount of Water Supplied and the Estimated Population Served during the Month of December 1901, and the Area and Capacity of the Storage and Subsidence Reservoirs and the Filtration Areas of the West Middlesex Waterworks Company and the Grand Junction Waterworks Company* (*Compiled from the report of the Water Examiner*)

| Companies | Average daily supply during the month | Estimated population | Storage and subsidence reservoirs | | Filtration area in acres |
|---|---|---|---|---|---|
| | | | Area in acres | Capacity in gallons | |
| West Middlesex Waterworks Company | 20 565 429 | 650 734 | 117½ | 397 500 000 | 22½ |
| Grand Junction Waterworks Company | 18 917 127 | 449 764 | 15 | 53 570 000 | 24½ |

2 In the last published annual report of the Local Government Board [3] Dr T E Thorpe, F R S, the analyst appointed by the Board called the attention of the President to the great importance which should be attached to the adequacy of the capacity of subsidence reservoirs and to the effects which were produced by a deficiency in this respect He pointed out that by drawing on their stored water at periods during which the Thames is in a dirty state some companies distribute their supplies in a less impure condition than they would have been able to do had they possessed no arrangements for storage An instructive table was given to elucidate this point and to show the relative positions of the Thames companies with regard to storage and to the organic elements in the water which they delivered during the six winter months of 1900 The table is as follows —

TABLE II.—*Showing the Relative Positions of the Thames Companies with regard to Storage and to the Organic Elements in the Water which they delivered during the Six Winter Months of 1900*

| Companies | Number of days supply in unfiltered water reservoirs | Organic elements (carbon and nitrogen) average for months of January February, March October November and December in parts per 100 000 |
|---|---|---|
| Chelsea | 15·0 | 0·203 |
| West Middlesex | 18·5 | 0·219 |
| Southwark | 13·2 | 0·303 |
| Grand Junction | 2·9 | 0·342 |
| Lambeth | 6·0 | 0·327 |

In his comments on this table Dr Thorpe says "From this it is seen that the Chelsea West Middlesex, and Southwark companies having from 13·2 to 18·5 days storage, delivered the best water The Grand Junction with less than three days storage delivered water containing the most organic matter whilst the Lambeth Company with but little more storage succeeded in supplying slightly better [we should prefer to say *less impure*] water than the former company

We have had occasion to call attention to the fact that the analyst of the Local Government Board has not been allowed or instructed to make a sufficient number of observations on the quality of the water supplied by the metropolitan water companies For a long time only one full analysis was made monthly of one specimen only of the water supplied by each company There has been no evidence to show that the specimen has not been taken in a perfectly haphazard manner in regard to the time at which it was taken We have insisted that it was necessary that analyses should be made at times during which the

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[1] Articles I and II appeared in THE LANCET of March 1st (p 614) and 8th (p 692) 1902, respectively

[2] THE LANCET, March 8th p 692.

[3] Thirtieth Annual Report of the Local Government Board, 1900-1901, London 1901

Thames was in flood. At length we are glad to see that this for once has been done. During the month of December two analyses were made of the water supplied by the Grand Junction Company. The results are given in the following table:—

TABLE III.—*Giving the Results of the Analyses, expressed in parts per 100,000, of Two Specimens of the Water supplied by the Grand Junction Waterworks Company in December, 1901. (From the report of analyses of the metropolitan water-supply undertaken by Dr. T. E. Thorpe, F.R.S., on behalf of the Local Government Board.)*

| Date. | Place of collection. | Organic carbon. | Organic nitrogen. | Ammonia. | Chlorine. |
|---|---|---|---|---|---|
| Dec. 9th, 1901. | Cab rank, Piccadilly, opposite Bolton-street ... ... ... | 0·129 | 0·014 | 0·0 | 1·9 |
| „ 31st;* „ | Cab rank, Shepherd's Bush Green ... ... | 0·287 | 0·032 | 0·014 | 2·2 |

* The Thames water was in a "bad" state from and including Dec. 26th to the end of the month.

In his remarks on the results of the analyses Dr. Thorpe says: "The Grand Junction Company's supply on Dec. 31st, ...... contained a considerable proportion of organic impurity, chiefly of vegetable origin. ......" Dr. Thorpe also makes some remarks on the presence of ammonia, which he found in comparatively large quantity in the water supplied on Dec. 30th and 31st: "The supply of these companies" (the Southwark, Grand Junction, and Lambeth), he says, "on several occasions in the latter part of the month contained sensible amounts of free ammonia, the largest proportion (0·023 part per 1000) being found in the Grand Junction Company's water on Dec. 30th. As free ammonia in more than minute traces is only exceptionally found in the filtered waters, it appears that this constituent must have been present in more than usual proportion in the raw Thames water during the recent floods." This hypothesis is, perhaps, not of much importance. The fact on which we would insist is that ammonia should not be distributed in the drinking-water supplied to the people of London. Enough has been said to prove that the water supplied by the Grand Junction company gives conclusive evidence to show that method in which it is treated is defective.

Is the President of the Local Government Board aware that the capacity of the storage and subsidence reservoirs of the Grand Junction Waterworks Company is insufficient in amount?

Is the President of the Local Government Board aware that the quality of the water supplied by the Grand Junction Waterworks Company gives conclusive evidence that the manner in which it is treated is defective?

If the President of the Local Government Board is not aware of these facts, will he make himself acquainted with the reports of the Water Examiner and of the analyst who are appointed by the Local Government Board?

If the President of the Local Government Board is aware of the facts, has he made any communication to the directors of the Grand Junction Waterworks Company with reference to them? If he has not done so, why has he not done so? If he has done so, when did he do so and with what result?

# VITAL STATISTICS.

## HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 9143 births and 5835 deaths were registered during the week ending March 8th. The annual rate of mortality in these towns, which had been 24·4 and 23·3 per 1000 in the two preceding weeks, further declined last week to 20·5 per 1000. In London the death-rate was 24·6 per 1000, while it averaged 18·8 per 1000 in the 75 other large towns. The lowest death-rates in these towns were 10·1 in Smethwick, 11·0 in Hornsey, 11·4 in Wolverhampton, 12·4 in Walthamstow, 12·8 in Middlesbrough, 13·1 in Great Yarmouth, and 13·7 in Plymouth and in Swansea; the highest rates were 25·2 in Preston and in Huddersfield, 25·5 in Warrington, 26·0 in Bury, 27·0 in Burnley, 27·4 in Blackburn, 27·6 in Stockport, and 30·4 in Barrow-in-Furness. The 5835 deaths in these towns last week included 600 which were referred to the principal zymotic diseases, against 582 and 570 in the two preceding weeks; of these 600 deaths 167 resulted from measles, 120 from whooping-cough, 92 from small-pox, 89 from diphtheria, 52 from scarlet fever, 42 from "fever," and 38 from diarrhœa. No death from any of these diseases occurred last week in Hastings, Bournemouth, Great Yarmouth, Hanley, Burton-on-Trent, Kings Norton, Smethwick, or Tynemouth; in the other towns they caused the highest death-rates in Willesden, Tottenham, Northampton, Leicester, Bootle, Wigan, Burnley, and Blackburn. The greatest proportional mortality from measles occurred in Tottenham, Willesden, Southampton, Northampton, Leicester, Stockport, Burnley, and Huddersfield; from scarlet fever in Wigan and in Handsworth; from diphtheria in Portsmouth, Bristol, and Derby; from whooping-cough in Devonport, Walsall, and Leicester, from "fever" in St. Helens and in Bolton; and from diarrhœa in Bootle. 92 fatal cases of small-pox among persons belonging to these 76 towns were registered last week; of these, 80 belonged to London, six to West Ham, and one each to Croydon, Tottenham, East Ham, Reading, Leicester, and Swansea. The number of small-pox patients under treatment in the Metropolitan Asylums hospitals, which had been 1185, 1321, and 1309 on the three preceding Saturdays, had risen to 1512 on Saturday, March 8th; 555 new cases were admitted during the week, against 390, 502, and 379 in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital at the end of the week was 2283, against numbers decreasing from 3137 to 2307 on the 10 preceding Saturdays; 277 new cases were admitted during the week, against 260, 219, and 215 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 885 and 733 in the two preceding weeks, further declined last week to 590, but were 53 above the corrected average. The deaths directly attributed to influenza numbered 89, having been 51. 107, and 103 in the three preceding weeks. The causes of 76, or 1·5 per cent., of the deaths in the 76 large towns were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Leicester, Salford, Leeds, Newcastle, and in 41 other smaller towns; the largest proportions of uncertified deaths were registered in Reading, St. Helens, Warrington, Preston, Sheffield, and South Shields.

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The annual rate of mortality in the eight Scotch towns, which had been 25·3 and 22·6 per 1000 in the two preceding weeks, rose again to 25·4 per 1000 during the week ending March 8th and exceeded by 4·9 the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 15·6 in Perth and 19·2 in Paisley to 26·9 in Edinburgh and 29·8 in Dundee. The 820 deaths in these towns included 20 which were referred to whooping-cough, 17 to diarrhœa, 14 to measles, seven to scarlet fever, seven to diphtheria, two to small-pox, and two to "fever." In all 69 deaths resulted from these principal zymotic diseases last week, against 81 and 75 in the two preceding weeks. These 69 deaths were equal to an annual rate of 2·1 per 1000, which corresponded with the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had been 20, 20, and 23 in the three preceding weeks, declined again last week to 20, of which eight occurred in Glasgow, five in Aberdeen, three in Edinburgh, and two in Dundee. The deaths from diarrhœa, which had been 22 and 13 in the two preceding weeks, rose again to 17 last week, and included nine in Glasgow and five in Edinburgh. The fatal cases of measles, which had been 12, 17, and 19 in the three preceding weeks, declined again last week to 14, of which nine were registered in Glasgow and three in Dundee. The deaths from scarlet fever, which had been three and four in the two preceding weeks, further rose to seven last week and included four in Glasgow. The fatal cases of diphtheria, which had been three, six, and one in the three preceding weeks, rose again last week to seven, of which two occurred in Dundee and two in Greenock. The deaths from small-pox, which had been two, seven, and

10 in the three preceding weeks, declined again last week to two, both of which were registered in Glasgow, where the two fatal cases of "fever" also occurred The deaths referred to diseases of the respiratory organs in these towns, which had been 211, 224, and 214 in the three preceding weeks, rose again last week to 230, and were 69 in excess of the number in the corresponding period of last year The causes of 48, or nearly 6 per cent, of the deaths in these eight towns last week were not certified

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### HEALTH OF DUBLIN

The death rate in Dublin, which had been 33 3 and 28 6 per 1000 in the two preceding weeks, rose again to 29 7 per 1000 during the week ending March 8th During the past four weeks the death rate has averaged 29 3 per 1000, the rates during the same period being 27·0 in London and 23 1 in Edinburgh The 216 deaths of persons belonging to Dublin registered during the week under notice showed an excess of eight over the number in the preceding week, and included 13 which were referred to the principal zymotic diseases, against 11, 11, and 13 in the three preceding weeks; of these, six resulted from measles, three from diphtheria, two from "fever," one from scarlet fever, and one from diarrhœa These 13 deaths were equal to an annual rate of 1 8 per 1000, the zymotic death rates during the same period being 2 7 in London and 1 6 in Edinburgh The fatal cases of measles, which had been three, three, and one in the three preceding weeks, rose again last week to six The deaths referred to "fever," which had been three in each of the two preceding weeks, declined last week to two The three fatal cases of scarlet fever exceeded the number recorded in any recent week The 216 deaths in Dublin last week included 32 of children under one year of age and 75 of persons aged upwards of 60 years, the deaths of infants showed a slight decline from the number in the preceding week, while those of elderly persons were considerably in excess Five inquest cases and three deaths from violence were registered, and 81, or three eighths, of the deaths occurred in public institutions The causes of eight, or nearly 4 per cent, of the deaths in Dublin last week were not certified

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### VITAL STATISTICS OF LONDON DURING FEBRUARY, 1902

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in each of the cities and boroughs in the county of London With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 11 4 per 1000 of the population, estimated at 4,579,107 persons in the middle of the year In the three preceding months the rates *had been 11·6, 10 6 and 11 4 per 1000 respectively* The rates were considerably below the average in Kensington, Fulham, Chelsea, and Hampstead, while they showed the largest excess in Finsbury, Shoreditch, Bethnal Green, Stepney, and Poplar During the four weeks ending March 1st the number of small pox cases notified showed a further increase over the numbers in recent months, the greatest proportional prevalence of this disease was recorded in Holborn, Finsbury, Shoreditch Bethnal Green, Stepney, and Poplar The number of small pox patients under treatment in the Metropolitan Asylums hospitals which had been 427 666 and 1135 at the end of the three preceding months had further risen to 1309 at the end of February, the weekly admissions averaged 390, against 110, 173, and 297 in the three preceding months. The prevalence of scarlet fever during February showed a considerable decline from that recorded in the preceding month, among the various metropolitan boroughs this disease was proportionally most prevalent in St Pancras Finsbury Poplar, Battersea Camberwell, and Lewisham The Metropolitan Asylums hospitals contained 2250 scarlet fever patients at the end of the month, against *3186 3080 and 2501 at the end of the* three preceding months, the weekly admissions averaged 234, against 352, 297, and 266 in the three preceding months A continued decline in the prevalence of diphtheria also was shown during February, this disease was proportionally most prevalent in St Pancras, Islington, Stoke Newington, Hackney, Camberwell, and Lewisham There were 1156 diphtheria patients under treatment in the Metropolitan Asylums hospitals at the end of last month, against 1504, 1369 and 1231 at the end of the three preceding months; the weekly admissions averaged 154, against 200, 160, and 167 in the three preceding months. The prevalence of enteric fever *showed a slight increase* during February, among the various metropolitan boroughs "fever" was proportionally most prevalent in Paddington Hampstead, Holborn, Southwark, and Bermondsey The number of enteric fever patients under treatment in the Metropolitan Asylums hospitals, which had been 245, 195 and 128 at the end of the three preceding months, had risen again to 143 at the end of February, the weekly admissions averaged 22 against 32, 21 and 18, in the three preceding months Erysipelas was proportionally most prevalent in Hackney, Bethnal Green Southwark, Bermondsey, and Greenwich The 23 cases of puerperal fever notified during the month included five in Wandsworth three in Camberwell, two in Paddington, two in St Pancras, and two in Deptford

The mortality statistics in the table relate to the deaths of persons actually belonging to the various metropolitan boroughs, the deaths occurring in the public institutions of London having been distributed among the boroughs in which the deceased persons had previously resided During the four weeks ending March 1st the deaths of 9105 persons belonging to London were registered, equal to an annual rate of 25 9 per 1000, against 20 0, 18 8, and 18 3 per 1000 in the three preceding months The lowest death rates last month in the various metropolitan boroughs were 19 1 in Hampstead, 20 0 in Deptford, 20 4 in Wandsworth, 21 0 in Lewisham and 21 8 in Battersea, the highest rates were 30 3 in St Marylebone, 30 6 in Shoreditch 31 3 in Bethnal Green, 33 6 in Holborn, and 34 6 in Finsbury and in the City of London The 9015 deaths from all causes included 257 from small pox, 229 from measles 49 from scarlet fever, 128 from diphtheria, 154 from whooping cough, 45 from enteric fever, one from simple continued fever, and 34 from diarrhœa, in all 897 deaths were referred to these principal zymotic diseases The lowest death rates last month from these diseases were 1 1 in Battersea and in Camberwell, 1·2 in Chelsea, 1 4 in Bermondsey, and 1 5 in Deptford and in the City of London, and the highest rates were 4 3 in Paddington, 4 6 in Bethnal Green, 4·9 in Finsbury, 5 3 in Stepney, and 7 2 in Shoreditch The 257 fatal cases of small pox showed a further considerable increase over the numbers recorded in recent months, the greatest proportional mortality from this disease occurred in Holborn *Finsbury, Shoreditch, Bethnal Green, Stepney, and* Poplar The 229 deaths from measles were 40 in excess of the average number in the corresponding periods of the 10 preceding years, among the various metropolitan boroughs this disease was proportionally most fatal in Paddington, Kensington, Hammersmith, Fulham St Marylebone, and Finsbury The 49 fatal cases of scarlet fever showed a slight decline from the corrected average number; this disease was proportionally most fatal in Hampstead, St Pancras Bethnal Green, Camberwell, Deptford, and Lewisham The 128 deaths from diphtheria were considerably below the average number in the corresponding periods of the 10 preceding years, among the various metropolitan boroughs the greatest proportional mortality from this disease occurred in Fulham St Pancras Islington, Finsbury, Shoreditch and Lewisham The 154 fatal cases of whooping cough showed a decline of 78 from the corrected average number, this disease was proportionally most fatal in Stoke Newington, Shoreditch, Bethnal Green Stepney, Lewisham, and Woolwich The 46 deaths referred to "fever" were four in excess of the average number in the corresponding periods of the 10 preceding years, the highest "fever" death rates last month were recorded in the City of Westminster, Hackney, Shoreditch, Bethnal Green and Poplar The 34 fatal cases of diarrhœa were 21 below the corrected average number; this disease was proportionally most fatal in Holborn Shoreditch, Stepney Poplar, and Greenwich In conclusion, it may be stated that the aggregate mortality in London last month from these diseases was nearly 22 per cent. above the average.

Infant mortality in London during February, measured by the proportion of deaths among children under one year of age to registered births was equal to 144 per 1000 The lowest rates of infant mortality were recorded in St Marylebone, Stoke Newington, Hackney, the City of London, Southwark and Deptford, and the highest rates in Chelsea, St Pancras, Finsbury, Poplar, Bermondsey, and Greenwich

## ANALYSIS OF SICKNESS AND [illegible] ICS IN LONDON DURING FEBRUARY, 1902.

(*Specially compiled for* THE LANCET.)

| CITIES AND BOROUGHS. | Estimated population in the middle of 1902. | NOTIFIED CASES OF INFECTIOUS DISEASE. | | | | | | | | | | | DEATHS FROM PRINCIPAL INFECTIOUS DISEASES. | | | | | | | | | | | Deaths from all causes. | Death-rate per 1000 living. | Deaths of infants under one year to 1000 births. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Small-pox. | Scarlet fever. | Diphtheria.* | Typhus fever. | Enteric fever. | Other continued fevers. | Puerperal fever. | Erysipelas. | Cholera. | Total. | Annual rate per 1000 persons living. | Small-pox. | Measles. | Scarlet fever. | Diphtheria.* | Whooping-cough. | Typhus fever. | Enteric fever. | Other continued fevers. | Diarrhœa. | Total. | Annual rate per 1000 persons living. | | | |
| LONDON... ... ... ... ... ... | 4,579,107 | 1441 | 1190 | 830 | — | 175 | 4 | 23 | 355 | — | 4018 | 11·4 | 257 | 229 | 49 | 123 | 154 | — | 45 | 1 | 34 | 897 | 2·6 | 9105 | 25·9 | 144 |
| *West Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Paddington ... ... ... ... ... ... | 145,107 | 22 | 16 | [illegible] | — | 8 | — | 2 | 10 | — | 81 | 7·3 | 6 | 34 | — | 5 | 1 | — | 1 | — | 1 | 48 | 4·3 | 285 | 25·6 | 147 |
| Kensington ... ... ... ... ... ... | 177,605 | 11 | 30 | [illegible] | — | 3 | 1 | — | 10 | — | 59 | 4·3 | 1 | 22 | 3 | — | 1 | — | — | — | 1 | 28 | 2·1 | 330 | 24·2 | 158 |
| Hammersmith ... ... ... ... ... | 114,210 | 19 | 15 | 20 | — | 3 | — | 1 | 5 | — | 63 | 7·2 | — | 14 | 1 | 2 | — | — | — | — | — | 17 | 1·9 | 217 | 24·8 | 124 |
| Fulham ... ... ... ... ... ... | 143,102 | 14 | 24 | 26 | — | 5 | — | — | 7 | — | 76 | 6·9 | 5 | 18 | — | 6 | 2 | — | — | — | — | 31 | 2·8 | 262 | 23·9 | 151 |
| Chelsea ... ... ... ... ... ... | 74,018 | 8 | 6 | 5 | — | 2 | — | — | 6 | — | 27 | 4·8 | 1 | 1 | 1 | 2 | 2 | — | — | — | — | 7 | 1·2 | 157 | 27·7 | 190 |
| City of Westminster ... ... ... | 180,800 | 51 | 26 | 19 | — | 8 | — | — | 6 | — | 110 | 7·9 | 8 | 6 | 2 | 4 | — | — | 4 | — | 2 | 26 | 1·9 | 378 | 27·3 | 152 |
| *North Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| St. Marylebone ... ... ... ... | 132,069 | 37 | 27 | 22 | — | 6 | — | — | 10 | — | 102 | 10·1 | 6 | 26 | 1 | 4 | 1 | — | 2 | — | 1 | 41 | 4·0 | 307 | 30·3 | 120 |
| Hampstead ... ... ... ... ... | 83,743 | 2 | 17 | 5 | — | 5 | — | 1 | 4 | — | 34 | 5·3 | — | 5 | 3 | — | 2 | — | 1 | — | — | 11 | 1·7 | 123 | 19·1 | 140 |
| St. Pancras ... ... ... ... ... | 235,596 | 56 | 75 | 86 | — | 12 | — | 2 | 20 | — | 251 | 13·9 | 10 | 7 | 5 | 12 | 3 | — | 3 | — | — | 40 | 2·2 | 516 | 28·6 | 174 |
| Islington ... ... ... ... ... | 337,263 | 25 | 96 | 92 | — | 9 | — | 1 | 25 | — | 248 | 9·6 | 1 | 7 | 3 | 17 | 13 | — | 3 | — | 1 | 45 | 1·7 | 653 | 25·2 | 141 |
| Stoke Newington ... ... ... ... | 51,700 | 11 | 15 | 19 | [illegible] | — | — | — | 4 | — | 49 | 12·4 | 1 | — | 1 | 1 | 3 | — | — | 1 | — | 7 | 1·8 | 88 | 22·2 | 50 |
| Hackney ... ... ... ... ... ... | 221,926 | 39 | 56 | [illegible] | [illegible] | 5 | — | 1 | 28 | — | 196 | 11·5 | 6 | 2 | 1 | 9 | 10 | — | 5 | — | 1 | 34 | 2·0 | 399 | 23·4 | 118 |
| *Central Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Holborn ... ... ... ... ... ... | 58,535 | 43 | 13 | 3 | — | 4 | — | — | 4 | — | 67 | 14·9 | 9 | 2 | — | — | — | — | — | — | 2 | 13 | 2·9 | 151 | 33·6 | 139 |
| Finsbury ... ... ... ... ... ... | 100,487 | 57 | 31 | 17 | — | 3 | 1 | 1 | 9 | — | 119 | 15·4 | 12 | 16 | 1 | 6 | 3 | — | — | — | — | 38 | 4·9 | 267 | 34·6 | 184 |
| City of London ... ... ... ... | 25,598 | 5 | 6 | 6 | — | 1 | — | — | 2 | — | 20 | 10·2 | 1 | 1 | 1 | — | — | — | — | — | — | 3 | 1·5 | 68 | 34·6 | 87 |
| *East Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Shoreditch ... ... ... ... ... | 117,980 | 147 | 17 | 22 | — | 2 | 1 | — | 8 | — | 197 | 21·8 | 40 | 5 | — | 5 | 9 | — | 3 | — | 3 | 65 | 7·2 | 277 | 30·6 | 138 |
| Bethnal Green ... ... ... ... ... | 129,889 | 82 | 27 | 22 | — | 6 | — | 1 | 17 | — | 155 | 15·6 | 14 | 3 | 3 | 3 | 19 | — | 4 | — | — | 46 | 4·6 | 312 | 31·3 | 157 |
| Stepney ... ... ... ... ... ... | 300,551 | 366 | 84 | 46 | — | 16 | — | — | 23 | — | 535 | 23·2 | 73 | 5 | — | 10 | 24 | — | 2 | — | 9 | 123 | 5·3 | 680 | 29·5 | 150 |
| Poplar ... ... ... ... ... ... | 169,214 | 121 | 66 | 31 | — | 8 | — | 1 | 9 | — | 236 | 18·2 | 18 | 4 | 2 | 4 | 7 | — | 4 | — | 4 | 43 | 3·3 | 353 | 27·2 | 172 |
| *South Districts.* | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Southwark ... ... ... ... ... | 206,825 | 82 | 69 | 26 | — | 12 | 1 | — | 27 | — | 217 | 13·7 | 10 | 11 | 2 | 8 | 7 | — | 4 | — | 2 | 44 | 2·8 | 453 | 28·6 | 120 |
| Bermondsey ... ... ... ... ... | 130,218 | 29 | 36 | 11 | — | 9 | — | — | 16 | — | 101 | 10·1 | 2 | 1 | 2 | 2 | 6 | — | 1 | — | — | 14 | 1·4 | 287 | 28·7 | 159 |
| Lambeth ... ... ... ... ... ... | 305,102 | 75 | 90 | 29 | — | 14 | — | — | 19 | — | 227 | 9·7 | 11 | 12 | 3 | 2 | 11 | — | 2 | — | 2 | 43 | 1·8 | 639 | 27·3 | 142 |
| Battersea ... ... ... ... ... ... | 171,401 | 24 | 60 | 24 | — | 3 | — | — | 18 | — | 129 | 9·8 | 5 | 5 | 1 | — | 3 | — | — | — | — | 14 | 1·1 | 286 | 21·8 | 134 |
| Wandsworth ... ... ... ... ... | 241,810 | 22 | 53 | 47 | — | 9 | — | 5 | 15 | — | 151 | 8·1 | 3 | 14 | — | 7 | 3 | — | 2 | — | — | 29 | 1·6 | 378 | 20·4 | 156 |
| Camberwell ... ... ... ... ... | 262,775 | 34 | 113 | 69 | — | 3 | — | 3 | 23 | — | 245 | 12·2 | 4 | — | 6 | 4 | 7 | — | 1 | — | 1 | 23 | 1·1 | 473 | 23·5 | 134 |
| Deptford ... ... ... ... ... ... | 111,577 | 13 | 32 | 22 | — | 3 | — | 2 | 5 | — | 77 | 9·0 | 4 | — | 3 | 2 | 2 | — | 1 | — | 1 | 13 | 1·5 | 171 | 20·0 | 79 |
| Greenwich ... ... ... ... ... ... | 98,013 | 15 | 29 | 12 | — | 5 | — | 1 | 12 | — | 74 | 9·8 | 4 | 1 | — | 3 | 2 | — | — | — | 2 | 12 | 1·6 | 173 | 23·0 | 173 |
| Lewisham ... ... ... ... ... ... | 132,432 | 8 | 42 | 33 | — | 6 | — | 1 | 7 | — | 97 | 9·5 | 1 | 1 | 3 | 9 | 7 | — | 1 | — | 1 | 23 | 2·3 | 213 | 21·0 | 150 |
| Woolwich... ... ... ... ... ... | 119,556 | 21 | 18 | 22 | — | 4 | — | — | 6 | — | 71 | 7·7 | 1 | 6 | 1 | 1 | 6 | — | 1 | — | — | 16 | 1·7 | 209 | 22·8 | 138 |
| Port of London ... ... ... ... | — | 2 | 1 | — | — | 1 | — | — | — | — | 4 | — | [illegible] | — | — | — | — | — | — | — | — | — | — | — | — | — |

* Includin

10 in the three preceding weeks, declined again last week to two, both of which were registered in Glasgow, where the two fatal cases of "fever" also occurred. The deaths referred to diseases of the respiratory organs in these towns, which had been 211, 224, and 214 in the three preceding weeks, rose again last week to 230, and were 69 in excess of the number in the corresponding period of last year. The causes of 48, or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

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### HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 33·3 and 28·6 per 1000 in the two preceding weeks, rose again to 29·7 per 1000 during the week ending March 8th. During the past four weeks the death-rate has averaged 29·3 per 1000, the rates during the same period being 27·0 in London and 23·1 in Edinburgh. The 216 deaths of persons belonging to Dublin registered during the week under notice showed an excess of eight over the number in the preceding week, and included 13 which were referred to the principal zymotic diseases, against 11, 11, and 13 in the three preceding weeks; of these, six resulted from measles, three from diphtheria, two from "fever," one from scarlet fever, and one from diarrhœa. These 13 deaths were equal to an annual rate of 1·8 per 1000, the zymotic death-rates during the same period being 2·7 in London and 1 6 in Edinburgh. The fatal cases of measles, which had been three, three, and one in the three preceding weeks, rose again last week to six. The deaths referred to "fever," which had been three in each of the two preceding weeks, declined last week to two. The three fatal cases of scarlet fever exceeded the number recorded in any recent week. The 216 deaths in Dublin last week included 32 of children under one year of age and 75 of persons aged upwards of 60 years; the deaths of infants showed a slight decline from the number in the preceding week, while those of elderly persons were considerably in excess. Five inquest cases and three deaths from violence were registered; and 81, or three-eighths, of the deaths occurred in public institutions. The causes of eight, or nearly 4 per cent., of the deaths in Dublin last week were not certified.

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### VITAL STATISTICS OF LONDON DURING FEBRUARY, 1902.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in each of the cities and boroughs in the county of London. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 11·4 per 1000 of the population, estimated at 4,579,107 persons in the middle of the year. In the three preceding months the rates had been 11·6, 10·6, and 11 4 per 1000 respectively. The rates were considerably below the average in Kensington, Fulham, Chelsea, and Hampstead, while they showed the largest excess in Finsbury, Shoreditch, Bethnal Green, Stepney, and Poplar. During the four weeks ending March 1st the number of small-pox cases notified showed a further increase over the numbers in recent months; the greatest proportional prevalence of this disease was recorded in Holborn, Finsbury, Shoreditch, Bethnal Green, Stepney, and Poplar. The number of small-pox patients under treatment in the Metropolitan Asylums hospitals, which had been 427, 666, and 1135 at the end of the three preceding months, had further risen to 1309 at the end of February; the weekly admissions averaged 390, against 110, 173, and 297 in the three preceding months. The prevalence of scarlet fever during February showed a considerable decline from that recorded in the preceding month; among the various metropolitan boroughs this disease was proportionally most prevalent in St. Pancras, Finsbury, Poplar, Battersea, Camberwell, and Lewisham. The Metropolitan Asylums hospitals contained 2250 scarlet fever patients at the end of the month, against 3186, 3080, and 2501 at the end of the three preceding months; the weekly admissions averaged 234, against 352, 297, and 266 in the three preceding months. A continued decline in the prevalence of diphtheria also was shown during February; this disease was proportionally most prevalent in St. Pancras, Islington, Stoke Newington, Hackney, Camberwell, and Lewisham. There were 1156 diphtheria patients under treatment in the Metropolitan Asylums hospitals at the end of last month, against 1504, 1369, and 1231 at the end of the three preceding months; the weekly admissions averaged 154, against 200, 160, and 167 in the three preceding months. The prevalence of enteric fever showed a slight increase during February; among the various metropolitan boroughs "fever" was proportionally most prevalent in Paddington, Hampstead, Holborn, Southwark, and Bermondsey. The number of enteric fever patients under treatment in the Metropolitan Asylums hospitals, which had been 245, 195, and 128 at the end of the three preceding months, had risen again to 143 at the end of February; the weekly admissions averaged 22, against 32, 21 and 18, in the three preceding months. Erysipelas was proportionally most prevalent in Hackney, Bethnal Green, Southwark, Bermondsey, and Greenwich. The 23 cases of puerperal fever notified during the month included five in Wandsworth, three in Camberwell, two in Paddington, two in St. Pancras, and two in Deptford.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various metropolitan boroughs, the deaths occuring in the public institutions of London having been distributed among the boroughs in which the deceased persons had previously resided. During the four weeks ending March 1st the deaths of 9105 persons belonging to London were registered, equal to an annual rate of 25 9 per 1000, against 20·0, 18·8, and 18·3 per 1000 in the three preceding months. The lowest death-rates last month in the various metropolitan boroughs were 19·1 in Hampstead, 20·0 in Deptford, 20·4 in Wandsworth, 21·0 in Lewisham, and 21 8 in Battersea; the highest rates were 30·3 in St. Marylebone, 30 6 in Shoreditch, 31·3 in Bethnal Green, 33·6 in Holborn, and 34·6 in Finsbury and in the City of London. The 9015 deaths from all causes included 257 from small-pox, 229 from measles, 49 from scarlet fever, 128 from diphtheria, 154 from whooping-cough, 45 from enteric fever, one from simple continued fever, and 34 from diarrhœa; in all, 897 deaths were referred to these principal zymotic diseases. The lowest death-rates last month from these diseases were 1·1 in Battersea and in Camberwell, 1·2 in Chelsea, 1·4 in Bermondsey, and 1·5 in Deptford and in the City of London; and the highest rates were 4 3 in Paddington, 4 6 in Bethnal Green, 4·9 in Finsbury, 5·3 in Stepney, and 7·2 in Shoreditch. The 257 fatal cases of small-pox showed a further considerable increase over the numbers recorded in recent months; the greatest proportional mortality from this disease occurred in Holborn, Finsbury, Shoreditch, Bethnal Green, Stepney, and Poplar. The 229 deaths from measles were 40 in excess of the average number in the corresponding periods of the 10 preceding years; among the various metropolitan boroughs this disease was proportionally most fatal in Paddington, Kensington, Hammersmith, Fulham, St. Marylebone, and Finsbury. The 49 fatal cases of scarlet fever showed a slight decline from the corrected average number; this disease was proportionally most fatal in Hampstead, St. Pancras, Bethnal Green, Camberwell, Deptford, and Lewisham. The 128 deaths from diphtheria were considerably below the average number in the corresponding periods of the 10 preceding years; among the various metropolitan boroughs the greatest proportional mortality from this disease occurred in Fulham, St. Pancras, Islington, Finsbury, Shoreditch, and Lewisham. The 154 fatal cases of whooping-cough showed a decline of 78 from the corrected average number; this disease was proportionally most fatal in Stoke Newington, Shoreditch, Bethnal Green, Stepney, Lewisham, and Woolwich. The 46 deaths referred to "fever" were four in excess of the average number in the corresponding periods of the 10 preceding years; the highest "fever" death-rates last month were recorded in the City of Westminster, Hackney, Shoreditch, Bethnal Green, and Poplar. The 34 fatal cases of diarrhœa were 21 below the corrected average number; this disease was proportionally most fatal in Holborn, Shoreditch, Stepney, Poplar, and Greenwich. In conclusion, it may be stated that the aggregate mortality in London last month from these diseases was nearly 22 per cent. above the average.

Infant mortality in London during February, measured by the proportion of deaths among children under one year of age to registered births, was equal to 144 per 1000. The lowest rates of infant mortality were recorded in St. Marylebone, Stoke Newington, Hackney, the City of London, Southwark and Deptford; and the highest rates in Chelsea, St. Pancras, Finsbury, Poplar, Bermondsey, and Greenwich

# Correspondence.

"Audi alteram partem."

## THE SUBJUGATION OF SMALL-POX: NOTIFICATION.

*To the Editors of* THE LANCET.

SIRS,—The small-pox question, as discussed by you in your leading article in THE LANCET of March 8th, p. 678, carries my mind a long way back in my own experience. In 1863, very shortly after my appointment to be medical officer of Glasgow, we were confronted with a rising epidemic of small-pox which had to be met by means largely extemporised and by a preventive staff—not to speak of a very inchoate state of the local and general sanitary acts—very inferior to those now in operation. Nevertheless, by diligent and specially organised house-to-house vaccination and revaccination (taking this, for the nonce, altogether out of the hands of the Poor-law authorities); by public disinfection (then freely carried out at the public expense for the first time); by segregation of the sick and careful watching (as far as was possible to us) of suspects; we had the satisfaction, not only of keeping down and ultimately extinguishing this particular epidemic, but of laying the foundations of a preventive organisation which, improved by experience, succeeded in keeping Glasgow for a good many years absolutely free from small-pox. It was apparent to us at that time, and was confirmed later by Dr. J. B. Russell, that the most dangerous cases from the sanitarian's point of view were not the severe but the mild cases, and particularly those in which the diagnosis was obscure and in which, after a brief premonitory fever and a few insignificant-looking spots, all the symptoms subsided, so that the patient was able to go about his ordinary occupation and perhaps never came to know what was the disease he had at all. I remember a case of this kind among what may be called the better ranks (socially speaking) which occurred after I had ceased to be medical officer of the city but which was carefully traced out in detail by my successor, Dr. Russell. A gentleman connected with one of the most flourishing shops in the most *shoppy* street in Glasgow (Buchanan-street) came home from Paris with what was supposed to be a feverish cold. He sent for his private medical adviser, who arrived, prescribed, and left him under the impression above-mentioned, and did not (as I was informed) visit him again. Next day a few insignificant acne-like spots had appeared on the face, but all discomfort was gone and the patient regarded himself as quite well, *taking no precautions whatever.* To this single case, moving in the best society, I was credibly informed that from 12 to 20 cases subsequently were actually traced in different quarters; and in all probability those so traced were only a fraction of the whole. Now it must be admitted that although "notification" was in those days unknown, or at all events not practised, it might very well have been that an isolated case like that of Mr. B might have escaped notification without much blame to anyone. But this, and other incidents which I have always had in mind since, have pressed home with me the conclusion that I have endeavoured (hitherto, I fear, unsuccessfully) to ventilate in your columns; that in "notification" it is a mistake to stipulate for the *name* of the disease as the essential fact to be notified, and that the mere suspicion or reasonable presumption of an infectious disease, however arising, ought to be accepted as a valid notification in law and should be invited, if not compelled, not only from the medical man in attendance but from all who are interested or implicated in the case, as a basis for fuller investigation. Suppose that the medical attendant of Mr. B had paid him just one more visit it is very probable that, if not well versed in small-pox, he might still have had a doubt as to the disease; but he could hardly have seen even the few traces of an exanthem without suspecting *something* infectious, and that something, I would say, he should be held bound to communicate *at once,* leaving the completion of the diagnosis. Perhaps it might have been chicken-pox? What then? Because chicken-pox has not been enumerated (wrongly, in my opinion) in the Notification Act, is it expedient that all the ambiguous cases which occur should wait for complete verification before being notified as small-pox? I am glad to read in your leader that the authorities in London have come to a different conclusion upon this point, and I hope that before they are done they will see the expediency of bringing about some further reforms in the Notification Act in accordance with the views that I have submitted.

I am, Sirs, yours faithfully,
Edinburgh, March 8th, 1902. W. T. GAIRDNER.

## THE HOUSING OF THE POOR.

*To the Editors of* THE LANCET.

SIRS,—The valuable work which has been done during the past 20 years by the Mansion House Council on the Dwellings of the Poor is not too well known. By voluntary effort it has successfully grappled with the most pressing need of our time—the housing of the poor. It has received the approval of the most earnest and practical of the men and women of the day, and it has won the confidence of the poor themselves. The numerous urgent letters constantly received by the Mansion House Council demonstrate the necessity of its continued existence.

I have to ask the public for funds in order that this useful work may be efficiently maintained. The help solicited is pressingly needed and I trust may be heartily and generously rendered. To those who have not hitherto contributed to the movement, it may be well to say that the health and well-being of the very poor and the increased comfort and improved sanitary condition of the dwellings of the wage-earning class are some of the many benefits which have resulted from the Council's labours.

Contributions may be sent to me here or to Messrs. Prescott, Dimsdale, and Co., the bankers of the society, 50, Cornhill, and will be duly acknowledged.

I am, Sirs, yours faithfully,
JOSEPH C. DIMSDALE,
Lord Mayor.
The Mansion House, London, E.C., March 10th, 1902.

P.S.—A report of the Council will be forwarded to anyone interested in the subject upon application to the honorary secretary (Mr. John Hamer, J.P.), 31, Imperial-buildings, Ludgate-circus, E.C.

## THE PSYCHIATRIC CLINIC.

*To the Editors of* THE LANCET.

SIRS,—It is reassuring to note that the position assumed, in THE LANCET of March 1st, p. 622, by your Scottish correspondent in reference to the proposed psychiatric clinic in Edinburgh is not in accordance with your deliberate finding on this important question in THE LANCET of Feb. 1st, p. 318. The question clearly does not affect Edinburgh alone, but must sooner or later be discussed in the various general hospitals of the country where there is scope for the treatment and teaching of psychological medicine. It is impossible within the limits of a brief letter to place the facts before your readers with all relevant details. Broadly, this country is not abreast of continental practice; an important class of patients is not reached; a field of medical observation and research is untilled; a definite benefit is withheld from the country at large so long as these proposals are neglected. It is not a new question. When the Edinburgh Royal Infirmary was being built Sir Arthur Mitchell appealed for the institution of a special department for mental disorders; 30 years ago Sir John Sibbald urged that such a course was desirable; and from time to time others have not been unmindful to plead for the poorer class of mental patients on the lines indicated.

I traverse the observations and conclusions of your correspondent from first to last, and regret that at this time of day they should have found a place in the authoritative columns of THE LANCET. The meeting of the Medico-Chirurgical Society was widely representative, and the resolution of approval proposed by Sir John Batty Tuke was adopted *nem. con.* Indeed, there were no objections raised in discussion except on questions of finance, which, of course, must be dealt with after the principle is adopted. While financial considerations are of importance to the managers of the infirmary and to the promoters, and constitute difficulties to be surmounted, the purport of the medical

# THE SERVICES.

### ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeons: J. Crowley to the *Bulwark;* R. E. Biddulph to the *Hibernia*, and W. G. K. Barnes to the *Duke of Wellington*. Staff Surgeons: R. F. Bowie to the *Gibraltar;* E. St. M. Nepean to the *Empress of India;* W. G. Stott to the *Melampus;* R. Hickson to the *Prince George;* J. Andrews to the *Monarch* for Ascension Hospital; J. McC. Martin, D.S O., to the *Cambridge;* E. H. Meaden to the *Amphitrite;* and P. V. Jackson to the *Charybdis*, additional. Surgeons: W. E. Marshall to the Haulbowline Hospital; T. B. Shaw, lent to Portsmouth Division R.M.L.I.; A. C. Renwick to the *Bulwark;* H. L. Penny to the *Benbow;* L. S. Whitwam to the *Dwarf;* A. A. J. McNabb to the *Collingwood*· L. E. Dartnell to Hong-Kong Hospital; A. T. Wysard to the *Ganges;* C. L. W. Bunton to the *Forte*, when recommissioning; F. D. Lumley to the *Amphitrite;* J. Whelan to the *Partridge;* and S. Conner to the *Empress of India*.

### IMPERIAL YEOMANRY (IN SOUTH AFRICA).

John Henderson Wright to be Medical Officer, with the temporary rank of Captain. Dated Jan. 14th, 1902.

Arthur Ricketts, C.M.G, to be Medical Officer, with the temporary rank of Captain Dated Feb. 4th, 1902.

T. J. S. Suffield to be Medical Officer, with the temporary rank of Captain. Dated Jan 20th, 1902.

John Edward Williams to be Medical Officer, with the temporary rank of Captain. Dated Feb 3rd, 1902

### ROYAL ARMY MEDICAL CORPS.

Major D. R. Hamilton proceeds to Colchester for temporary duty. Lieutenant-Colonel E. L. Maunsell is appointed to the charge of the Station Hospital at Fyzabad. Lieutenant-Colonel P. J. Dempsey takes over charge of the Station Hospital, Portsmouth.

### INDIA AND THE INDIAN MEDICAL SERVICES.

The King has approved of the following promotions among officers of the Indian Staff Corps:—To be Lieutenants (dated Jan. 29th, 1902): Alfred Ernest John Lister, Thomas Samuel Beauchamp Williams, Samuel Herbert Lee Abbott, Alexander William Greig, Richard Ernest Lloyd, John Edmund Clements, Hugh Barkley Steen, Ernest Bisset, Richard James Bradley, James Woods, Alexander William Overbeck-Wright, David Munro, Ernest Archibald Loch, Thomas William Harley, William John McCoy, Roger Lionel Hagger, Robert Markham Carter, Roger Durrant Willcocks, Thomas George Ferguson Paterson, Dodington George Richard Shurton Baker, Jaspar Robert Joly Tyrrell, [illegible] Ganpat Rai, Robert Macpherson Barron, William Reith Scroggie, Lewis Patrick Farrell.

The King has also approved of the retirement from the service of the undermentioned officers:—Madras Establishment: Lieutenant-Colonel Arthur Theophilus Lodge Patch, dated June 19th, 1901. Lieutenant-Colonel Jamshedji Kharshedji Kanga, dated Dec. 14th, 1901. Bengal Establishment: The retirement of Lieutenant-Colonel E. Bovill has effect from Nov. 9th, 1901, and not as notified in the *London Gazette* of Jan. 17th, 1902.

### IMPERIAL YEOMANRY.

The under-mentioned officers resign their commissions and receive new commissions subject to the provisions of the Militia and Yeomanry Act, 1901, each retaining his present rank and seniority:—

Derbyshire: Surgeon-Lieutenant R. M. Wilson.

Suffolk (The Duke of York's own Loyal Suffolk Hussars): Surgeon-Lieutenant-Colonel A. Cooper.

Bedfordshire: Henry Skelding to be Surgeon-Lieutenant.

Royal East Kent (The Duke of Cannaught's Own): Robert Leishman Moorhead to be Surgeon-Lieutenant.

Shropshire: Surgeon-Major J. D. Lloyd to be Surgeon-Lieutenant-Colonel.

### VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers):—9th Lancashire: John Holt Marsh to be Surgeon-Lieutenant.—1st North Riding of Yorkshire: Surgeon-Lieutenant P. B. G. Considine resigns his commission.

Submarine Miners (the Tees Division).—Surgeon-Captain J. W. Edwards resigns his commission.

*Rifle:* 4th (Nottinghamshire) Volunteer Battalion, the Sherwood Foresters (Derbyshire Regiment): Brigade-Surgeon-Lieutenant-Colonel F. H. Appleby is seconded whilst holding the appointment of Senior Medical Officer to the Sherwood Foresters Voluntary Infantry Brigade. 1st (Ross Highland) Volunteer Battalion, Seaforth Highlanders (Ross-shire Buffs, the Duke of Albany's): The under-mentioned officer resigns his commission: Surgeon-Lieutenant D. Lamond, dated 12th March, 1902

### ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

The Woolwich Companies: Major F. L. Stephenson to be Lieutenant-Colonel, and to command under paragraph 55A Volunteer Regulations.

### SOUTH AFRICAN WAR NOTES.

Colonel Townsend, R A.M.C., is reported dangerously wounded in the shoulder at Klip Drift on March 7th but doing well March 10th.

Lieutenant J. Clarke, R A.M.C., and Civil Surgeon Stephen are on passage home in the s.s. *Ulstermore* which left Cape Town on March 1st. Lieutenant W. C. Stevenson, R.A.M.C., and Civil Surgeon Stoney are on passage home in the s.s. *Guelph* which left Cape Town on the same date.

### DEATHS IN THE SERVICES.

Surgeon-Major Francis Turnbull, I.M.S. (retired), aged 82 years, at his residence in London.

Lieutenant-Colonel Arthur Robert Wyatt Sedgefield, I.M.S., on March 8th, at Sanawar, Punjab, India, aged 47 years. He was appointed surgeon in 1880 and was promoted lieutenant-colonel in 1900

Fleet-Surgeon Ernest Elliott (retired) on Feb. 27th, at Southsea, aged 84 years. He was appointed surgeon in the navy in 1841.

Brigade-Surgeon-Lieutenant-Colonel Edward Ambrose Fitz-Gerald, late I.M.S. (retired), aged 67 years, on March 9th, in London.

Percy Reginald Fort, M.R.C.S. Eng., L.R.C.P. Lond., Civil Surgeon to the South African Field Force, who died at Standerton on Feb. 10th from an attack of enteric fever, was born in 1874 and was educated at the Merchant Taylor's School, London, and at St. Mary's Hospital Medical School. After qualifying in 1900 he was appointed a medical officer at the York Dispensary, but resigned that post in order to take service in connexion with the war. He sailed for South Africa in July, 1901, doing duty on the hospital ship *Simla* and made two voyages in the same vessel. He was then appointed to the medical charge of the 8th Mounted Infantry in Colonel Rawlinson's column and it was while so employed that he contracted the fever from which he died.

### SCARLET FEVER ON H.M.S. "IMPREGNABLE."

The scarlet fever epidemic on the training ship *Impregnable* at Devonport not having diminished it has been decided to transfer the boys and crew to the *Inconstant*, overflow ship attached to the naval depôt, in order to allow the thorough disinfecting of the *Impregnable*.

A display of Military and Musical Drill by selected companies of the Church Lads Brigade will take place at the Guildhall on Tuesday, April 15th, at 8 P.M., when the Duke of Fife will preside.

**PRESENTATION TO A TEACHER OF DEAF-MUTES.**—An interesting meeting of adult deaf-mutes of both sexes and their sympathisers was held on Sunday afternoon, March 9th, in the New Synagogue, Great St. Helen's, Bishopsgate, E.C, for the purpose of presenting to the deaf-mutes' former teacher, Dr. S. Schöntheil, an embossed silver bowl as a testimonial to his important services in improving the methods of teaching the deaf and dumb and promoting the efficiency of their teachers. Dr. S. Schöntheil was for 22 years headmaster of the Jews' Deaf and Dumb Home, formerly at Notting Hill but now at Wandsworth Common, and since his resignation in 1893 has been devoting himself to the education (primary and secondary) of deaf and dumb children of the upper and middle classes.

were evidences of vesiculation and umbilication. We decided that the case was probably small-pox and the patient was therefore isolated in hospital and the remainder of the family were vaccinated. During his stay in the hospital he completed an undoubted, though mild, case of true small-pox. The correctness of the diagnosis was further clinched by the fact that two attempts at vaccination were made when the skin had practically regained its normal condition, and both had failed. The closest possible inquiry failed to reveal any local cause of infection, and, indeed, no case of small-pox had occurred in this neighbourhood for about a year previously to this, nor has any case arisen up to the present time since then. I made inquiries at the patient's workplace and through the courtesy of the managing director saw the process in which he was engaged. I was also kindly furnished with the address of the place from which the cotton was imported and on writing to the State health officer of that locality I received the following reply :—

> Quarantine Department, Austin, Texas.
>
> DEAR SIR,—Yours of the 15th instant received. Small-pox is quite prevalent on the cotton plantations, not only of Texas, but of all the southern States It is of such a mild form as a rule as to not require medical attention, and in many cases the victim will pursue his ordinary work in the cotton-field throughout the attack. That the cotton is thereby infected cannot be doubted, as the workmen of several cotton-gins have been infected through the cotton. Wherever the health authorities become aware of the infection of cotton it is either disinfected or destroyed. But you will readily see by the preceding that there will be many instances of infection that will not come to their knowledge. If it will not appear presumptuous I will make the suggestion that your factory operators should all be thoroughly vaccinated. Very truly,
>
> (Signed) A. F. BLUNT, M.D.,
> State Health Officer of Texas.

The last remark of Dr Blunt is worthy of recommendation to any medical officer of health whose energy is likely to prove equal to the demand.

I am, Sirs, yours faithfully,
MEREDITH YOUNG,
Medical Officer of Health of the County Borough of Stockport.
Stockport, March 5th, 1902.

## CARDIAC PAIN.

*To the Editors of* THE LANCET.

SIRS,—In the report in THE LANCET of March 1st (p. 592) of the discussion upon Dr E. Markham Skerritt's paper upon cardiac pain read before the Medical Society of London more than one speaker is mentioned as having referred to the occurrence of pain in aortic regurgitation, but apparently it was not suggested that the most important lesion in these cases is probably the same as in those in which there is no valvular disease. The aorta immediately above the aortic valve is diseased in the majority of fatal cases of aortic regurgitation occurring in the later half of life, the orifices of the coronary arteries are often obstructed, and as a consequence of this obstruction there is fibrosis of the cardiac muscle It is probable that the disease of the heart-wall rather than the valvular lesion is mainly responsible for the attacks of cardiac pain. As Dr. H. D. Rolleston remarked, in cases of aortic stenosis due to calcareous diseases of the aortic valve the aorta is generally healthy, yet fibrosis of the cardiac muscle may also exist in these cases, and when pain is associated with aortic stenosis fibroid degeneration of the myocardium is probably present. The general opinion of the meeting appears to have been that severe cardiac pain is not common. This is doubtless true, but the nature of the milder cases is probably very similar to that of the more severe In cases of cardiac pain associated with anæmia, and not uncommonly in those cases which may be attributed to the referred pains of dyspepsia, the various situations in which pain is felt are the same as those of angina pectoris, even to its extension to one or both arms. There are also the same localised areas of tenderness, and an interesting feature which I do not remember to have seen mentioned is the occasional presence of slight pain in swallowing referred to the region of the lower third of the œsophagus, no doubt where it passes behind the pericardium. In anæmia we know there is temporary weakness of the cardiac muscle, and it is possible that in dyspepsia also much of the pain considered to be referred pain may indicate disturbance of the heart-muscle, not by reflex irritation, but as a consequence of poisoning by abnormal products of digestion. Why the pain should only occur in some people and in them be generally spasmodic is a wider question. It has been my intention here merely to suggest that in all cases of cardiac pain, whether slight or severe, there is either permanent lesion or temporary disturbance of the cardiac muscle.

I am, Sirs, yours faithfully,
THEODORE FISHER.
March 4th, 1902.

## SMALL-POX AND VACCINATION.

*To the Editors of* THE LANCET.

SIRS,—In a recent issue you print, under the above heading, a letter from a correspondent suggesting that the Government should supply lymph to vaccinators. It will interest him to know that the New Zealand Government, through the Health Department, supplies medical men free not only with vaccine but with the various serums and antitoxins. Our Government also undertakes free bacteriological examinations of tissues, &c., and reports on the same to the sender. I am, Sirs, yours faithfully,

F. W. GALE, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A.
Kaikoura, New Zealand, Jan. 20th, 1902.

## THE DIPLOMA OF THE SPECTACLE-MAKERS' COMPANY.

*To the Editors of* THE LANCET.

SIRS,—It has been brought to my notice, as Master of the Spectacle-Makers' Company, that reports are circulated to the effect that candidates for the diploma of this Company are examined in sight-testing and that the diploma certifies that the holder is competent, by virtue of such examination, specially to undertake cases of refraction. I therefore wish to state most emphatically that the examination does not include sight-testing, but deals generally with theoretical and applied optics, spectacle-making and frame-fitting, heat and elementary mathematics, and so ensures that the holder has an intelligent knowledge of his trade.

Any holder of the diploma of the Spectacle-Makers' Company may carry on the general business of an optician in the ordinary way ; but in reference to spectacle-fitting particularly he is bound by certain restrictions, as you may see by the inclosed copy of the declaration which he signs. Thanking you in anticipation of your publishing this statement, I am, Sirs, yours faithfully,

W. HART DYKE,
Master of the Spectacle-Makers' Company.
Temple-avenue, E.C.

## SOCIETY OF LICENTIATES AND MEMBERS OF THE LONDON ROYAL COLLEGES.

*To the Editors of* THE LANCET.

SIRS,—I should esteem it a favour if you would allow me to make known through the columns of THE LANCET that the secretaries of the above society have this week posted to every L.R.C.P., M.R C.S. who has not already a degree in medicine a copy of the petition to the Royal Colleges asking the Royal Colleges to consider the disabilities of their petitioners. The secretaries would be glad to receive signatures as soon as possible that the presentation may be proceeded with. As it is very important that the petition should be as numerously and as influentially signed as possible we hope that all Licentiates and Members will sign quite irrespective of whether they belong to the society or not. I am, Sirs, yours faithfully,

FREDERICK J. SMITH,
President and Treasurer of the Society.
Harley-street, W.

*To the Editors of* THE LANCET.

SIRS,—May I venture to ask what is the position of an L.R C P. Lond. with regard to the objects aimed at by the Society of Licentiates and Members of the London Royal Colleges? Is it necessary in order to become a member of the society to be the possessor of the conjoint diploma, and is he who holds merely the diploma of L.R.C.P. Lond., to be precluded from enjoying the benefits of the reforms which the society has been established to secure—if possible? The Royal College of Physicians of London used regularly to advertise that its diploma was a qualification in surgery as well as in medicine and midwifery, in fact, a *lete* qualification, and this claim, I fancy, has bee l by the College meeting was to debate the propositions from the medical point of view The result was entirely satisfactory to those of us who have long been convinced and importunate for the scheme If it were in the mind of anyone at the meeting to propose that general physicians should be appointed, to the exclusion of specialists, in attendance on cases of incipient and transitory cases of mental derangement, why did he not speak out? For myself I would not have act or part in the matter if the department of medicine to which I have given my life were to be passed over in that contemptuous fashion The suggestion is an evil echo of the bad old days You will remember that the proposals of the London County Council for the establishment of a psychiatric hospital were wrecked on this rock of offence, and right gladly and willingly I stood in with the wreckers What is known of insanity (the various physical diseases issuing in mental disorder) is the outcome of specialist work and our proposals to enlarge that work rest upon our claims as physicians and on no other ground

Will you persuade us that ophthalmic operations are to be *handed over to the general surgeon*? *Or will you offer us* appointments in gynæcological spheres of interest? The proposition is absurd It has ever been a stumbling-block to the British public that a man may do more than one thing well Herein, indeed, lies a vulgar error So, there was much wisdom shown by a well known surgeon when he issued his powerful etchings with the Horatian quotation —

> 'O laborum
> Dulce lenimen '

Thus, the asylum physician is obscured in his palatial environment even to his fellows, who should really know better.

Too much is made of the asylum "stigma" As years pass these institutions are becoming recognised as true hospitals, and it is commonly admitted that hundreds are being sent to them who formerly would never have passed their doors I will not labour that point The same "stigma" *attaches to tuberculosis or cancer*

Any innovation is received with diffidence It must often win its way through contempt and objurgations, but if it is founded on justice and common sense it will in the end be generally accepted This proposal *is* founded on justice If a man be rich enough to command the services of a consultant in mental disorders he is in no difficulty If he be poor that door is not open to him Your correspondent writes in ignorance of what has been done at St. Thomas's Hospital by the establishment of an out patient department in psychiatry years ago It is a success, still more valuable would be an in patient ward It has been a success, and we press for the logical development

I shall pass over the establishment of psychiatric clinics at all the German universities and briefly refer to what has been done at Copenhagen, where the circumstances are nearly similar to those of Edinburgh Many years ago when the Hospital Commune was rebuilt, two pavilions were erected for the reception of mental and neurological patients, and these pavilions were placed under the care of Professor Pontoppidan There, again, the results have been eminently satisfactory Many cases never proceed to the asylums of Denmark, the study and investigation of mental maladies have been notably advanced, and the students of the University see cases which would otherwise have escaped their notice Or, to come nearer to Edinburgh, the Barony Parish of Glasgow established observation wards in their poorhouse under the care of a physician of experience in asylum life with the result that a separate institution is now to be built Glasgow does not advance on theoretical considerations only, the practical results of tentative experiments appeal to that business community, and the Barony wards are therefore being developed as a special hospital Will Edinburgh lag behind? I think not The traditions of its medical school are entirely favourable to progress and efficiency, to maintain a position in the front rank. We desire to see a psychiatric clinic established in the Royal Infirmary for the public benefit, for the advancement of science and for the whole hearted instruction of medical students To that end the physician and teacher must be a man who has devoted himself to the study of these disorders, and no other He must be a man of proved ability in observation, research, and expression—in short, a specialist of eminence That is fundamental. The question of ways and means, although important is not a question of principle It falls to be considered with other primary details

In my relations with general practitioners especially those working in country districts, I stand appalled by the magnitude of their responsibilities Face to face with problems of life and mind, they emerge with credit hardly won and often slightly recognised The range of medical and surgical work is vast and daily more complicated in practical difficulties Perhaps to those of us who are engaged in specialised work this is more apparent Yet a specialist must ever be on guard against the limitations of his work and keep in touch with the great world of medicine Assuredly he will not reach success if these limitations overmaster him Here is a scheme which will knit psychiatry to general medicine where hitherto we have had to deplore loose ends On these grounds I ask you to continue your powerful support I am, Sirs, yours faithfully,

Perth, March 1st 1902 A R URQUHART

### *To the Editors of* THE LANCET

SIRS,—In the remarks on the special meeting of the Edinburgh Medico Chirurgical Society with reference to this matter the observation is made that if such a clinic is established it should be under the care of a "general physician" On this line of reasoning the eye wards should be under the care of a general surgeon The argument that if an alienist had charge the wards would be regarded as "mad wards" is, I think, erroneous At St Thomas's Hospital, where for several years past an out-patient department for mental diseases has been established, I believe that there is very little feeling amongst the patients that they are regarded as mad or *that others regard them as "mad" patients*; the recognition of mental disease as associated with other disease has, I believe, already grown and will continue to grow

In correspondence relating to the London reception houses recently proposed I note that the workhouse infirmaries claim that they already supply the want, but it must be borne in mind that a large proportion of the class of cases who would be saved from complete mental breakdown by a few days' treatment in a psychiatric clinic or reception-ward will not voluntarily go to the Poor law infirmary or to the asylum as boarders They and their friends often beg piteously to be admitted to the hospital, but this in the absence of a specially organised ward it is impossible to recommend

"Insanity is a preventable disease" and its prevention lies in getting those who are evolving it to come under skilled care in the incipient stage If an alienist is needed to treat the fully developed disease, as admitted to the asylums, still more is one required to detect and to treat it in its earliest, often most insidious, stages If a tenth part of the enormous outlay on palatial asylums were devoted to the prevention of mental disease, some of these grand institutions, at once the pride and shame of civilisation, might in a few years be eligible for other purposes

Alienist physicians have been frequently attacked for many years past as being unscientific, and during that time I have accumulated a large number of notes of cases which have ultimately come under my notice after treatment by the "scientific and even eminent physician" If I could submit them to you, Sirs, I believe that you would agree with me that at least in many instances, a grievous wrong had been inflicted by persons unskilled in mental disease undertaking its treatment I therefore demur to the psychiatric clinic being placed under a general physician

I am, Sirs yours faithfully,

March 10th 1902. HENRY RAYNER, M D Aberd

## SMALL-POX INFECTION BY MEANS OF RAW COTTON

### *To the Editors of* THE LANCET

SIRS—The following case illustrates I venture to think, an unusual method of infection in cases of small pox The patient, a young man aged about 23 years, worked in a large cotton spinning mill here, opening the bales and feeding them into a machine for the first stage in the spinning process He worked in a large room with only one other man On a certain date he began to feel ill—had headache, slight feverishness and marked backache, three days later a papular rash appeared and his medical attendant was called in For two days the medical attendant was uncertain as to the nature of the illness, and *then fearing the worst* asked me to see the case with him At that stage there was still some little doubt as to the precise nature of the ailment, but there

## MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

### *The Victoria University Question.*

THE graduates and the undergraduates of the Victoria University are giving utterance to their hopes and fears in the daily press. Some lament the triple split of the "triplets," while others think it the best thing that could happen. Some of the graduates fear the loss of value that may ensue to the degree of an extinct university, while the undergraduates do not feel sure that the Manchester degree will equal that of the Victoria University. There was a meeting of women undergraduates of the Owens College on Feb 21st at which the opposing views were very vigorously set forth. A proposition was moved—"That this meeting supports the action of the court of Owens College with reference to the university question." That is of course in favour of the happy despatch. An amendment was then moved as follows: "That we regret the action of University College, Liverpool, and would regret the dissolution of the Victoria University." This was carried by 46 votes to 29, and was also passed as the substantive motion. The lady who moved the original proposition then expressed a wish that her motion should also be voted on, and the (lady) chairman allowed this, with the result that it also was carried by 34 votes to 26. This somewhat amusing result shows that though no doubt these ladies are all admirably adapted for "home rule," it is not clear that they are equally well able or willing to submit to the rules and trammels of public meetings. As a sequel to this meeting one of the ladies wrote to the press "to explain that the contradictory conclusion apparently arrived at was due to the fact that the chairman persisted in putting the original motion to the meeting after the amendment had been carried as a substantive resolution, in consequence of which many refrained from voting." This was followed by a rejoinder from the "chairman," stating that the terms of the resolution and amendment were such that there was nothing inconsistent in voting for both.

### *The Cheadle Lunatic Asylum.*

The Cheadle Asylum is a branch of the Manchester Infirmary and at the last annual meeting of the trustees its condition came under review. In 1881 there were in the asylum 186 patients and an indoor staff of 112. There are now 358 patients and an indoor staff of 212. Great improvements have been made during the past year in the main buildings and their surroundings with the very proper view of making them as attractive as possible. A new block is in course of construction at a cost of £20,000, to contain 70 persons, which is sure to be filled as soon as opened. The statistics given in the report would seem to show that drink and mental worry were the two chief causes bringing patients to the asylum. A large proportion are classed under the heads of "ladies" and "gentlemen"—i.e., persons of no occupation—and the chairman observed: "This would almost justify one in coming to the conclusion that idleness was a fertile source of mental worry and drink." It is probable that the Cheadle Asylum is the largest private institution of its kind in this country. It was announced at the annual meeting of the trustees of the infirmary held on Feb. 14th that Dr. T. Harris and Dr. Judson S. Bury were appointed visiting physicians to the asylum for the ensuing year.

### *The late Dr. D. J. Leech.*

An interesting event took place in the Christie Library of Owens College on March 4th. On behalf of a number of subscribers Dr. J. Dreschfeld presented to the College a portrait of the late Dr. D J. Leech, Professor of Materia Medica and Therapeutics. He spoke of the services rendered by Dr. Leech to the college through a long course of years, of his scientific attainments, his professional qualities, and his private character, and said that he did much to make the college and the medical school what they are to-day. Mr. Alderman Thompson, speaking for the college, "accepted most thankfully the portrait of one whom they all respected, loved, and revered." He alluded to the time when the relations between the infirmary and the Owens College were a little strained, and said that at that difficult time Dr. Leech did much to avert the danger of rupture. Mr. Alfred Hopkinson, the Principal, expressed sincere thanks to the subscribers, who comprised professional men, patients of Dr. Leech, and former pupils, not only in the United Kingdom, but also in the colonies and America, for the action they had taken. The portrait, painted by Mr. T. Harcourt, is a very successful one although it had to be painted from the study of photographs.

### *Fatal Electric Shock.*

In view of the interest which is felt just now in the subject of fatal electric shocks it may be worth while to mention a case reported from Sheffield. A man who was an electrician's labourer went to the theatre with a companion, and in the lavatory, in a joke, got hold of an electric bracket with both hands when it gave way and he "received the full current of 200 volts. He shouted to his companion who pulled him down." "Doctors were called in," but he died in about 10 minutes. At the inquest, held on March 3rd, the opinion was expressed that "had he taken hold of the bracket with one hand he would only have received a shock, but as he had hold by two hands there was a complete circuit of the current through his body." If this report is accurate the case is in marked contrast—a charge of 200 volts being fatal—to one mentioned in Mr. Aspinall's paper in the last issue of THE LANCET, where a man received a 2000-volt shock from hand to hand and came round without assistance in about 25 minutes.

March 11th.

## WALES AND WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

### *Small-pox.*

THE district of Ystalyfera, where the first cases of small-pox in South Wales occurred at the beginning of the year, is now quite free from the disease. Six fresh cases have been reported in Swansea, one patient being the chief sanitary inspector. There have been three deaths in Swansea up to the present time. Isolated cases of the disease have also occurred during March in Merthyr, Bangor, and Ebbw Vale.

### *The Supply of Vaccine Lymph.*

The Swansea and the Pontypridd boards of guardians have decided to supply glycerinated calf lymph to their public vaccinators when the Local Government Board supply is insufficient, but the Bridgend board, in a more niggardly spirit has refused to provide any. It is a great pity that the Local Government Board was not more precise in the communication addressed to boards of guardians which stated that the Board would be prepared to sanction any reasonable expenditure incurred in the purchase of lymph required by public vaccinators.

### *Notification of Phthisis.*

The Local Government Board has suggested to the Llangyfelach Rural District Council that a scheme of voluntary notification of cases of phthisis should be adopted within the council's area in preference to adding the disease to those compulsorily notifiable under the Infectious Disease (Notification) Act, 1889.—The Oystermouth Urban District Council has decided to take steps to procure the notification of cases of phthisis occurring within its district.

### *The Sale of Food and Drugs Act at Bristol.*

During 1901 there were submitted to the analyst of the city of Bristol 732 samples of food, &c., a proportion of one sample to 449 persons in the city. Of the 259 samples of milk taken 18 were condemned, and 18 of the 377 samples of butter examined were found to be impure Convictions ensued in all these instances except one where a warranty was produced. There was no adulteration found in any articles examined except milk and butter. For the Departmental Committee on Food Preservatives 61 samples of food were taken in Bristol and 26, or 42 6 per cent., were found to contain preservatives.

### *Bristol Royal Hospital for Sick Children and Women.*

This excellent institution, which has accommodation for over 100 patients, is in a much better financial position than it was in a year ago. For several years the expenditure has exceeded the income by about £800 yearly, but a large bazaar organised by the Duchess of Beaufort in the summer of 1901 not only cleared off the accumulated debt of previous years, but left the managers with an adverse balance at the end of 1901 of only in the Law Courts But so far as I can see those in a similar position to my own are now to be left

OUT IN THE COLD.

## ACUTE SUFFOCATIVE PULMONARY ŒDEMA.

*To the Editors of* THE LANCET.

SIRS,—I think that the manner in which Dr. J. L Steven has presented his criticisms in THE LANCET of March 8th, p. 698, is somewhat unfair to Laennec and calls for a word in reply. He states that Laennec is dealing with a catarrh affecting the mucous membrane of the lungs, whereas he (Dr. Steven) is describing a pulmonary œdema. Now, making allowance for the state of pathology in Laennec's time, it may be remarked that when Laennec says the "lungs" he means the lungs and not the bronchial tubes, for he expressly states that the symptoms are due to a sudden inundation of the lungs with fluid. It is therefore beyond cavil that Laennec is describing an acute pulmonary œdema. Then when the points of difference which Dr. Steven describes as existing between the affection described by Laennec and that described by himself are closely examined it will be found that there is only one of these which can be fairly maintained, and that is, as to the duration of the symptoms. The two others—viz., that the expectoration in his cases (1) began at once and (2) was expelled with a hawk—though their great importance does not appeal to my mind—are, nevertheless, quite compatible with Laennec's statement. Laennec says· "*While* the suffocation lasts ...... the expectoration, *if any*, is altogether pituitous." The words "while" and "if any" warrant the inclusion of cases in which pituitous expectoration was present from the very beginning. As to the "hawking"—well, that depends very much on the patient Laennec says that there is little cough, and it is likely that he did not think it worth while to describe minutely the manner in which the fluid was expectorated, but he, at any rate, does not say that it was *not* hawked up. Dr. Steven also states that in one of his cases the suffocative symptoms and the expectoration ceased together, but in his second case there was catarrhal expectoration before the onset of the œdema which apparently continued right up to the patient's death. Therefore, as already said, the only point which holds is as to duration. But every disease differs in duration in different individuals; and will Dr. Steven or anyone else maintain that the duration of the symptoms in only two cases is enough to warrant the establishment of a totally different disease?

I am, Sirs, yours faithfully,

Henrietta-street, W., March 10th, 1902. A. G. AULD.

## BEEF WORM IN THE ORBITAL CAVITY.

*To the Editors of* THE LANCET.

SIRS,—I am much obliged to your correspondent Dr. George Ferdinands for calling my attention, in THE LANCET of Jan. 25th, p. 260, to a case of "beef worm in the orbital cavity" recorded by Dr. F. Keyt in the *British Medical Journal* of Feb 10th, 1900. Had I read Dr. Keyt's case I should obviously not have ventured the opinion that my own was unique There is not, however, anything "singular," as Dr. Ferdinands seems to imagine, in my not having read Dr. Keyt's notes on his case, as I do not take in the *British Medical Journal* and in this remote part of the world have no opportunity of seeing it. I am sorry that Dr Ferdinands's experience should lead him to express such pessimistic views in regard to the decadence of what he terms the "fairer courtesies which always existed between members of our profession", interesting as these views may be in themselves, however, I fail to see what bearing they have on the present case

I am, Sirs, yours faithfully,

THOMAS W. F. GANN.

Corozal, British Honduras, Feb 19th, 1902.

## THE DISSEMINATION OF KNOWLEDGE CONCERNING VACCINATION.

*To the Editors of* THE LANCET.

SIRS,—Dr. Herbert W. G. Macleod, in THE LANCET of March 1st, p. 618, suggests public lectures illustrated by lantern slides showing typical cases of small-pox as a means of educating people on the importance and the advantages of vaccination. Such lectures have already been given in various places with very good success. We have prepared for such purposes some excellent slides showing typical cases of confluent, hæmorrhagic, discrete, and modified small-pox. They have been shown in Essex and are considered excellent. They will also be shown in Glasgow at an early date. We shall be glad to supply them at any time they may be wanted for public lectures by a medical man.

We are, Sirs, yours faithfully,

REBMAN, LIMITED.

129, Shaftesbury-avenue, Cambridge-circus, London, W.C.,
March 4th, 1902.

## NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

*The Plague Epidemic and the Famine.—Disastrous Seasons and their Effects on Crime and Mortality.—A Leprosy Conference.—Victoria Memorials.—Mandalay condemned as a Military Station.*

THE mortality from plague throughout India fluctuates from week to week. Last week it rose to 15,165, and for the past seven days it has gone down to 12,695 The disease is increasing in Bombay city, Karachi, and Calcutta, but has declined in the districts of Bombay and the Punjab. The deaths recorded are Bombay city, 568; the Presidency, 3830; Karachi, 49; Madras Presidency, 514; Calcutta, 120; Bengal Presidency, 738; North-West Provinces, 1506; the Punjab, 4113; Mysore State, 611; Hyderabad State, 144; and Kashmir, 500. Fresh centres keep declaring themselves. At Bhusawal the disease is very virulent and three cases have occurred at Agra.

The famine is still increasing. The latest returns show 307,157 persons in receipt of relief, of which number the Bombay districts return 183,000.

From certain facts given in the report of the Bombay Presidency it would seem that bad seasons are responsible not only for distress but for much additional crime and mortality. For the year ending July 31st, 1901, cognisable offences increased by over 10,000, and dacoities and highway robberies were nearly doubled. The distress caused by the famine helped to make the mortality the most disastrous on record. While plague carried off only 33,000, cholera claimed 163,000 victims, diarrhœa and dysentery caused 218,000 deaths, and fevers 500,000 These adverse influences affected Bombay city, where for the year under notice the mortality was at the rate of 102·25 per 1000—the total deaths being 79,350. It will be remembered that the famine chiefly affected the Bombay Presidency.

*At a recent conference* of the *Mission to Lepers* at Wardha, Central Provinces, it was resolved that leprosy was and should be considered contagious. The meeting expressed itself strongly on the necessity of strict segregation of the sexes, both married and unmarried, and that no untainted child over three years should remain in a leper asylum with its diseased parents These resolutions are the result of wide experience, for the operations of the society extend over 48 centres. It has 27 asylums and 14 houses for untainted children.

The memorials to Queen Victoria in the different cities of India will be very varied. In Bombay they talk of having a school for the blind, in Bangalore a technical institute, and in Lahore a statue The Church party in Mandalay has managed to secure an English church, the erection of which, strange to relate, has been subscribed to by numerous sects and creeds In Calcutta there is to be a memorial hall built of marble and of large dimensions, with extensive ornamental grounds. At Colombo it is proposed to have a school for the blind

Mandalay is likely at last to be given up as a station for troops. One company of infantry has already been shifted to Maymyo The former place has been frequently reported upon for its unhealthiness. The drainage and the situation of Fort Dufferin are bad and an epidemic of ague of a severe type occurred there in 1900, rendering one regiment completely unfit for active service The cantonment is built practically within a marsh. The water-supply is liable to every possible contamination. The unhealthiness of Mandalay is not a thing of to day—it has been known for years.

Feb. 21st.

Trust by the Aberdeen University Court is of considerable length and is subdivided into seven sections. The sums suggested under this heading are exclusive of any existing endowment for the purpose named, but are inclusive of annual grants from the general grants of the University (about £940) and from public bodies (about £350). A considerable part of the grants from public bodies is likely to be withdrawn. Under Section II. (Science and Medicine), Section V. (Research and Travelling Scholarships and Fellowships), and Section VI. (Other Purposes) the following items are specified, together with their annual cost: chair in Public Health, £950 to £1000; lectureships in Astronomy, Physiological and Pathological Chemistry, Medical and Surgical Electricity, Embryology, Art and Architecture, £1200 to £1500; lectureships in Mental Diseases, Ophthalmology, and Tropical Medicine, £750; research and travelling scholarships and fellowships in science, medicine, and arts, from £1500 to £2000; library, capital sum of £2000; laboratory equipment, capital sum of £10,000; upkeep of library, from £800 to £1000; and upkeep of laboratories and museums, from £1500 to £2000 —Lord Strathcona and Mount Royal, Lord Rector of the University, is to receive the freedom of the city of Aberdeen on April 9th. On the following day the graduation ceremony falls to be held in the Mitchell Hall of Marischal College —A meeting of the Sites and Plans Committee was held on March 7th for the purpose of considering the report which the senatus had obtained as to the accommodation required by the different professors and lecturers in their various departments in the extended buildings at Marischal College. The provision desired for the physiology department consists of a large lecture-room and seven other rooms; for the department of medicine the requirements consist of a class-room, a museum and laboratory, a retiring room, and a dark room; for pathology a plea is put in for an animal room; and for materia medica an additional research room is desired, also the enlargement of the museum, an animal observation room, a curator's room, and a storeroom. The general requirements consist of an examination room and a considerable increase of library accommodation. The matter was ultimately referred to the architect and a sub-committee, to report to what extent and at what cost it is possible to provide the desired accommodation.

### *Aberdeen Dispensary.*

The annual meeting of the managers and subscribers of the Aberdeen Dispensary, Maternity Hospital, and Vaccine Institution, was held in the town hall on March 7th, Lord Provost Fleming presiding. The report showed that the total number of cases treated during the past year was 11,810.

March 11th.

## IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

### *The College of Science in Dublin.*

IN reply to the Member for South Belfast (Mr. W. Johnston, M.P.) the Chief Secretary said that it would be neither practicable nor desirable to remove the College of Science in Dublin to Belfast, the chief industrial centre in Ireland, as it was a national institution serving the needs of the whole country. The questions naturally arise, Why should scientific students in the north not have a college of science quite equal to that of Dublin, and why should the favours of the Crown in relation to the expenditure of public money be so largely confined to Dublin, a city with few industries and with a smaller population than Belfast, and in regard to the inhabitants of which Dr. W. K. Sullivan in his evidence before the Royal Commission on Technical Instruction, the report of which was issued in 1896, states, "The people of Dublin, who have been crying out for technical education lately, do not seem to know that they have had in their midst for the last 20 years one of the most complete polytechnic schools in Europe. If it has not done so much good as it might have done it is the fault of the people of Dublin." Under these circumstances the question is, Why should new buildings and an endowment of £8744 a year be given to Dublin and nothing to Belfast? But this is not all, for it appears that the museum in Dublin, handed over to the Agricultural and Technical Instruction Department by the Science and Art Department, South Kensington, with the College of Science, gets a yearly grant of £13,292, the Botanic Gardens receive an equal grant of £3842, while the Library receives £3732 a year. Dublin receives in connexion with the College of Science £29,680 per annum and Belfast, the great commercial centre of Ireland, not a penny. This great injustice to Ulster is felt to be a crying grievance and a campaign is being started so that the opportunities for higher scientific education shall not be confined to Dublin but shall be distributed in the provinces. What I say about Belfast applies equally to Cork. Why should those in search of higher scientific education in Cork be compelled to go to Dublin? The days of such absurd centralisation are surely now over. One of the Belfast newspapers asks "why it was that two eminent professors of the College of Science who offered to give evidence before the Royal Commission (on University Education) were not called," and hints that it was a desire to prevent disclosures about the causes of the backward condition of scientific and technical education in Ireland.

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March 11th

£67. In a city of the world-wide reputation for philanthropy possessed by Bristol there ought not to be any difficulty in securing a sufficient sum to meet the annual expenditure of £4600. The number of in-patients treated in 1901 was 608, or 23 fewer than in 1900, the reduction being due to the closing of the wards in the spring in consequence of outbreaks of scarlet fever and diphtheria. In the out-patient department 4414 patients were treated, an increase of nearly 200 over the number in the previous year. In the dental department 661 patients received treatment. There are in the hospital 34 cots either endowed or supported by special subscriptions.

### *The Workmen's Compensation Act.*

At the Cardiff County-court on March 7th, before his Honour Judge Owen, a claim for compensation was made by a widow against a firm of building contractors for the death of her husband, aged 65 years, a stonemason in their employ. The evidence showed that the deceased was at work on Sept 30th, 1901, when an electrically-driven crane collapsed and fell. He was so much frightened that although the nearest part of the crane to him at the time of the accident was 55 feet away he died from heart failure on Nov. 22nd. The facts were admitted, but it was contended that the applicant was not entitled to compensation for the results of an accident or shock from such an accident unless actual physical injury had been sustained. The judge held otherwise and awarded the widow £156.

March 11th.

## SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

### *Royal Edinburgh Asylum for the Insane.*

THE statutory annual meeting of the corporation of the Royal Edinburgh Hospital for the Insane was held on Feb. 24th in the city chambers. The report by the ordinary managers showed that the ordinary revenue for the year amounted to £58,279 and the ordinary expenditure to £53,876, leaving a gross surplus revenue of £4403 Deducting from this £1828, the annual instalment towards liquidating the debt on the West House, a free surplus remained of £2574 Of this surplus there were derived from Craig House £2653, less a loss on intermediate and pauper patients of over £79. The cost of maintenance per head of the patients in Craig House was £124 16*s.* 8*d.*; that of intermediate patients £42 14*s* 6½*d.*, and that of pauper patients £33 2*s.* 4*d.*, including share of instalment towards liquidation of debt. The managers see no prospect of their being able to make any abatement in the rates chargeable for the intermediate and pauper patients, so that those rates will remain at £42 for the intermediates and £33 for the paupers, including clothing for the latter. The managers renew their complaint with regard to the overcrowding occasioned by the large numbers of patients sent to the asylum by the Edinburgh parochial authorities. The report of Dr. T. S. Clouston, the physician superintendent, stated that at the beginning of the year the patients numbered 970, including six on probation, while at the end of the year there were 962 patients, also including six on probation. There had been 441 admissions during the year, 215 having been men and 226 women The total number of patients under treatment had therefore been 1411, the largest number on record. 63 men and 60 women had died during the year. The number of rate-paid patients sent was 356, six more than the average of the past five years. There had been great difficulty in accommodating the patients sent, and it was only done by refusing almost all applications at the lower rate of board—a hardship and injustice to which he had directed attention for many years Arrangements had been made to board other 30 patients in the Hartwood Asylum, which would give slight relief for a few months to the overcrowded wards, but it would not enable the asylum to admit the deserving poor of the private class. With regard to the causes of insanity he had to point out that alcoholic excess was the most frequent of all the contributory causes of mental disease. That cause existed in one quarter of the whole admissions. The mental causes which upset sanity and many of the bodily causes acted much more strongly in individuals of sensitive, high-strung, sympathetic temperament than on those of strong and tough disposition. There were no possessions for which an average man or woman should be so thankful as a good nervous heredity, an education in self-control, a fair self-assurance, and even a moderate thickhidedness. Between one-third and one-fourth of cases of insanity suffered from organic brain disease. One of the most terrible but medically most interesting of the organic brain diseases, general paralysis, had lately become more prevalent among city populations. Last year the asylum had to deal with 65 cases, or 69 per 1000 residents—a quite unprecedented number. The number of cases of general paralysis in the Royal Edinburgh Asylum was thrice that in the whole of the Scottish asylums. It was doubtful whether insanity in general was on the increase. The death-rate had been higher during the past year owing to the large number of general paralytics and of other cases of organic brain disease admitted. Dr. Clouston concluded by referring to the proposal to establish a mental ward in the Royal Infirmary. During the past two years over 80 patients had been discharged cured from Morningside within six weeks of admission. All those might be reckoned among the incipient cases for whose benefit such a ward was intended. If established on right lines and properly worked this scheme would be most philanthropic and useful. He considered that it would be a wise and economical proceeding on the part of the parish council to approach the Royal Infirmary managers and to arrange, if possible, to pay a yearly sum for all patients admitted to such a ward in the infirmary.

### *Honorary Degrees of the University of Edinburgh.*

The Senatus Academicus of Edinburgh University have resolved to confer the honorary degree of Doctor of Laws at the April graduation ceremonial on the following:—The Right Hon. Herbert Henry Asquith, K.C.; Professor John Cleland, M.D., L R C S. Edin., LL.D., D.Sc, F.R.S., University of Glasgow; Professor Samuel Dill, M.A., Queen's College, Belfast; Mr. Austin Dobson; Professor James Alfred Ewing, B Sc, M.A., LL D, F.R.S., M.I C.E., University of Cambridge; Mr. Arthur William Rücker, M.A., D.Sc., F.R.S., Principal of the University of London; Mr. J. G. Schurman, M.A, D.Sc., President of Cornell University, U.S.A.; and Sir John Batty Tuke, M.P., M.D., F.R.C.P. Edin, F.R.S. Edin., Hon. D Sc.

### *Annual Dinner of the Royal Medical Society of Edinburgh.*

This dinner was held on March 4th. The guest of the evening was Dr. Patrick Manson, C.M.G. The chair was occupied by the senior president, Dr. A. M. Wood, while the other three presidents (Dr. W. E. Carnegie-Dickson, Dr. G. S. Carmichael, and Dr. J. G. McBride) acted as croupiers. There was a good attendance of members and guests.

### *A Grievance of the Resident Medical Officers at the Edinburgh Royal Infirmary.*

For a long time past there has been great dissatisfaction among the resident medical officers of the Royal Infirmary, Edinburgh, owing to the refusal of the managers to give them free personal laundry. This at first sight may appear a small matter, but the residents claim that in an institution where no salaries are paid they should at least be maintained at the hospital expense. Inquiry has shown that free laundry is provided for residents holding similar appointments in other Scottish and English hospitals. So far as can be ascertained the Edinburgh Royal Infirmary is the only large general hospital in the United Kingdom where such a privilege is not granted or an allowance made in lieu thereof. The managers have been petitioned repeatedly by the residents on this question but the request has always been refused. Considering that the managers have recently erected a new and very commodious laundry, and seeing that the extra expense would be trifling, the residents evidently feel deeply aggrieved that the re-statement of their grievance does not seem to be taken seriously by the board

### *Complete Excision of the Stomach for Cancer.*

The operation of excision of the whole stomach was performed by Mr. R. H. Parry at the Victoria Hospital, Glasgow, on Feb. 14th The case was one of extensive malignant disease and the patient has so far made a good recovery. It is believed to be the first time that the operation has been performed successfully in Scotland.

### *Aberdeen University.*

The summary of the needs of Aberdeen University as noted in the report to the executive committee of the Carnegie

Trust by the Aberdeen University Court is of considerable length and is subdivided into seven sections. The sums suggested under this heading are exclusive of any existing endowment for the purpose named, but are inclusive of annual grants from the general grants of the University (about £940) and from public bodies (about £350). A considerable part of the grants from public bodies is likely to be withdrawn. Under Section II. (Science and Medicine), Section V. (Research and Travelling Scholarships and Fellowships), and Section VI. (Other Purposes) the following items are specified, together with their annual cost: chair in Public Health, £950 to £1000; lectureships in Astronomy, Physiological and Pathological Chemistry, Medical and Surgical Electricity, Embryology, Art and Architecture, £1200 to £1500; lectureships in Mental Diseases, Ophthalmology, and Tropical Medicine, £750; research and travelling scholarships and fellowships in science, medicine, and arts, from £1500 to £2000; library, capital sum of £2000; laboratory equipment, capital sum of £10,000; upkeep of library, from £800 to £1000; and upkeep of laboratories and museums, from £1500 to £2000.—Lord Strathcona and Mount Royal, Lord Rector of the University, is to receive the freedom of the city of Aberdeen on April 9th. On the following day the graduation ceremony falls to be held in the Mitchell Hall of Marischal College.—A meeting of the Sites and Plans Committee was held on March 7th for the purpose of considering the report which the senatus had obtained as to the accommodation required by the different professors and lecturers in their various departments in the extended buildings at Marischal College. The provision desired for the physiology department consists of a large lecture-room and seven other rooms; for the department of medicine the requirements consist of a classroom, a museum and laboratory, a retiring room, and a dark room; for pathology a plea is put in for an animal room; and for materia medica an additional research room is desired, also the enlargement of the museum, an animal observation room, a curator's room, and a storeroom. The general requirements consist of an examination room and a considerable increase of library accommodation. The matter was ultimately referred to the architect and a sub-committee, to report to what extent and at what cost it is possible to provide the desired accommodation.

### *Aberdeen Dispensary.*

The annual meeting of the managers and subscribers of the Aberdeen Dispensary, Maternity Hospital, and Vaccine Institution, was held in the town hall on March 7th, Lord Provost Fleming presiding. The report showed that the total number of cases treated during the past year was 11,810.

March 11th.

## IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

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# PARIS.

(FROM OUR OWN CORRESPONDENT.)

### *Tuberculosis and the Army.*

AT the sitting of Feb. 21st the Chamber of Deputies adopted some modifications of the law of 1889, which modifications will tend to give the revising councils the power of eliminating from the ranks of recruits those conscripts who show any tendency to tuberculosis. The council of revision may be asked to give a certificate drawing the attention of the military surgeon to the case of any conscript who at the drawing of the lots shall have made a declaration of illness. This certificate must be signed by a medical man, by the patient, and by the mayor of the commune. The prefect or the sub-prefect will hand over to every conscript who at the drawing of lots shall make a declaration of illness a form of certificate which runs thus:—

> I, the undersigned doctor of medicine of ... ....., certify that I have conscientiously examined number ......... in the cantonal lot-drawing of the department of ..... which deals with the recruiting of ...... ....., and I wish particularly to draw the attention of the revising military surgeon to the condition of the recruit's .......... (here name the organ affected).

This certificate when filled up will be delivered free of charge to the prefect of the department whose duty it is to present it for revision. Any conscript who is on the indigent list can be gratuitously examined by the medical officer of the *Assistance* of the commune. After revision such certificate must be given to the recruiting commandant, who will forward it to the regiment, so that the recruit will be kept under observation from the time at which he joins the colours. Volunteers will not be enrolled unless their physical condition answers all the required tests. In some regiments where the work is very hard, such as heavy cavalry or engineers, no volunteer will be enrolled under 19 years of age. Bacteriological laboratories will be established for the complete examination of the cases of recruits rejected by the council of revision, the staff of such laboratories being composed of experts nominated by the Minister of War. Those conscripts who after examination in the bacteriological laboratories are returned as unfit for service will not be drafted to a regiment but will have to present themselves before a discharge committee, one of which will sit at every recruiting centre. Every draft of conscripts on the day of departure for the regiment will attend at the recruiting centre and will have to undergo a further examination by the military surgeons. Those who do not come up to the physical standard will at once be sent before a discharge committee and will be discharged with certificate No. 2—*i.e.*, a certificate of temporary discharge.

### *Asphyxia in Nightmen.*

M. Hanriot has recently been giving the Society of Biology some information upon this subject. It is well known that nightmen who have to go down into cesspools are exposed to the danger of intoxication by the gases which collect in these receptacles. Chevreul considered that the toxic agent was sulphuretted hydrogen, but from experiments made by various observers it appears that this gas is only toxic when the proportion existing in the respired atmosphere is at least 5 per cent. M Hanriot has analysed the air in unventilated cesspools and has found that sulphuretted hydrogen exists only in the proportion of three parts per 10,000 On the other hand, the proportion of carbonic acid was 10 per cent., of oxygen 0 to 3 per cent., of nitrogen 45 per cent, of marsh gas 28 per cent. and of free hydrogen 9 per cent. The asphyxia to which nightmen are liable cannot therefore be due to sulphuretted hydrogen. M. Brouardel and M. Loye, who conducted, as experts, an inquiry into the deaths of nightmen who had perished from asphyxia, were surprised not to find at the post-mortem examination any of the usual appearances of poisoning by sulphuretted hydrogen. It appears, then, that death is due to want of oxygen, to the high proportion of carbonic acid, and possibly to the action of toxic volatile bases. It is possible for the contents of cesspools to give off sulphuretted hydrogen and if fæcal matter is treated with acids it gives off a large quantity of sulphuretted hydrogen and of carbonic acid But as a rule the contents of a cesspool are alkaline and contain some 2 or 3 per cent. of ammonia. Chemical disinfection is of no use; the only means of preventing such accidents is by the use of thorough ventilation.

### *The Death-rate in Guiana and New Caledonia.*

M. Kermorgen, Inspector-General of the Colonial Health Department, has laid before the Academy of Medicine some interesting statistics as to the death-rate in Guiana and New Caledonia The death-rate in the latter is far lower than in the former, and the Government, no longer acting from a somewhat misplaced sense of philanthropy, has ceased to send convicts to Noumea, one of the most beautiful of French colonies, but sends them again to Cayenne. However, despite the good climate, everything is not right in New Caledonia. Tuberculosis is very prevalent and leprosy is increasing. Of the latter there were 12 cases in 1895, while in 1900 there were 83 The general mortality from May 9th, 1864, to Dec 31st, 1895, was as follows. Of 21,630 convicts 7222 died. Of these, 5926 deaths were due to disease and 1296 to accident, a mortality of 277·6 per 1000. In Guiana the mortality from 1852 to 1895 was as follows. Of 31,903 convicts 15,189 died from disease and 789 from accident. The unhealthiness of Guiana is mainly due to malaria and yellow fever Various works to improve the sanitary conditions have been executed and the convicts are given minute directions as to the precautions which should be taken. But the sanitarian in Guiana has a special enemy to fight against—namely, the desire of the convicts to fall ill in order that they may go to hospital. Hence they will not use mosquito nets, or drink filtered water, or take quinine. That these precautions are protective is easily seen by looking at the condition of the warders who live under the same conditions as the convicts but who do take precautions. Among these the rate of mortality is extremely low.

### *Lactate of Mercury in Pharmacy.*

At the meeting of the Hospitals Medical Society held on Feb 28th M Gaucher said that he had long been on the look out for a mercurial preparation which should unite the four following advantages: (1) that of being an organic body; (2) easy to prepare and of definite composition; (3) of being unirritating and so capable of administration either by the mouth or by hypodermic injection; and (4) of containing such a proportion of mercury that a dose of one centigramme per diem should be enough. M. Gaucher, together with M. Lextrait, the pharmacist at the St. Antoine Hospital, and M. Caudillon, the *interne* in pharmacy at the same hospital, think that they have found a substance possessed of these desiderata in the neutral lactate of mercury. This salt contains less mercury than the perchloride does but more than the benzoate. It is easily prepared by dissolving red oxide of mercury in a 10 per cent solution of lactic acid. The acid must be pure. The dose is four *cuillerées à café* (from 40 to 50 minims) per diem of a 1 in 1000 solution if given in water or milk by the mouth, or one centigramme of a 1 per cent solution given by the hypodermic method.

March 11th.

# BERLIN.

(FROM OUR OWN CORRESPONDENT.)

### *Trial and Acquittal of Professor Dührssen.*

THE body of one of the Berlin law courts recently presented somewhat the appearance of a medical congress owing to the number of medical men, especially gynæcologists, who were in attendance either as witnesses or spectators. The occasion was the trial of a charge made against Professor Dührssen, the well-known gynæcologist; and the case was a remarkable one, showing as it did that a surgeon must not only justify his actions before his own conscience but may also be called upon at any moment to justify them before a court of law. A woman had been sent to Professor Dührssen's private clinic to be operated on for retroflexion of the uterus, and he had been told by the medical man who sent her that she was very desirous of becoming a mother and that both she and her husband consented to the operation being performed. Professor Dührssen asked his assistant to make a preliminary examination and to take notes of the previous history of the case; being very much occupied he did not himself see the patient previously to operation until after the administration of chloroform He had intended to perform vaginofixation, an operation of his own devising, in which the uterus is fixed by sutures to the vagina. In the course of the operation he found that there were dense adhesions between the uterus and the rectum and that myomata were also present. He endeavoured to preserve the uterus, but the separation of the adhesions produced copious hæmorrhage which could not be stopped by the application of ligatures, so that he at last found it necessary to remove the whole of the uterus together with the growths. A fortnight after the operation the patient was able to return home feeling quite well. She was afterwards told what had been done and neither she nor her husband raised any objection. Six weeks later she was examined and found to be relatively well. Professor Dührssen was therefore not a little surprised when the husband brought an action against him claiming damages on the ground that the operation had been detrimental to the health of his (plaintiff's) wife, and had rendered her an invalid through the formation of a recto-vaginal fistula, so that she required nursing and special diet. This action would have been tried in a civil court, but without any obvious motive the husband withdrew it, substituting a charge of causing bodily injury by neglect (*fahrlassige Korperverletzung*). The case was accordingly taken up by the public prosecutor, and Professor Dührssen had to appear before a criminal court, where he gave an account of the circumstances, explaining that the removal of the uterus was unavoidable because the woman's life was endangered by the profuse hæmorrhage. The public prosecutor stated that before taking proceedings against the accused he had asked the opinion both of the provincial and of the central medical board (Provincial-Medicinal-Collegium and Wissenschaftliche Deputation für das Medicinalwesen) and that both of these bodies had expressed the opinion that the dangerous operation for retroflexion of the uterus was not indicated in the case of a patient who did not suffer locally and on account of her advanced age could not have been expected to become pregnant. Professor Dührssen replied that with regard to her age the woman had made a false statement to his assistant, for she had described herself as being only 40, whereas she was really 45 years of age Moreover, in his opinion the operation was not dangerous, for it had been performed by him 70 times without a fatal result. The evidence of the assistants and nurses belonging to the clinic confirmed Professor Dührssen's statement that at the commencement of the operation he intended to preserve the uterus, but ultimately found himself unable to do so on account of the profuse hæmorrhage. The patient herself declared that she would not have given her consent if she had been previously made aware that so dangerous an operation was to be performed; she said that she had been in good health before the operation, but was now an invalid; she was told in the clinic that the operation would remove an obstacle to pregnancy and in submitting to it she had no other inducement than this; she had understated her age as being 40 instead of 45 years from a natural unwillingness to admit that at the latter age she was still desirous of becoming a mother. Witnesses called by the defence then gave evidence to the effect that the woman's health had been unsatisfactory for some years, that she had already been in other clinics on account of uterine troubles, and that she had been heard to say that she wished to be relieved from all her pains as well as from the obstacle to pregnancy. Then followed the evidence of the medical experts, of whom a great many were called both by the defence and by the prosecution, not only from Berlin but also from other cities, and even some foreigners. Professor Ruge of the provincial medical board was called by the prosecution and said that it was the opinion of the board that an operation so dangerous was not indicated in the case of a patient who suffered comparatively little and on account of her advanced age was very unlikely to become pregnant; at any rate the previous consent of the patient ought to have been obtained, and it was the duty of the surgeon to explain to her beforehand that in the course of the operation conditions might perhaps be encountered which would necessitate the removal of the uterus. Professor Fritsch of Bonn, for the defence, said that it was quite within Professor Duhrssen's competence to direct his assistant to attend to matters which had to be discussed with the patient and that it was in no way obligatory on him to undertake this himself. Professor Fritsch considered [illegible] there was a collective responsibility of the surgeon [illegible] the assistant; it was allowable for a surgeon [illegible] on being told by his assistant that [illegible] had been duly explained to the patient [illegible] en her consent; the question whether an operation was justifiable or not was a matter of conscience and of experience and could not be determined by the evidence of witnesses or by judicial methods of arriving at a decision; provided always—as he believed was the case—that the patient's consent had been given and that there was a reasonable probability of the operation being successful Professor Dührssen had acted justifiably. The public prosecutor then asked for a conviction on the charge of causing bodily injury by neglect, but in view of the good work that had been done by Professor Dührssen and the fact that his motives were quite disinterested a fine of only 300 marks (£15) was proposed. Counsel for the defence entered a plea of not guilty, explaining to the court that the patient's consent to the operation was proved by the fact that she had understated her age in order to induce Professor Dührssen to operate and that afterwards it had to be left to him to do what was necessary in order to save her life. The court, after a short deliberation, found the accused not guilty. The presiding judge stated that the patient's evidence was not reliable, that the court was persuaded that she had consented to the operation, and that Professor Dührssen could not be found guilty of neglect, as asserted by the public prosecutor, merely because the previous history of the case had been taken by his assistant and not by himself. In the opinion of the court Professor Dührssen had not failed in his duty as a conscientious surgeon. The case has naturally been much discussed by the general public as well as in medical circles. The *Berliner Klinische Wochenschrift* suggests that the shorthand-writer's notes of the proceedings and the substance of the finding of the court should be published, so that the medical profession may have an authentic report of a case of such fundamental importance, and the Berlin Medical Chamber will be asked to discuss the advisability of a reform of the criminal law in respect to medical practice, for the Duhrssen case shows that in the present state of the law a surgeon has no security against malevolent prosecution.

### *Health of Professor Virchow.*

According to current reports Professor Virchow's health is now quite satisfactory. The fracture of the femur has united and he gets up every day, but, considering his age the probability of a resumption of his lectures is not great.

March 11th.

## AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

### *The Plague.*

BUBONIC plague has broken out again in Sydney. On Jan. 15th it was reported that rats were dying in a block of houses at Rushcutter's Bay and shortly afterwards three occupants of the premises were found to be suffering from bubonic plague and were sent to the Coast Hospital. The premises were thoroughly disinfected and their contents destroyed by fire. The surrounding locality was found to be in a very insanitary condition and several houses have been destroyed. A fresh case has also occurred in Brisbane, of a virulent form. The other states remain free from plague, but rat-destroying is still vigorously prosecuted

### *Infectious Diseases in Victoria.*

The returns of infectious diseases for the fortnight ending Jan. 4th presented to the Board of Public Health of Victoria showed a marked increase in the number of cases of typhoid fever and diphtheria—viz., 105 cases and eight deaths had occurred during that period in the whole state from typhoid fever, as against 58 cases and two deaths for the corresponding period last year. Within the metropolitan area the numbers were 46 cases and six deaths, as against 26 cases and one death for the fortnight ended Jan. 2nd. The diphtheria returns in the whole state showed 65 cases and four deaths as against 28 cases and two deaths in the corresponding period last year. In the metropolitan area there had been 14 cases and one death, as against 16 cases and one death last year.

### *Treatment of Tuberculosis in Victoria.*

The local municipal council at Echuca oppose the sion of the consumptive sanatorium established in town. The medical inspector of the Board of

# PARIS.

(FROM OUR OWN CORRESPONDENT.)

### *Tuberculosis and the Army.*

AT the sitting of Feb. 21st the Chamber of Deputies adopted some modifications of the law of 1889, which modifications will tend to give the revising councils the power of eliminating from the ranks of recruits those conscripts who show any tendency to tuberculosis. The council of revision may be asked to give a certificate drawing the attention of the military surgeon to the case of any conscript who at the drawing of the lots shall have made a declaration of illness. This certificate must be signed by a medical man, by the patient, and by the mayor of the commune. The prefect or the sub-prefect will hand over to every conscript who at the drawing of lots shall make a declaration of illness a form of certificate which runs thus :—

> I, the undersigned doctor of medicine of ......., certify that I have conscientiously examined number ........... in the cantonal lot-drawing of the department of .... which deals with the recruiting of ........, and I wish particularly to draw the attention of the revising military surgeon to the condition of the recruit's ........ (here name the organ affected).

This certificate when filled up will be delivered free of charge to the prefect of the department whose duty it is to present it for revision. Any conscript who is on the indigent list can be gratuitously examined by the medical officer of the *Assistance* of the commune. After revision such certificate must be given to the recruiting commandant, who will forward it to the regiment, so that the recruit will be kept under observation from the time at which he joins the colours. Volunteers will not be enrolled unless their physical condition answers all the required tests. In some regiments where the work is very hard, such as heavy cavalry or engineers, no volunteer will be enrolled under 19 years of age. Bacteriological laboratories will be established for the complete examination of the cases of recruits rejected by the council of revision, the staff of such laboratories being composed of experts nominated by the Minister of War. Those conscripts who after examination in the bacteriological laboratories are returned as unfit for service will not be drafted to a regiment but will have to present themselves before a discharge committee, one of which will sit at every recruiting centre. Every draft of conscripts on the day of departure for the regiment will attend at the recruiting centre and will have to undergo a further examination by the military surgeons. Those who do not come up to the physical standard will at once be sent before a discharge committee and will be discharged with certificate No. 2—i.e., a certificate of temporary discharge.

### *Asphyxia in Nightmen.*

M. Hanriot has recently been giving the Society of Biology some information upon this subject It is well known that nightmen who have to go down into cesspools are exposed to the danger of intoxication by the gases which collect in these receptacles. Chevreuil considered that the toxic agent was sulphuretted hydrogen, but from experiments made by various observers it appears that this gas is only toxic when the proportion existing in the respired atmosphere is at least 5 per cent. M. Hanriot has analysed the air in unventilated cesspools and has found that sulphuretted hydrogen exists only in the proportion of three parts per 10,000. On the other hand, the proportion of carbonic acid was 10 per cent., of oxygen 0 to 3 per cent, of nitrogen 45 per cent., of marsh gas 28 per cent. and of free hydrogen 9 per cent. The asphyxia to which nightmen are liable cannot therefore be due to sulphuretted hydrogen. M. Brouardel and M. Loye, who conducted, as experts, an inquiry into the deaths of nightmen who had perished from asphyxia, were surprised not to find at the post-mortem examination any of the usual appearances of poisoning by sulphuretted hydrogen. It appears, then, that death is due to want of oxygen, to the high proportion of carbonic acid, and possibly to the action of toxic volatile bases. It is possible for the contents of cesspools to give off sulphuretted hydrogen and if fæcal matter is treated with acids it gives off a large quantity of sulphuretted hydrogen and of carbonic acid. But as a rule the contents of a cesspool are alkaline and contain some 2 or 3 per cent. of ammonia. Chemical disinfection is of no use ; the only means of preventing such accidents is by the use of thorough ventilation.

### *The Death-rate in Guiana and New Caledonia.*

M. Kermorgen, Inspector-General of the Colonial Health Department, has laid before the Academy of Medicine some interesting statistics as to the death-rate in Guiana and New Caledonia. The death-rate in the latter is far lower than in the former, and the Government, no longer acting from a somewhat misplaced sense of philanthropy, has ceased to send convicts to Noumea, one of the most beautiful of French colonies, but sends them again to Cayenne. However, despite the good climate, everything is not right in New Caledonia. Tuberculosis is very prevalent and leprosy is increasing. Of the latter there were 12 cases in 1895, while in 1900 there were 83. The general mortality from May 9th, 1864, to Dec 31st, 1895, was as follows. Of 21,630 convicts 7222 died Of these, 5926 deaths were due to disease and 1296 to accident, a mortality of 277 6 per 1000. In Guiana the mortality from 1852 to 1895 was as follows. Of 31,903 convicts 15,189 died from disease and 789 from accident. The unhealthiness of Guiana is mainly due to malaria and yellow fever Various works to improve the sanitary conditions have been executed and the convicts are given minute directions as to the precautions which should be taken. But the sanitarian in Guiana has a special enemy to fight against—namely, the desire of the convicts to fall ill in order that they may go to hospital. Hence they will not use mosquito nets, or drink filtered water, or take quinine. That these precautions are protective is easily seen by looking at the condition of the warders who live under the same conditions as the convicts but who do take precautions. Among these the rate of mortality is extremely low.

### *Lactate of Mercury in Pharmacy.*

At the meeting of the Hospitals Medical Society held on Feb 28th M. Gaucher said that he had long been on the look out for a mercurial preparation which should unite the four following advantages : (1) that of being an organic body ; (2) easy to prepare and of definite composition ; (3) of being unirritating and so capable of administration either by the mouth or by hypodermic injection ; and (4) of containing such a proportion of mercury that a dose of one centigramme per diem should be enough. M. Gaucher, together with M. Lextrait, the pharmacist at the St. Antoine Hospital, and M. Caudillon, the *interne* in pharmacy at the same hospital, think that they have found a substance possessed of these desiderata in the neutral lactate of mercury. This salt contains less mercury than the perchloride does but more than the benzoate. It is easily prepared by dissolving red oxide of mercury in a 10 per cent. solution of lactic acid. The acid must be pure. The dose is four *cuillerées à café* (from 40 to 50 minims) per diem of a 1 in 1000 solution if given in water or milk by the mouth, or one centigramme of a 1 per cent solution given by the hypodermic method.

March 11th.

# BERLIN.

(FROM OUR OWN CORRESPONDENT.)

### *Trial and Acquittal of Professor Dührssen.*

THE body of one of the Berlin law courts recently presented somewhat the appearance of a medical congress owing to the number of medical men, especially gynæcologists, who were in attendance either as witnesses or spectators The occasion was the trial of a charge made against Professor Dührssen, the well-known gynæcologist ; and the case was a remarkable one, showing as it did that a surgeon must not only justify his actions before his own conscience but may also be called upon at any moment to justify them before a court of law. A woman had been sent to Professor Dührssen's private clinic to be operated on for retroflexion of the uterus, and he had been told by the medical man who sent her that she was very desirous of becoming a mother and that both she and her husband consented to the operation being performed. Professor Dührssen asked his assistant to make a preliminary examination and to take notes of the previous history of the case ; being very much occupied he did not himself see the patient previously to operation until after the administration of chloroform He had intended to perform vaginofixation, an operation of his own devising, in which the uterus is fixed by sutures to the vagina. the course of the operation he found that t profession, one of whom, after an honourable record in the British navy, still occupies a high position as a practitioner in Monte Video, and the other after a distinguished career as a student in the late Queen's University in Ireland died from phthisis a few years ago in Texas. The late Dr. Mullin himself was an *alumnus* of the Queen's University, Ireland, having graduated as M.D., M Ch., and L.M. in 1880. Previously to his medical career he had sojourned for some time in the Southern States of America, and was an intimate friend of General Beauregard and other well-known Confederate leaders. Throughout his career as a student Dr. Mullin was distinguished for his remarkable assiduity and the whole-hearted zeal with which he devoted himself to the mastery of his profession. After a few years of preliminary study in Queen's College, Galway, he went to Dublin and studied medicine at the Meath Hospital under the late Dr. Foot and surgery at the Richmond Hospital under the late Sir William Stokes. By both these distinguished teachers he was held in the highest personal esteem. He graduated as M.D., M.Ch., and L.M. in 1880 and after some years' practice in Dublin finally settled down in Newport, Mon., to the career of a general practitioner. His career in Newport extended over some 10 years, and although he went there as a perfect stranger, by his genial manner and kindly disposition he soon succeeded in winning hosts of friends, and by his skill, attention, and unflagging energy he gathered together a very large practice. During his 10 years' residence in the town of his adoption he probably had not more than 10 days' holiday. This unremitting labour could have but one result, and the inevitable breakdown occurred without any premonitory symptoms when he dropped dead on Feb. 17th. The cause of death was heart failure. His funeral was probably one of the most striking spectacles that ever occurred in the annals of Newport. From his house to the cemetery, a route over a mile in length, all traffic was suspended and all that distance was completely blocked by the multitude who followed his hearse. It was quite touching to see how many were in tears and the poor especially manifested the deepest grief. But the townspeople were not satisfied with even this tribute of affection to his memory, as they started a shilling subscription to erect a memorial that would keep his name ever green amongst them.

## JOHN LUMSDEN PROPERT, M.B. LOND., M.R.C.S. ENG.

We much regret to announce the death of Dr. John Lumsden Propert, which occurred on Friday, March 7th, at his house in Gloucester-place, from pneumonia after a brief illness. Dr. Propert was born 67 years ago and was the son of the founder of the Royal Medical Benevolent College at Epsom. He received his medical education at King's College Hospital, where he filled the resident appointments, and at the age of 22 years he graduated in medicine at London University, having previously taken the diploma of the Royal College of Surgeons of England. On leaving the hospital he joined his father in practice, and by his energy, ability, and assiduous attention to his patients, became a highly-successful general practitioner. His quiet, dignified manner, unfailing tact, and knowledge made his patients at once feel that they had placed themselves under a man whose opinion would not be given lightly and would be valuable when expressed.

Dr. Propert, himself a good etcher, was widely known in artistic circles as a connoisseur in many departments of art, and his house in Gloucester-place was full of beautiful specimens of china, pottery, and jewelled work. He was generally credited with being the originator of the revival of interest in miniature-painting which has lately taken place in England, and he possessed at one time a very fine collection of miniatures At the exhibition of portrait miniatures at the Burlington Fine Arts Club he compiled the illustrated catalogue, which he afterwards enlarged into a book upon British Miniatures that is familiar to all collectors.

There was a full congregation at the funeral service, held at St. Mary's, Bryanston-square, on Tuesday last, for Dr. Propert had a large circle of private and professional friends. Among those present may be mentioned Sir Thomas Smith, Mr. Christopher Heath, Dr. T. Buzzard, Dr. G. H Savage, Dr. Whipham, and Dr. Frederick Taylor. Many members of the council of the Royal Medical Benevolent College were lso pr although Dr. Propert had not been able to give the amount of time to the working details of the college that had been given by his father he never ceased, as a member of the council, to take an active interest in the institution, which was represented at his funeral by Dr C. Holman (treasurer), Sir R. Douglas Powell, Dr. M. Baines, Mr Stamford Felce, Mr. Reginald Harrison, Mr. H. W. Kiallmark, Mr. C. L. Smiles, Dr. F. Taylor, Colonel Gordon Watson, Rev. T. N. Hart Smith (head-master), and Mr. J. B. Lamb (secretary). The Rev. Russell Wakefield, rector of St. Mary's, Bryanston-square, gave a touching address on the relations of medical men to the public, and concluded by asking the prayers of the congregation for "John Propert's son, now taking up in the third generation the work of the father and grandfather."

# Medical News.

**ROYAL COLLEGE OF SURGEONS OF ENGLAND.**—The following gentlemen having passed the necessary examinations and conformed to the by-laws have been admitted Members of the College and have received their diplomas:—

James Weeden Woodhams Adamson, St. George's Hospital; Frederick Eustace Anley, Charing Cross Hospital; Henry Lawrence Atkinson, Yorkshire College and General Infirmary, Leeds, and St. Mary's Hospital, Stanley Bean Atkinson, B.Sc. Lond., LL.M. and M.A. Camb., St. Bartholomew's Hospital; Austin Lewis Badcock, Charing-cross Hospital; Edward Walter Bain, London Hospital; Hugh Barber, Owens College and Royal Infirmary, Manchester, and Guys's Hospital; Wilfrid Boothby Blandy, Charing-cross Hospital; John Crosthwaite Bridge, Middlesex Hospital; Harrie Spence David Browne, B.A. Camb., Cambridge University and St. Thomas's Hospital; William Walker Browne and Joseph Barnes Burt, University College Hospital; Alexander Cameron, Middlesex Hospital; George Fernandez Mitchell Clarke, L.S.A. Lond., Charing Cross Hospital; Ernest Langsford Clay, Mason College, Queen's and General Hospitals, Birmingham; Joseph Basil Cook, Owens College and Royal Infirmary, Manchester, and St. Bartholomew's Hospital; Ernest Alfred Cox, King's College Hospital; William Thomson Crawford, University College Hospital; Richard Ingram Cuming, St. Thomas's Hospital; Henry Tregellas Doble, St. Mary's Hospital; Robert Valentine Dolbey, and Reginald Anthony Eastmond, London Hospital; Harold Augustus Easton, St. Thomas's Hospital; Charles John Ernest Edmonds, L S.A. Lond., St. Thomas's Hospital; Frederick Kincaid Etlinger, University College, London, and Newcastle Royal Infirmary; Douglas Edward Finlay, St. Mary's Hospital; Edward Fow Fisher, London Hospital; Edward Cecil Foster, University College Hospital; George Denne Franklin, B.A. Camb., Cambridge University and St. Thomas's Hospital; John Gay French, St. Mary's Hospital; Charles Herbert Gask and Arthur William Gater, Guy's Hospital; George Frederick Gill, Otago University and St. Bartholomew's Hospital; Ian Canute Gordon Glassford, Melbourne and Edinburgh Universities; Bertram Winter Gonin, St. Mary's Hospital; Eric Walton Grogono, London Hospital; William Rhodes Harrison, St. Mary's Hospital; Percival George Harvey, St. Bartholomew's Hospital; Somerville Hastings, Middlesex Hospital; Walter Turner Haydon, St. Thomas's Hospital; Frederick Lewis Henderson, Cambridge University and Middlesex Hospital; George Sullivan Clifford Hayes and Hugh Arthur Higgens, Guy's Hospital; Walter Henry Philip Hill, M.D., C.M. McGill, McGill University, Montreal; Andrew Ferguson Horn, University College Hospital; Charles Reginald Howard, B.A. Camb., Cambridge University and Guy's Hospital; Leslie Edward Hughes, St. Bartholomew's Hospital; Edwin Hyde, Cambridge University and St. George's Hospital; Francis Willan Jackson, St. Bartholomew's Hospital; Luis Ricardo Jimenez, Guy's Hospital; Hugh Nevill Keeling, Yorkshire College and General Infirmary, Leeds, and St. Mary's Hospital; Thomas Thelwell Kelly, Alfred Dudley Eskell Kennard, and William Perceval Ker, Guy's Hospital; Horace Harvard Kiddle, St. Thomas's Hospital; Henry Ardagh Kingsmill, M.D. West Univ., Western University, Ontario, Edinburgh, and Middlesex Hospital; Frederick Samuel Langmead, St. Mary's Hospital; Albert Penard Laycock, Cambridge University and London Hospital; Alfred Newman Leathem, Charing-cross Hospital; Napoleon Leonard, St. Bartholomew's Hospital; John Woodruff Lewellyn, University College, Cardiff, and St. Bartholomew's Hospital; Archibald Malcolm Macintosh, St. Mary's Hospital; Matthew Robert Cecil MacWatters, King's College Hospital; Frank Derecourt Martyn, Westminster Hospital; Hugh Giffen McKinney, Henry Norman Marrett, Herbert Michael Henry Melhuish, and Guy Witton Miller, St. Bartholomew's Hospital; Oswald Mills, St. Thomas's Hospital; William John Morrish, St. Mary's Hospital; Cyril Raymond Moss, M.A. Oxford, Oxford University and University College and Royal Infirmary, Liverpool, Sydney Gwenffrwd Mostyn, M.A. Oxford, St. Bartholomew's Hospital; Norman Howard Mummery, University College, London; Lorimer Gifford Nash, Guy's Hospital; Harold Rundle FitzNattle, University College Hospital; Richard Arthur Needham, B.Sc., M B., Ch.B. Vict., Owens College and Royal Infirmary, Manchester; William Nicholson, L.D.S. Eng., Owens College and Royal Infirmary, Manchester; Paul Norman Blake Odgers, B.A. Oxford, Oxford University and Guy's Hospital; John Norman Parrott, St. Mary's Hospital; Victor Stanley Partridge, L.S A. Lond., Westminster and Charing-cross Hospitals; Nathaniel Richard Phillips, University College, Cardiff, and University College Hospital; Charles Arthur Gayer Phipps, Owens College and Royal Infirmary, Manchester, and London Hospital; James Farquharson Powell, St. George's Hospital; John Philip also reported against any extension, as the site was unsuitable. The Board has passed the following resolution :—

> That the Minister be informed that, in the opinion of this board, land in two or more suitable localities in the State should be set apart for the reception and treatment of persons affected with tuberculosis, and that the land should be of such area as to afford the most ample opportunities and meet all possible requirements for exercise and recreation of all persons therein received and treated.

The Minister of Health has approved of the proposal and placed it before the Cabinet. The Board regards the treatment of consumption as a national question and considers *the present sanatorium at Echuca to be unsatisfactory as to* position and extent.

### *Infectious Diseases Hospital, Melbourne.*

As has been previously stated, the Infectious Diseases Hospital, Melbourne (for which the public subscribed, as a memorial of Queen Victoria's Jubilee, the sum of £19,000), has never been completed, about £4000 more being required to make it available for patients. The Victorian Government has now decided to grant this amount, as it regards the hospital as a national institution. The committee will *accordingly get the necessary work—completing the laundry,* furnishing, &c.—completed as soon as possible. The difficulty of maintaining the institution, however, still remains.

### *Ptomaine Poisoning.*

Forty people at Darlington, Sydney, have been affected with an illness resembling cholera, violent abdominal pains, retching, and diarrhœa. In some cases the whole family was affected, in others only single individuals. In every case the sufferers had partaken of corned beef purchased at the same shop, and the cases are regarded as due to ptomaine poisoning. The police seized the remaining portions of beef at the shop and had them destroyed.

### *Intercolonial Medical Congress.*

The arrangements for the sixth session of the Intercolonial Medical Congress, to be held in Hobart on Feb. 17th, are fairly complete and the meeting promises to be very successful. Mr G. H. Butler has been nominated as president in place of the late Dr. Bright. The attendance promises to be large and the contributions to the sections numerous. A special discussion is to be held on Cancer.

### *Professor of Pathology, Sydney University.*

At its last monthly meeting the Senate of the Sydney University elected Dr. David Arthur Welsh, M.A., B.Sc, M.D. Edin., to the new chair of Pathology. Dr. Welsh was a distinguished student at Edinburgh University and recently pathologist to the Royal Infirmary. He has also been senior assistant to the professor of pathology and lecturer in pathological bacteriology. It is somewhat remarkable that so many of the teachers in the Sydney medical school are Edinburgh men.

### *The Medical Act, New South Wales.*

A Bill to amend the present Medical Act of New South Wales has been drafted and read for the first time in the Legislative Assembly. If passed it would bring about the state of things existing before the present Act was passed.

### *Committee versus Staff of Women's Hospital.*

A remarkable position has developed at the Women's Hospital, Melbourne. On Dec. 25th, 1901, a patient was admitted to the midwifery side of the hospital and developed septicæmia, from which she died on Jan. 3rd. She was isolated and the ward in which she had been was disinfected. Between Jan. 10th and 17th five midwifery patients developed high temperatures and were isolated. They did not develop any further septic symptoms and have recovered. Another patient was said to be suffering from "sapræmia" These facts were reported to the committee who appointed a subcommittee to investigate the circumstances. This was done. The resident medical staff gave it as their opinion that there was no danger of an outbreak of septicæmia in the institution, but the opinion of the honorary medical staff does not appear to have been definitely obtained. The chairman of the midwifery staff, Mr. G. Cuscaden, who reported the occurrences originally, seems to have been very undecided in his views and in some way or other caused the committee to think that there was danger and that the hospital should be closed. At all events, the sub-committee reported to the committee that no fresh cases should be admitted and that arrangements should be made to attend to patients in various nursing homes in the neighbourhood The committee gave orders that this should be done. The resident staff thereupon refused to carry out the instructions and said that they would admit and treat cases. The superintendent and secretary also refused to carry out the instructions of the committee and lock the gates of the hospital The committee then dismissed the superintendent and informed the resident medical officers that their services would be dispensed with at the end of a month. The honorary staff met to consider the position and reported that in their opinion there was no necessity to close the hospital. In the meantime cases had been admitted by the resident medical officers. Finally, the committee, in deference to the views of the honorary staff, decided to remove the patients from the main wards to others and thoroughly to disinfect the main wards, and when that is done to receive patients in the ordinary way Naturally the episode has excited much interest in Melbourne and caused much correspondence in the newspapers The whole difficulty arose from a lay committee interfering in a question which should have been decided by the medical staff.

### *Deniliquin Hospital.*

At the annual meeting of the Deniliquin Hospital (New South Wales) it was stated by the committee that plans for a new hospital had been prepared to replace the present building erected 45 years ago. The money required had already been given by Mr. Landale.

### *Obituary.*

Dr. Michael J. Clune died on Jan. 3rd at North Sydney at the age of 54 years. He was a native of Sydney and took his B.A degree at Sydney University in 1863. Then he went to Dublin University where he had a brilliant career as a student. He returned to Sydney in 1872 and commenced practice in College-street. He was physician to St. Vincent's Hospital for 20 years. He was the first medical man in Australia to adopt Sayre's method of treating spinal caries. The first time small-pox occurred in Sydney Dr. Clune attended the first patient and reported its nature He was sent with his patient to the quarantine station and on his release he advocated and secured many useful and necessary reforms in the management of the station.—Another well-known Sydney practitioner has passed away in the person of Dr. C. F. Eichler who was probably the oldest medical man in Sydney where he had practised for half a century. He came to Sydney in charge of a German immigrant ship. For many years he was honorary visiting surgeon to the Sydney Hospital. He founded the German Club in Sydney and was one of the oldest members of the Royal Society of New South Wales. He was an enthusiast in rose culture, having over 1000 varieties on his estate at Marrickville. He was a well read man and a great linguist, speaking eight languages, but always most modest and unassuming. He died on Jan 10th at the age of 80 years.—Another very old practitioner in Victoria died recently, Dr. D. J. Williams He was *nearly 84 years old and had* been long in bad health. When a young man he went to Russia and was medical officer of the Czar's yacht *Victoria.* He arrived in Melbourne in 1852 in charge of immigrants and was soon appointed medical officer at Queenscliff. He was transferred to Ballarat in 1854 as medical officer to the police and coroner, and was there during the Eureka riots He then returned to Queenscliff, where he entered upon private practice He was the oldest justice of the peace in the State

Feb. 4th.

## Obituary.

### JOHN FRANCIS LANGAN MULLIN, M.D., M CH. R.U I

"IN Dr Mullin's death the poor have lost a good friend and Newport has lost a good citizen." With these words the coroner for Newport (Mon.) wound up the inquest on the late Dr. John Francis Langan Mullin and words more appropriate to the occasion were never uttered. The deceased gentleman was a native of Ireland, having been born in the historic town of Drogheda some 52 years ago He was not the only member of his family who was connected with medicine, for he had two brothers in the

Mr. Grant Lawson replied: Some lymph was obtained by the Local Government Board from Cologne in December, 1900, and it has passed through a series of five calves in succession. The resulting lymph was that used in the case of Mr. Essex. The original lymph and that derived from it have been used in the vaccination of 264 calves and no complaints have been received of ill-effects from the use of the resulting lymph in any other case, although it has been used for the vaccination of a large number of persons. I cannot give precise information as to the derivation of the particular lymph obtained from Cologne, but as a rule the stock there is renewed by inoculation of the calf with human vaccine lymph.

### *Increased Comforts at the Royal Victoria Hospital, Netley.*

Captain Norton asked the Secretary of State for War whether he could say what steps, if any, had been taken to increase the comfort in the wards of the Royal Victoria Hospital at Netley by the addition of chairs for invalid soldiers in lieu of the forms heretofore in use.—Mr. Brodrick replied that 600 Windsor chairs with cushions had been issued to Netley for use in wards, &c. Further, comfortable easy-chairs had been provided for the wards by Her Majesty the Queen out of a sum of money which she had at her disposal.

### *Vaccination Prosecutions.*

On the motion of Mr. Channing a Bill was introduced to provide that no prosecution under the Vaccination Acts shall be commenced without the authority of the guardians.

## Monday, March 10th.

### *Enteric Fever among the Troops in South Africa.*

Sir Walter Foster asked the Secretary of State for War whether he had received the report of the commission of experts appointed in August, 1900, to inquire into the causation, pathology, and modes of prevention (more particularly as affecting armies in the field) of dysentery and its connexion, if any, with enteric fever; and, if not, if he would call for the report, and lay it upon the table of the House for the use of Members.—Mr. Brodrick: The report is now complete but has not yet been printed.—Sir Walter Foster asked the Secretary of State for War whether he could state the number of cases of, and the number of deaths from, enteric fever during the months of December and January last.—Mr. Brodrick: The approximate figures for December are: admissions, 1507; deaths, 224. The figures for January are not yet complete.

### *Vaccination and Small-pox in Bethnal Green.*

Sir Mancherjee Bhownaggree asked the President of the Local Government Board if he could state how many cases of small-pox had occurred or been reported from the borough of Bethnal Green since the beginning of the year; and what proportion of persons so afflicted was found to be unvaccinated.—Mr. Long replied: I am informed that 136 persons were reported to the medical officer of health for the borough of Bethnal Green during January and February last as suffering from small-pox, but 13 of these were found not to be cases of that disease. The particulars as to vaccination are as follows:—31 were unvaccinated, of whom 12 died; four were vaccinated children under 13 years, of whom none died; 76 were persons above 13 years, who were stated to have been vaccinated in infancy, of whom seven died. The medical officer had no information as to vaccination as regards the remaining 12 cases.

## Tuesday, March 11th.

### *Medical Inspection for the Imperial Yeomanry.*

Dr. Farquharson asked the Secretary of State for War whether the enlistment of the Imperial Yeomanry was carried out by officers of the Army Medical Department or by local private practitioners necessarily unfamiliar with the details of the standard required for regulars; whether he was aware that in the printed instructions issued there was a paragraph which stated that there was no need to reject men for minor defects and deformities as the standard need not be so high as for regulars; and whether these instructions were seen and sanctioned by the Director-General of the Army Medical Department before being issued.—Mr. Brodrick replied: In consequence of the absence of a large proportion of the officers of the Royal Army Medical Corps in South Africa the bulk of the men were examined by local practitioners. Instructions were issued that the conditions required of a recruit enlisting for the full term of service in the army might be modified. Instructions were issued to the effect that if the recruit was free from organic disease or other serious defect likely to prevent him from work during the continuance of the campaign he might be accepted. I have not been able to trace whether the late Director-General of the Army Medical Department was consulted, but the question was rather military than medical.

### *Medical Establishments of the Navy.*

While the House was in Committee of Supply a vote of £246,500 was taken for the medical establishments of the navy. Mr. Arnold-Forster, Financial Secretary of the Admiralty, stated in the course of the debate that the principle of attaching hospital ships to the squadrons in time of peace was not to be extended, but provision was being made for rapidly equipping hospital ships in time of war. The whole fittings for several such ships had been provided and arrangements had been made for medical officers to accompany them. Medical stores had also been provided. The policy of having hospital ships had been deliberately adopted after a great deal of consideration. The medical, and, he believed, also the naval, view was that the conditions of a modern ironclad were so unfavourable to the nursing of the sick and wounded that it was most desirable to have some ship accessible in case of war to which the men might be removed as soon as possible in order that they might receive proper treatment and nursing.—Mr. Whitley pointed out that while there was practically no addition to the number of medical officers the salaries to be paid showed an increase in the aggregate of £4800, and he asked for an explanation.—Mr. Arnold-Forster explained that medical officers in the army were about to receive higher emoluments, and it had been thought right to offer corresponding inducements to medical men to join the service of the navy. The additions to the pay were, however, very slight.—Sir Henry Campbell-Bannerman said that he would like this matter further explained, because the House had been led to understand that the medical service of the navy was in a perfectly satisfactory position.—Mr. Arnold-Forster, speaking again, said that owing to the number of candidates for the army not being very large it had been found necessary to increase the emoluments of the service. In the case of the navy the number of candidates had been just sufficient but not more than sufficient. It was found, however, that when the emoluments of the officers in the army were increased there was an immediate check in the applicants for the navy, and it was decided that this could not be allowed to continue. After consultation with the War Office it was arranged that the emoluments of the navy should be the same as those of the army.

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## MIDWIVES BILL.

### Proceedings before the Grand Committee.

The Grand Committee of the House of Commons on Law met on Tuesday, March 11th, with Sir James Fergusson in the chair, and began the consideration of the Midwives Bill.

The first clause, setting out the short title of the measure, was postponed.

Clause 2 of the Bill deals with certification. In its original form it proposed in the first section that "from and after the first day of January, 1905, no woman shall be entitled to take or use the name or title of midwife (either alone or in combination with any other word or words) or any name, title, addition, or description implying that she is certified under this Act or is recognised by law as a midwife unless she be certified under this Act."

Sir Walter Foster moved to insert in this section after the first "midwife" the words "or nurse midwife." He did so, he said, in order to raise the general question of what was intended to be done by this legislation. There had been a great deal of talk about Mrs. Gamp and Mrs. Harris, but these ladies, famous in English literature, were not touched by the Bill. Now, if they wanted to do this work thoroughly they ought to include all classes of women who attended childbirth, including Mrs. Gamp and Mrs. Harris, who were the chief source of danger. Of 10 women who attended midwifery cases one was a technically qualified person and held some sort of certificate after a certain amount of training, and the other nine were really monthly nurses and it was these nine who in the opinion of medical men were responsible for the mischief that occurred.

Mr. Heywood Johnstone asked the committee not to accept this amendment because the Bill proposed to deal only with midwives and not with "nurse midwives," whatever that term might mean. It might be a very desirable thing in the interests of the public health that every person who attended women in childbirth should be registered and qualified and supervised, but this could not be done at the present moment. The condition of kindred professions did not encourage such an experiment and they could only proceed by steps in a matter of this kind. They had been something like 10 years, if not more, in getting as far as they had, and he asked the committee seriously to consider this point and not to take a step which would overload the Bill and prevent its passage. The promoters had designedly made it a somewhat modest Bill because they knew that only by so doing they would have a chance of seeing the Bill passed. If they accepted this amendment it would be the first step towards destroying and wrecking the Bill.

Sir Barrington Simeon said that he would like to know whether this was a Bill to protect the title of "midwife" or a Bill to protect parturient women.

Mr. Heywood Johnstone said that it was a Bill to protect parturient women in the same sense that persons desiring the services of a medical man were protected by being able to distinguish between qualified and unqualified medical men.

On a division the amendment was rejected by 21 votes to 7.

Mr. Parker Smith moved to insert words to secure that the uncertified woman shall not use a title implying that she is "a person specially qualified to practise midwifery." These words, he said, were taken from the Dentists Act. The Bill did not propose to impose a penalty upon any woman who practised for gain, but it did propose to defend the public by letting it know that the woman who used the title "midwife" might be relied on to do her work efficiently. He considered that no woman should be entitled to call herself an "obstetric nurse" or a "nurse midwife" or anything else of that kind unless she were certified under the Act.

Mr. Heywood Johnstone said that his only objection to the proposed words was that he thought they would render the clause cumbrous and were unnecessary; though they appeared in the Dentists Act it was rather difficult to know what meaning they would carry. Supposing that there was a criminal prosecution it would be a very difficult thing for anyone to say that the person against whom proceedings were taken had used some name, title, or description, implying that she was a person specially qualified to practise midwifery. Members of the committee must bear in mind that they were dealing here with a penal clause and that it was desirable that the words used should be few and simple and leave as little room as possible for mistake.

Mr. Ambrose approved the amendment as strengthening and improving the clause.

The amendment was carried by 19 votes against 12 and the words were inserted in the clause.

The committee then took up the consideration of the second section of the clause; "Any woman who, after the first day of January, 1905, not being certified under this Act, shall take or use the name of midwife, or any other such name, title, addition, or description as aforesaid, shall be liable on summary conviction to a fine not exceeding £5."

Mr. Griffith-Boscawen moved to insert after the first "shall" the words "habitually and for gain attend women in childbirth or shall." He understood the object of the promoters of the Bill to be to put an end to the frightful amount of preventable suffering and disease which occurred owing to the attendance of perfectly ignorant women; and in order that this terrible evil might be thoroughly dealt with it was necessary that these ignorant women should be prohibited from [illegible] altogether. As the Bill stood there was nothing in it to prevent these ignorant women from practising or to secure their proper training. The Bill merely granted legal certificates to what he might call the better class of midwives and allowed all these ignorant, dirty, and dangerous women to continue in future as they did at the present moment. Instead of striking a blow at the people who really did harm the Bill left them alone. He thought that the committee ought to aim at making a thorough and complete measure, one that would deal with

Prell London Hospital Walton Rix Read L D S Eng St Bartholomew's Hospital Morgan James Rees Guy's Hospital Bertram Ell Sansom L S A Lond St Thomas's Hospital Leonard Douglas Saunders St George's Hospital Stanley Samuel Howard Shannon Guy's Hospital Joseph Sharples Cambridge University and St Mary's Hospital Charles Buckingham Shuttleworth M D C M Toronto Medical College Toronto Edward Smallwood L S A Lond M D Brux University College and Royal Infirmary Liverpool and University College Hospital George Frederick Dinwall Smith M A M B Oxon B Ch Oxon Oxford University and St George's Hospital Gerald Morgan Spicer St Mary's Hospital Richard Davis Stacey St Bartholomew's Hospital William Howard Flynn Stewart Cambridge University and St Thomas's Hospital Gerald William Stone St Bartholomew's Hospital William Benjamin Swete Evans B A Camb Cambridge University and St George's Hospital Elijal Richard Lockwood Thomas London Hospital Robert Elwin Goone Tilleke M D Brux L R C P & S Edin D P H Lond Ceylon Medical College and King's College Hospital Francis Inman Trimmer and John Henry Tripe London Hospital John Walker St Thomas's Hospital Alfred Herbert Irwin Wall Guy's Hospital Joseph Walters University College Cardiff and King's College Hospital Herbert Kingsley Ward Mason College Queen's and General Hospitals Birmingham Vere Godsalve Ward St Bartholomew's Hospital Amyas Theodore Waterhouse B A Oxon Oxford and St Thomas's Hospital Robert James Waugh St Bartholomew's Hospital Arthur Robartes Wellington St Mary's Hospital John Arthur West St Bartholomew's Hospital George Harold Lawson Whale B A Camb Cambridge University and St Bartholomew's Hospital James Lawson Whatley Guy's Hospital Percy Walter White University College Bristol Frederick Ernest Wilson University College Hospital and Arthur Stanley Woodwark Charles Stuart Woodwark and Alistair Cameron Young St Bartholomew's Hospital

UNIVERSITY OF CAMBRIDGE —At a congregation on March 8th the following medical degrees were conferred —

*M B and B C* —W F Tucker Gonville and Caius
*M B only* —G W Deeping Trinity

The Balfour Studentship is awarded to Mr J S Budgett of Trinity, and the Allen Scholarship to Mr F N Hales of Trinity

VACCINATION OF TRAMPS —The Liskeard (Cornwall) Board of Guardians recently passed a resolution directing that all tramps should obtain a certificate from the medical officer of health stating that they were free from any infectious disease before they were admitted to the workhouse The medical officer of health consequently informed the guardians that such work was outside his duties and that his fee for each inspection would be half a crown At the meeting of the guardians held on March 1st it was decided to rescind the resolution

THE BRISTOL GENERAL HOSPITAL —At the half-yearly meeting of the governors of this institution held on March 10th it was announced that the scholarships were awarded as follows Clarke's Surgical Scholarship, £15 to Mr A. R Short, Sanders Scholarships, £22 10s, to Mr J E Sparks, and £11 5s to Mr C Corfield, Lady Haberfield prize £29 9s 8d between Mr A. J M Wright and Mr J F Blackett Martyn Memorial Scholarship £10 each to Mr J E Sparks and Mr C Corfield, Henry Marshall prize, £11 Mr A R Short

DONATIONS AND BEQUESTS TO HOSPITALS —By the will of Mr Robert Rolle McQuater the sum of £150 has been bequeathed to each of the following institutions —the Adelaide Hospital in Dublin, Sir Patrick Dun's Hospital and St Mark's Ophthalmic and Aural Hospital —The Royal London Ophthalmic Hospital, City road E C has received a donation of 30 guineas and the North Eastern Hospital for Children Hackney, a donation of £10 10s from the Leathersellers Company —By the will of Mr James Alexander Molleson of Edinburgh £1000 have been left to the Victoria Hospital for Consumption and a similar amount to the Children's Hospital

PRUDENTIAL ASSURANCE COMPANY, LIMITED —The fifty third annual report of this company for the year ending Dec 31st 1901 shows its continued prosperity In the ordinary branch the number of policies issued during the year was 76 831 assuring the sum of £7 575 835 and producing a new annual premium income of £399 776 The premiums received during the year were £3,489 955 being an increase of £167 613 over the year 1900 The claims of the year amounted to £1 563 775 The number of deaths was 6723 and 6105 endowment assurances matured The number of policies in force at the end of the year was 651 553 In the industrial branch the premiums received during the year were £5,529 461, being an increase of £81 704 The claims of the year amounted to £2,104 939 The number of deaths was 211 670, and 2227 endowment assurances matured The number of free policies granted during the year to those policy holders of five years standing who desired to discontinue their payments was 74 798 the number in force being 771,279 The number of free policies which became claims during the year was 17,880 The total number of policies in force at the end of the year was 14 334 820 their average duration exceeded nine and a half years The assets of the company, in both branches, as shown in the balance sheet were £43 292,026 being an increase of £3 396 698 over those of 1900

THE INCORPORATED SOCIETY OF TRAINED MASSEUSES —The members of the Incorporated Society of Trained Masseuses held their annual meeting on Feb 14th at the Trained Nurses Club, 12, Buckingham street Strand There was a good attendance The meeting was an animated one and a very general interest was evinced in the business of the evening The honorary secretary is Miss Grant Trained Nurses Club 12 Buckingham street, Strand

EXETER DISPENSARY —The annual meeting of the managers of this institution was held on Feb 22nd under the presidency of Colonel Hardinge The medical report stated that 5638 patients had been treated during 1901 compared with 5571 in the previous year The financial statement showed that the income amounted to £1836 the expenditure being £1918 The deficit was met by drawing on the capital of the institution, which at the end of the year amounted to £17 301

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, CITY ROAD —The eighty eighth annual report of this hospital, which has just been presented to the annual court of governors states that during the last year 709 patients have been under treatment in the wards of the hospital, and there has been an attendance of 26 884 persons in the out-patient department The festival dinner, which was held at the Hotel Metropole on May 6th 1901, for the purpose of raising £10 000 to purchase a freehold site to build and to furnish a nurses home and to carry on the work of the hospital brought in receipts amounting to £5858 3s 9d This amount included new annual subscriptions amounting to £68 16s and was £1227 12s 7d in excess of the amount collected at the previous festival dinner in 1898 and is the largest amount ever collected for the charity at a festival dinner The total income for the year amounted to £9656 15s 9d, as against £7365 8s 5d in 1900 The donations show an increase of £2543 17s, but a loss of £85 in annual subscriptions is very much to be regretted The total expenditure amounted to £10 486 3s 8d, and is £2784 2s 8d in excess of that of 1900 This increase is largely due to the payment of £2000 for the freehold site of the proposed Nurses Home The hospital was thoroughly cleaned and repainted throughout during the summer, and a number of much needed repairs to the roof and gutterings were effected, necessitating an outlay of £490

# Parliamentary Intelligence.

## HOUSE OF COMMONS

### THURSDAY MARCH 6TH

*Preservatives and Colouring Matters in Food*

SIR SEYMOUR KING asked the President of the Local Government Board whether he has decided to take steps by the introduction of a Bill or otherwise of giving effect at an early date to the recommendations of the report of the Departmental Committee which inquired into the use of Preservatives and Colouring matters in the preservation and colouring of food and whether he is aware of the opinion [illegible] sanitary authorities in England in favour of those recommendations —Mr GRANT LAWSON replied The report referred to is under consideration and I cannot at present make any statement as to the course to be taken in regard to it With respect to the last part of the question the Local Government Board has received only one or two communications from sanitary authorities on the subject

### FRIDAY MARCH 7TH

*[illegible]*

Mr CORRIE GRANT asked the President of the Local Government Board whether [illegible] the case of [illegible] as far back as [illegible] [illegible] after [illegible]

Mr. Schwann took the view that it would be doing the Obstetrical Society of London an injustice if it were not recognised in the manner proposed in the Bill and asserted that the tests applied by the society to its candidates were often more severe than those applied to medical men in connexion with this particular work.

Mr. Griffith-Boscawen said that the whole object of this legislation seemed to be to glorify this society. He admitted that it had done good work, but here they were setting up a new board and the first thing they proposed to do was to tie its hands by saying that it must accept the certificates of this particular society.

Sir Barrington Simeon thought that the better course would be to make no distinctions of any kind, but to leave the matter with the Central Midwives Board.

Mr. Ambrose took the view that if any institutions were to be mentioned they should all be mentioned.

Sir Michael Foster pointed out that this arrangement would only last for two years and that thereafter the Central Midwives Board would be free to establish its own standard.

Sir Walter Foster said that the first two years were all important, because they would give the character to the whole subsequent proceedings.

Mr. John Dillon spoke of the clause as a pure advertisement of the Obstetrical Society of London.

On a division the amendment moved by Sir John Tuke was rejected by 18 votes against nine.

Sir John Tuke then moved to extend the special recognition to the following institutions—viz., the Queen Charlotte Hospital, London, the Maternity Hospitals of Manchester, Birmingham, Liverpool, Edinburgh, and Glasgow, and the Rotunda and Coombe Hospitals, Dublin.

Sir Walter Foster, in supporting this amendment, said that nothing did more to lower the medical profession than the two years of grace allowed after the passing of the Medical Act of 1858. Shiploads of gentlemen went from London and other places up to certain universities in the north and came back full-blown doctors of medicine and there were hundreds put upon the Medical Register in that way.

Sir John Tuke said that he must put in an absolute denial to that statement.

Sir Walter Foster said that his hon. friend represented one of these universities and was bound to stand up for it, but the fact remained.

Sir John Tuke insisted that the statement was absolutely unfounded.

Sir Walter Foster said that he knew what he was talking about. He was invited himself to go to one or two of these places. The doors of these institutions were opened and a large amount of money went into their coffers. In the present case he would wish to have no names inserted in the Bill at all.

Sir John Tuke said that he must be allowed to say that as regards the universities of Scotland the statement of his hon. friend was entirely and absolutely without foundation.

The amendment was rejected by 17 votes against eight.

The committee then adjourned until Friday, March 14th.

## ROYAL COMMISSION ON ARSENICAL POISONING.

A meeting of this Commission, for the examination of witnesses, was held on March 7th, in the Westminster Palace Hotel, Lord Kelvin, chairman of the Commission, presiding.

Dr. Ernest S. Reynolds (Manchester) who gave evidence last year, presented himself for further examination. In reply to the Chairman he said that a special look-out had been kept by himself and his assistants at the Manchester Workhouse Infirmary, the Manchester Royal Infirmary, and in his private practice for any symptoms which might have been caused by arsenic occurring in food or drink. They found that the symptoms had practically all disappeared. The keratosis, the arsenical neuritis, and the pigmentation had quite disappeared and the cases of herpes had very much diminished. Even the pigmentation which had been ascribed for years to the irritation of vermin in the pauper class had very markedly lessened in frequency. Up to the end of September, 1901, a few cases showing arsenical symptoms presented themselves at Crumpsall, but in all cases except two it was found that they had suffered already during the winter 1900–1901 and had not entirely recovered. The two exceptions were women who said that they had only recently—about May—become affected. In each of these cases Dr. J. Dixon Mann found that the hair contained a considerable quantity of arsenic. The beer which one of the women had consumed was found to contain one-hundredth of a grain of arsenic per gallon of beer. He could not give the actual amount of arsenic found in the hair. He had, however, the analyses of some hair which Mr. Scudder, the chemist in Manchester, had given him, which showed minute traces of arsenic, something like 0·003 per cent.; this was in the hair of a healthy person who was not known to have taken arsenic in any way. The idea that Gautier wished to make out was that arsenic was an essential ingredient in the thyroid gland, but knowing what they did now about the prevalence of arsenic in all sorts of things he (Dr. Reynolds) thought that it was quite likely that it was introduced from an outside source. Dr. Reynolds did not think that arsenic was an essential ingredient of hair, because in analysis they had had many blank results. At Crumpsall, from Nov. 30th, 1900, to July 20th, 1901, they had had 30 deaths—17 women and 13 men. Of these 10 men l four women were found to be suffering from rapid consumption. hese figures did not include the cases of patients who had died before e cause of the outbreak was known.

By Sir William Church: Since 1901 his experience in Manchester of euritis and other conditions attributed to arsenic had approximated to the experiences of the other large towns in this country. During the last nine months, in hospital and in private practice, he had seen a considerable number of very heavy drinkers, but only two cases of peripheral neuritis. These cases were in private practice and the symptoms were those of neuritis. One case was that of a cab-driver who drank at least a bottle of whisky a day and the other was that of a woman who did the same. In the case of the cab-driver there were pains in the limbs and some loss of power, but there was no wasting and there were no other signs at all of any arsenical poisoning and he did not think that the man took beer. The woman was bed-ridden and certainly took no beer. The symptoms were coming on rather fast. There was some wasting, there was distinct loss of power, and there were marked pains in the limbs; but again there was not a single sign of any other arsenical symptom. These were the only two cases which he had been able to pick out in which beer-drinking could be excluded and in which there were signs of peripheral neuritis. In beer-drinkers pure and simple there was now no peripheral neuritis in Manchester. It was extremely probable that arsenic might remain locked up in the thyroid gland for a long time. He knew that Dr. Dixon Mann had been examining thyroid gland and that he had not found arsenic in it, and he (Dr. Reynolds) thought that the experiments of Gautier should be taken with some reserve.

By Dr. Whitelegge: He thought that a great deal of the pigmentation which was thought to be due to vermin was actually due to arsenic. He would expect to find pigmentation from arsenic alone and he did not think that alcohol added to the tendency.

By Sir William Church: If he found arsenic either in the hair or the urine he should look for an arsenical causation.

By the Chairman: Very many of the arsenical patients who had died had died from phthisis, and in most of the cases of cirrhosis of the liver with ascites post-mortem examination had shown that there was also tuberculous peritonitis. There were still two or three old arsenical cases suffering from paralysis at the workhouse infirmary; they were recovering very slowly. During the last seven months he had been watching most carefully for cases of so-called true "alcoholic" neuritis occurring in pure spirit-drinkers, and although there had been but little or any decrease in alcoholic consumption in the district during this period and he had seen very many heavy drinkers, yet alcoholic neuritis (whether in spirit-, beer-, or mixed-drinkers) seemed to have disappeared from the district, which was formerly noted for the prevalence of the condition. These observations were confirmed by his colleagues and professional friends. Curiously enough, there had been also an enormous decrease, almost to *nil*, of cases of so-called "alcoholic" cardiac muscular dilatation, with a disappearance of the marked œdema of the legs seen in the arsenical cases. From his clinical observations during the last 20 years he was driven to the conclusion that the disappearance during the last seven months of so many symptoms which were formerly described as being due to alcohol could only be explained by the elimination of arsenic from alcoholic beverages, and as a corollary that arsenic had been present in alcoholic beverages (*to an extent dangerous to a few drinkers specially susceptible*) for many years and possibly from a source entirely independent of contaminated glucose. In September, 1901, Major Ronald Ross asked him to see a case of supposed beri-beri. The patient, who had been brought from the West Coast of Africa, was an American lady, the wife of a missionary, and she was a total abstainer. She had well-marked neuritis exactly similar to that occurring in arsenical poisoning; there was a history of a "rash" and there was very slight punctiform pigmentation. She had been living principally on tinned Californian fruit. Her hair was examined by Dr. Dixon Mann who reported to him that it contained "not a mere trace but considerable quantities of arsenic." The Californian fruit had been examined by Mr. Scudder and had been found to be practically free from arsenic and therefore it could be set aside so far as Mr. Scudder's examination was concerned. He would suggest that those tinned foods should be further examined for the presence of arsenic. The idea that arsenic might be the cause of some cases of so-called beri-beri, as suggested by Major Ross and himself some time ago, was now gaining ground in the tropics and evidence was forthcoming to show how easily arsenical poisoning might occur in tropical districts. Dr. Dixon Mann had examined specimens of hair in 24 cases of patients who were suffering from beri-beri which had been sent to him from various parts of the world; 18 of these specimens were found to be free from arsenic and six of them to contain the drug, but he (Dr. Reynolds) did not know in what quantity. Dr. Reynolds had recently received samples of the hair of four beri-beri patients in the hospital ship at Cardiff who had come from Rangoon. These he sent to Dr. Dixon Mann who found that two of them yielded no arsenic, one an appreciable amount of arsenic, and one a trace of arsenic. Although he did not think that the arsenical origin of beri-beri was proved, still the matter was worthy of further consideration, especially when the dreadful character of the disease and its great prevalence were thought of. The lady whose case he had mentioned said that she had not used any arsenical hairwash and that so far as she knew she had not taken any drug containing arsenic. After consulting with Dr. Dixon Mann he was of opinion that the *absence* of arsenic in the hair in a suspected case of arsenical poisoning did not prove that the case was not arsenical. The test for arsenic in hair required the greatest skill and experience for its performance, and results given must be examined critically unless the analyst was of high-standing and well-known ability. Some little time ago, at the request of Dr. Hodgson, he visited St. Luke's Hospital, Halifax. He saw there four suspected cases of arsenical poisoning. One case, that of a man, seemed somewhat doubtful clinically, but in this case Dr. Hodgson chemically proved the presence of arsenic in the body. The other three cases, two men and a woman, were very well-marked cases of arsenical poisoning, the clinical appearances being severe and most typical. Moreover, in his opinion, they had been poisoned with arsenic probably within three months of his visit. If he were asked to explain this outbreak at Halifax he should say that the beer and the malt ought to be examined.

The other witnesses examined were Mr. Arthur Angell, public analyst, Southampton, and his son, Mr. Arthur French Angell, who gave evidence as to a series of experiments carried out by them to determine whether or not plants were capable of taking up arsenic from soils manured with arsenical phosphates. They explained that in speaking of arsenic they meant arsenious oxide, the white arsenic of commerce. Several samples of the ordinary superphosphate manures of commerce were obtained from three large manufacturers and were tested for arsenic. Arsenic was found in every instance—22 in all. The quantity found was generally about 0·03 per cent. by weight on the whole manure. An ordinary superphosphate of lime was mixed with ½ per cent. of arsenic, this being a proportion of arsenic about 17 times greater than the quantity usually present in commercial phosphates an admitted evil. They ought to insert the provision that was in the Bill of 1900. He could not understand why it had been omitted. They ere told that a certain Government office objected. He had very reat belief in Government offices but, after all, they could not be allowed to dictate the legislation of the country, and if the House of Commons thought that in order to deal thoroughly with a matter certain enactments were necessary it was for the House to pass those enactments and for the Government office to see that they were properly carried out. They had been told that this was contrary to the precedent of the Medical Act, the Dentists Act, and other Acts but he did not think that the cases were analogous. There was an evil here which required a very stringent enactment. They had been told by Sir Michael Foster that this legal certificate would be enough in itself to prevent people from employing women who were not certified; that they would always resort to the certified woman. He could not believe this. On the contrary, he believed that poor people would continue to resort to the lower class of midwife because of the lowness of her fees.

Mr T. P. O'CONNOR said that he thought it was a defect in the law that the public were not more protected from quacks. The law was that anyone could go and consult a quack. His first objection, therefore, was that they were introducing with regard to a class of inferior medical practitioners (if he might so lescribe midwives) a principle which had not yet been established n the law with regard to a large superior, and more responsible body f practitioners—namely, physicians and surgeons. Another point as that if this Bill were passed the new class of certified midwives hich it would bring into existence would not become a numerous ss, for some considerable time at any rate, in the small towns and villages. If this amendment were passed it would deprive many places of all the aid to which they had been accustomed or nearly the whole of it. Therefore he thought that the amendment was premature.

Sir JOHN BATTY TUKE said that he could not see the force of the last argument used by Mr O'Connor because according to the Bill any midwife of reputable character now in practice could claim to be certified during the first two years from the date of the Act coming into operation. Surely therefore there would be sufficient midwives to fill up any gaps created by this legislation. The penal provision was in the Bill of 1900, and he could see no good reason for its omission from the present Bill.

Mr HEYWOOD JOHNSTONE said that the mover of the amendment knew perfectly well that the acceptance of these words meant the ruin of the Bill. He knew perfectly well that Governments even in these days of large majorities had some little control over the shaping of private Members' Bills. But apart from that, an objection to this amendment was that it was contrary to Parliamentary procedure and practice in all kindred matters. The Medical Act of 1858 did not make unqualified practice penal; it simply imposed a penalty upon persons who professed to be qualified when they were not qualified just in the same way as this Bill proposed to impose a penalty upon women who professed to be qualified midwives when they were not qualified. From the very passing of the Medical Act of 1858 the General Medical Council and other medical authorities had tried their best to make unqualified practice of any sort penal and he found that so lately as last month one of the leading medical papers said that the omission to penalise unqualified practice was a great defect in the Medical Acts. This therefore was the thin end of the wedge and if the committee were to allow it to be inserted they would very soon find Parliament asked to amend the Medical Acts so as to render all unqualified practice penal. The amendment was not only contrary to the Medical Act, but it was also contrary to the Dentists Act 1878, and to the Veterinary Surgeons Act 1891. He might also say that these words which were in the Bill of two years ago raised very great doubts as to the position of the person generally known as the friendly neighbour. Two years ago the promoters of the Bill sought in every possible way to frame words which would satisfy those Members who were desirous that women helping their neighbours in this time of trouble should be protected from all danger of penalty or interference but they could not frame any form of words which were satisfactory to those who wished to protect the interests of these women. If the words proposed in the amendment were put in they would, no doubt, interfere very seriously with the help of the friendly neighbour for let it be remembered that in a matter of this kind poor people were easily frightened and if they thought that there was any risk whatever they would not examine minutely the words of the Act of Parliament but would simply run off frightened. The fate of the Bill practically depended upon the fate of this amendment and he asked the committee to reject the amendment.

Sir WALTER FOSTER said that he had long been connected with the General Medical Council and he had never known it to take any steps to put down unqualified practice in the sense referred to by the hon. Member. All that the General Medical Council had done had been to try to protect the registered practitioner and occasionally to institute prosecutions against persons who used titles indicating that they were registered. He could not think that the analogy between the midwives proposed to be registered under this Bill and the medical profession was a correct one. The medical pro[illegible] were the vast majority of the people engaged in the practic[illegible] edicine surgery, and midwifery but the women here were only [illegible] all section probably about one tenth of those engaged in the pr[illegible] f midwifery. They were taking pains to protect a certain sm[illegible] limited class of certified midwives whereas the whole class [illegible] ly nurses who did an infinitely greater amount of harm were left [illegible] le. He submitted that in such a matter there should be a penal cl[illegible]. As to what would happen in country districts, the women now [illegible] in practice would come in and be registered the moment th[illegible] Bill was passed and the Central Midwives Board was constitut[illegible].

Mr SCHWANN insisted that if the proposed words were introduced they would raise a legion of opponents to the Bill.

Sir MICHAEL FOSTER said that the operation of the measure could only be a matter of opinion and in spite of the strong assertions to the contrary he still believed that its operation would eventually very largely diminish almost to extinction, the class of women whom they all desired to be extinguished. He had practised the art of midwifery for some six years in country districts, and he believed that without calling into operation any penal clause the Bill would produce the desired result.

Sir FRANCIS POWELL said that since the second reading of the Bill he had gone into this matter very carefully and he had come to the conclusion that it would be safer on the whole to do without a penal provision.

On a division the amendment was rejected by 25 votes against eight.

Mr AMBROSE moved to insert these words: "Or any woman who being licensed under this Act shall employ as a substitute at any childbirth any person not licensed under this Act shall be liable on summary conviction to a fine not exceeding £5, provided always that nothing in this Act shall apply to any person or persons attending a woman during labour in a case of emergency until the services of a person licensed under this Act or of a registered medical practitioner, are available." The hon. Member denied that he had any wish to wreck the Bill; he merely wished to make it as perfect as possible.

Mr HEYWOOD JOHNSTONE pointed out that there was already in the Bill a provision that no woman certified under the Act should employ an uncertified person as her substitute.

The amendment was negatived without a division.

Sir JOHN TUKE moved to insert a section to the effect that "no woman shall be entitled after the first day of January, 1906, to recover any fee or charge for attendance as a midwife unless she is certified under this Act." He argued that it was only a matter of justice to the certified midwife that she should have this security for her fees.

Mr PARKER SMITH hoped that the committee would accept this section which he said was thoroughly in accordance with the principles of the Medical Acts. It was one of the inducements offered to medical practitioners to get registered that registration enabled them to sue for fees in a court of law and he thought that this inducement should be offered to midwives.

Mr HEYWOOD JOHNSTONE said that he must ask the committee to decide this question for the promoters of the Bill. There was much to be said on both sides. Personally he should feel considerable difficulty in resisting the amendment because he felt considerable sympathy with it but on the other hand it must be borne in mind that they were disentitling a woman to recover fees for doing what was a perfectly legal act.

Mr GRIFFITH BOSCAWEN spoke in support of the amendment as calculated to improve the legal position of the certified midwife.

The amendment was carried by 21 against 10 votes and the words proposed by Sir John Tuke were accordingly inserted in the Bill.

Mr T. P. O'CONNOR moved to insert these words: "No woman certified under this Act shall represent that she is to be regarded as an independent practitioner of midwifery." The main opposition of the medical profession to this Bill was that they were creating a class of midwives who would usurp not to the disadvantage of the profession but to that of parturient women, the position of the obstetric physician. For himself, he regarded this as a serious danger. The midwife should be entitled to act as a midwife only in a perfectly easy natural normal state of things, and he did not think that too many provisions could be inserted in the Bill to enforce this upon the mind of midwives.

Mr COHEN criticised the proposed words as ambiguous.

Mr HEYWOOD JOHNSTONE said that he did not know what this amendment was aimed at or what it would effect.

Sir WALTER FOSTER said that the object of the amendment was to bring home to midwives that they must not regard themselves as independent practitioners of midwifery and that when anything went wrong with a case it became their duty to send for a medical practitioner. In the interests of the smooth working of the Bill he was inclined to support the amendment.

Mr EMMOTT said that while he was in sympathy with the object of the amendment he did not think that the words proposed were of any use.

Sir WALTER FOSTER: What the medical profession means by an independent practitioner of midwifery is a person, man or woman, who is qualified to practise midwifery in all its branches.

Mr EMMOTT: Quite so, but would the judges mean that?

Sir WALTER FOSTER: Nobody can tell what the judges will do with Acts of Parliament but these words have been arrived at after some deliberation and I believe that they are proposed in perfectly good faith.

After some further discussion Mr O'CONNOR withdrew the amendment.

The committee then proceeded to the consideration of Clause 3—viz.: "Any woman who within two years from the date of this Act coming into operation claims to be certified under this Act shall be so certified provided she holds a certificate in midwifery from the Royal College of Physicians of Ireland or from the Obstetrical Society of London or such other certificate as may be approved by the Central Midwives Board or produces evidence satisfactory to the board that at the passing of this Act she has been in *bonâ fide* practice as a midwife and that she bears a good character."

Mr T. P. O'CONNOR took exception to the two bodies named being distinguished by this special treatment and suggested that the whole responsibility as to the acceptance of certificates should be left with the Central Midwives Board.

Sir JOHN TUKE moved to strike out of the clause the reference to the Royal College of Physicians of Ireland and the Obstetrical Society of London. He thought that not only was it invidious to make any destinction in this connexion but it was inferentially setting up a standard for the Central Midwives Board.

Mr HEYWOOD JOHNSTONE gave an account of the work done by the Obstetrical Society of London and said that the question was whether in this Bill there should be some recognition of that work. The society, he said, had been doing the very work which in future would be done by the Central Midwives Board and again and again it had been openly stated that when a duly qualified examining board had been called into existence [illegible] as he hoped one would be by this Bill, the functions of the society as far as the examination of midwives was concerned would cease. At the present moment there were 6527 women on the register of the society who he thought would make an admirable [illegible] under the new system. In these circumstances he asked the committee to recognise the society in the manner suggested.

Sir WALTER FOSTER said that it was the first time that he had known of an Act of Parliament being used to give a testimonial to a private society. He objected to the Obstetrical Society of London being given special advantages over other societies engaged in the same work. All these 6527 women would come upon the register by virtue of the decision of the Central Midwives Board and therefore they would suffer no detriment.

Hodson, V. S., B.A., M.B., B.Ch. Oxon., has been appointed Senior Obstetric Physician to St. Thomas's Hospital.

Hudson, A. C., M.A., M.B., B.C. Cantab., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

Jones, B.S., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

Martin, John Middleton, B.A., M.B., B.C., D.P.H. Cantab., has been appointed Medical Officer of Health for the Stroud Urban District Council, vice T. Partridge, M.R.C.P. Irel., M.R.C.S., L.S.A., resigned.

McNaughton, J. G., M.D., M.R.C.P. Edin., has been appointed Honorary Medical Officer, Chorlton-upon-Medlock Dispensary, Manchester.

Mennell, Z., M.B. Lond., L.R.C.P. Lond., M.R.C.S., has been appointed Clinical Assistant in the Throat Department at St. Thomas's Hospital.

Miller, T. D., L.R.C.P. Lond., M.R.C.S., has been appointed Junior Obstetric Physician to St. Thomas's Hospital.

Morison, R., M.B., Ch.B., has been appointed Junior House Surgeon to the Birkenhead Borough Hospital.

Paterson, T. W. S., M.A., M.B., B.C. Cantab., L.R.C.P. Lond., M.R.C.S., has been appointed House Physician to St. Thomas's Hospital.

Sansom, B. E., L.R.C.P. Lond., M.R.C.S., L.S.A., has been appointed Clinical Assistant in the Throat Department at St. Thomas's Hospital.

Shipman, G. A. C., M.A., M.B., B.C. Cantab., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

Sinclair, H. W., M.B., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant House Physician to St. Thomas's Hospital.

Skerrett, F. B., B Sc Lond., L.R.C.P. Lond., M.R.C.S., has been appointed Senior Ophthalmic House Surgeon to St. Thomas's Hospital.

Spurrier, H., B.A. Cantab., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

Stannus, H. S., L.R.C.P. Lond., M.R.C.S., has been appointed House Physician to St. Thomas's Hospital.

Thresh, J. C., M.D. Vict. Univ., has been appointed by the Kelso Town Council to report on the various schemes of water-supply proposed for the Infectious Diseases Hospital of the Kelso District Committee.

White, G. F., M.D., has been appointed Senior House Surgeon to the Birkenhead Borough Hospital.

Wrightson, R. B., M.D. Dubl., has been re-appointed Medical Officer of Health to the Aldeburgh Corporation.

## Vacancies.

*For further information regarding each vacancy reference should be made to the advertisement (see Index).*

Birmingham and Midland Skin and Urinary Hospital.—Assistant Surgeon.

Borough Hospital, Bootle, Liverpool.—Junior Resident. Salary £80, with board and laundry.

Bradford Poor-law Union, Hospital, and Workhouse.—First Resident Assistant Medical Officer, unmarried. Salary £125, with rations, apartments, and washing.

Bradford Royal Infirmary.—Dispensary Surgeon, unmarried. Salary £100 per annum, with board and residence.

Brecon Infirmary.—Resident House Surgeon, unmarried. Salary £120 per annum, with apartments, board, attendance, fire, and gas.

Brentford Union Infirmary and Workhouse.—Assistant Medical Superintendent, unmarried. The person appointed will be required to devote his whole time to the service of the guardians. Salary £120 per annum, with apartments, rations, washing, &c.

Bridgwater Infirmary.—House Surgeon. Salary £80 a year, with board and residence.

Brighton, Hove, and Sussex Throat and Ear Hospital, Church-street, Brighton.—House Surgeon for six months, renewable. Salary at rate of £75 per annum.

Brighton and Hove Lying-in Institution and Hospital for Women.—House Surgeon, unmarried. Salary £80 per annum, with apartments, board, gas, coals, and attendance.

Chelsea Hospital for Women, Fulham-road, S.W.—Pathologist.

Chesterfield and North Derbyshire Hospital and Dispensary.—Resident House Surgeon. Salary £120, with board, apartments, and laundress.

Cornwall County Asylum, Bodmin.—Junior Assistant Medical Officer. Salary £120, rising to £150, with board, apartments, &c.

East London Hospital for Children and Dispensary for Women, Glamis road, Shadwell, E.—House Surgeon for six months. Board, residence, &c., and honorarium of £25.

East Sussex County Asylum, Hayward's Heath.—Second Assistant Medical Officer and Pathologist, unmarried. Salary £175 per annum, with board, lodging, washing, and attendance.

Essex and Colchester General Hospital.—House Surgeon. Salary £100 a year, with board, washing, and residence.

Glasgow Eye Infirmary.—Resident Assistant House Surgeon. Salary £75, with apartments and board.

Great Northern Central Hospital, Holloway, N.—Junior House Physician for six months. Salary at rate of £30 per annum, with board, lodging, and washing.

Grey's Hospital, Pietermaritzburg, Natal, South Africa.—Resident Medical Superintendent. Salary, £350 first year, £400 second year, with board, lodging, and washing.

Guy's Hospital.—Demonstrator of Bacteriology and Bacteriologist. Salary about £150, rising to £200 per annum.

Hanley, Stoke, and Fenton Joint Hospital Board.—Lady Resident Assistant Medical Officer. Salary £60 per annum, with board, residence, and washing.

Huddersfield Infirmary.—Assistant House Surgeon. Salary £60 per annum, with board, residence, and washing.

Lancashire County Asylum, Winwick, Warrington.—Assistant Medical Officer, unmarried. Salary £150 per annum, rising to £200, with apartments, board, attendance, and washing.

Leicester Infirmary.—Honorary Assistant Physician.

Liverpool Stanley Hospital.—Second and Third House Surgeons. Salaries £80 and £70 per annum respectively, with board, residence, and washing.

London County Asylum, Bexley, Kent.—Junior Assistant Medical Officer. Salary £150 per annum, with board, apartments, and washing.

Metropolitan Ear, Nose, and Throat Hospital, Grafton-street, Tottenham-court-road, W.—Clinical Assistants.

Middlesex County Asylum, Upper Tooting, London, S.W.—Assistant Medical Officer.

Newcastle-on-Tyne Dispensary.—Visiting Medical Assistant. Salary £160 for first year and £180 afterwards.

Norfolk and Norwich Hospital.—House Surgeon, unmarried. Salary £80 per annum, with board, lodging, and washing.

Nottingham Children's Hospital, Forest House.—House Surgeon, unmarried. Salary £100, with board and residence.

Royal Berkshire Hospital.—House Surgeon. Salary £80 per annum, with board, lodging, and washing. Also Assistant House Surgeon. Salary £50 per annum, with board, lodging, and washing. Both for six months.

Royal Halifax Infirmary.—Second House Surgeon. Also Third House Surgeon, unmarried. Salary £80 per annum, with residence, board, and washing.

Royal Sea Bathing Hospital.—Resident Surgeon as Junior for six months and as Senior for a like period. Salary at rate of £80 and £120 per annum respectively, with board and residence.

Sheffield University College.—Demonstrator in the Bacteriological Laboratory. Salary £150, rising to £200 per annum.

Stockport Infirmary.—Assistant House and Visiting Surgeon. Salary £80 per annum, with board, washing, and residence.

St. Pancras Workhouse, London.—Senior Assistant Medical Officer. Salary £135 per annum, with residential allowances.

Taunton and Somerset Hospital.—Assistant House Surgeon for six months. Salary at rate of £60 per annum, with board, lodging, and laundry.

Tunbridge Wells General Hospital.—House Surgeon, unmarried. Salary £100 per annum, with board, apartments, gas, firing, and attendance.

Victoria Hospital for Children, Queen's-road, Chelsea, S.W. House Physician for six months. Honorarium of £25, with boa and lodging.

West Riding Asylum, Wadsley, near Sheffield.—Fifth Assista Medical Officer. Salary £140 per annum, rising to £160, wi board, &c.

The Chief Inspector of Factories, Home Office, London, S.W., giv notice of vacancies as Certifying Surgeon, under the Facto Acts, at Kendal, in the county of Westmorland; at Castle Bytha in the county of Lincoln; at Earl's Colne, in the county of Esse at Draperstown, in the county of Londonderry; at Colnbrook, the county of Buckingham; at Ripley, in the county of Derby; Mortimer, in the county of Berks; at Tullow, in the county Carlow; at Tow Law and Wolsingham, in the county of Durha at Chesterfield, in the county of Derby; and at Mountmellick, Queen's County.

## Births, Marriages, and Deaths.

### BIRTHS.

Farthing.—On March 4th, at Dartford, the wife of T. Farthing, M. Edin., of a son.

Ferguson.—On March 5th, at Canfield-gardens, South Hampstead, t wife of Arnold Ferguson, F.R.C.S. Edin., of a daughter.

Gedge.—On March 4th, at Pewsey, Wilts, the wife of Arthur Sydn Gedge, M.R.C.S., L.R.C.P. Lond., of a daughter.

Thomson.—On the 10th inst., at Bridge House, Retford, Notts, the w of Dr. George Thomson, of a son.

Tyson.—On March 3rd, at Folkestone, the wife of W. J. Tyson, M. Durh., F.R.C.P. Lond., F.R.C.S. Eng., of a daughter.

Young.—On March 3rd, at Sydney, N.S.W., the wife of H. Tay Young, M.D. Glasg., of a son.

### MARRIAGE.

Longhurst—Phillipson.—On March 8th, at St. Alban's Churc Teddington, Percy A. Longhurst, M.R.C.S., L.R.C.P. Lond., Naida Eveleigh Phillipson, eldest daughter of the late N. Phillipson.

### DEATHS.

Dudley.—On March 7th, William Lewis Dudley, M.D. St. An F.R.C.S. Eng., in his 82nd year.

Nightingall.—On Feb. 26th, at 83, London-road, St. Leonards on Se Robert Salisbury Nightingall, M.D. St. Andrews, M.R.C.S. En L.S.A., in his 86th year. Interred at Hollington.

Sedgefield.—On Feb. 8th, at Sanawar, Punjab, India, Lieutena Colonel Arthur Robert Wyatt Sedgefield, I.M.S., aged 47 years.

Turnbull.—On March 7th, at Cleveland-gardens, Surgeon Maj Francis Turnbull, I.M.S. (retired), aged 82.

*N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

Half the manure was applied at the time of sowing and half when the young plants were well above ground care being taken on each application to avoid actual contact between the manure and seed or plant It was determined by experiment that the arsenic when mixed with superphosphate was readily soluble in cold water The method adopted for the testing for, and estimation of, arsenic was Hehner's modification of Marsh's process The results of their experiments which had been carried as far as one season permitted went to show that the roots of plants were capable of taking up arsenic from soils manured with arseniated phosphates From the roots the arsenic could rise in the fibro-vascular bundles by a process of suction and capillarity and might be present in measurable quantities in the early stages of succulent growths Arsenic was found in rhubarb petioles and leaf blades and in the young leaves or grass of rye and buckwheat and in the stems and leaves and green pods of broad beans In no instance was the faintest trace of arsenic present in the fruit or seed of any plant It thus appeared that in those parts of the plants which were remote from the influences of mere mechanical forces and where vital or physiological energies predominated a selective power was brought to bear, and arsenic even if present was rejected No arsenic was present in the green, unripe, nor in the fully ripe seeds of buckwheat barley wheat oats maize, rye nor in the fruits of tomatoes and cucumbers nor in the whole plants of lettuce and cabbage nor in carrots and mangold They had satisfied themselves that the culture of all the plants was carried on with due care to prevent the adherence of the arseniated phosphate to any part of the plants above ground

## BOOKS, ETC, RECEIVED

**ASSOCIATION OF AMERICAN PHYSICIANS** *Philadelphia*

Transactions of the Association of American Physicians Sixteenth Session Held at Washington D C, April 30th and May 1st and 2nd 1901 Vol xvi Price not stated

**BALE JOHN, SONS AND DANIELSSON, LIMITED**, 83-89, Great Titchfield street, W

The British Sanatoria Annual 1902 With numerous Illustrations and Appendix Price 2*s* 6*d*, post free 2*s* 9*d*

A Handbook of the Gnats or Mosquitoes giving the Anatomy and Life History of the Culicidæ By Lieutenant Colonel Geo M Giles I M S (retired) M B Lond, F R C S Second edition, rewritten and enlarged Price 21*s* net, post free abroad 22*s* 6*d*

**BRITISH INDIA PRINTING WORKS** Bombay

Report on Leprosy and the Homeless Leper Asylum Matunga Bombay, 1890-97 By N H Choksy, M D (*honoris causâ*) *Freiburg i B Special Assistant Health Officer in Charge* Arthur road Hospital, late Medical Officer in Charge Homeless Leper Asylum Matunga Bombay Price not stated

**CHURCHILL, J & A**, 7, Great Marlborough-street, W

A Short History of the Society of Apothecaries of London By Percy G Lodge F R C S L R C S, L A H I L S A Lond With an Account of the Apothecaries Hall of Ireland Price not stated

*Guy's Hospital Reports* Edited by J H Bryant M D, and F J Stewart M S Vol lvi, being Vol xli of the Third Series Price 6*s*, to non subscribers 10*s* 6*d*

**CLARK, T AND T**, 38, George-street, Edinburgh

Demonic Possession in the New Testament Its Relations *Historical Medical and Theological* By William Menzies Alexander, M A, B Sc B D C M, M D Price 5*s*

**GRIFFIN, CHARLES, AND COMPANY, LIMITED**, Exeter street, Strand W C

Forensic Medicine and Toxicology By J Dixon Mann M D, F R C P Professor of Forensic Medicine and Toxicology in Owens College, Manchester &c Third edition, revised and enlarged Price 21*s*

**HIRSCHWALD AUGUST**, Unter den Linden 68 Berlin, N W

Bibliothek von Coler (Herausgeber O Schjerning):—

Band XI Die experimentelle Diagnostik Serumtherapie und Prophylaxe der Infectionskrankheiten Von Stabsarzt Dr E Marx Price not stated

Band XII Die Verletzungen und Verengerungen der Harnröhre und ihre Behandlung Bearbeitet von Dr M Martens Stabsarzt an der Kaiser Wilhelms Akademie fur das militärärztliche Bildungswesen &c Mit einem Vorwort von Geh Med Rath Prof Dr König Generalarzt à la suite des Sanitäts Corps Price not stated

**'KNOWLEDGE' Office**, 326 High Holborn W C

Bird Hunting on the White Nile a Naturalist's Experiences in the Soudan By Harry F Witherby F Z S, Member of the British Ornithological Union Price 2*s* 6*d*

**LIPPINCOTT, J B, COMPANY** 6 Southampton street, W C

Photographic Atlas of the *Diseases of the Skin* By George Henry Fox, A M M D Parts XIII XIV XV, XVI (conclusion) Price not stated

**LONGMANS GREEN AND CO** 39 Paternoster row E C

The Foraminifera An Introduction to the Study of the Protozoa By Frederick Chapman A L S F R M S formerly Assistant in the Geological Laboratory of the Royal College of Science London, Palæontologist to the National Museum Melbourne Price 9*s* net

**LONGMANS GREEN AND CO** 39 Paternoster-row, E C, **AND CHARITY ORGANISATION SOCIETY**, 15, Buckingham-street, Adelphi W C

The Annual Charities Register and Digest 1902 With an introduction by C S Loch Secretary to the Council of the Charity Organisation Society, London Price 4*s* net

**MARLBOROUGH E AND CO**, 51, Old Bailey, E C

Hindustani Self taught With English Phonetic Pronunciation By C A Thimm F R G S Price 2*s*, cloth 2*s* 6*d*

**MEDICAL SUPPLY ASSOCIATION** 12 Teviot place, Edinburgh

Tables of Organic Materia Medica For Medical Students By William Wood M B C M, M R C P Eng Price not stated

**OLIPHANT ANDERSON AND FERRIER**, Edinburgh and London

The Academic Gregories By Agnes Grainger Stewart ('Famous Scots Series) Price 1*s* 6*d* net

**SAUNDERS, W B AND CO**, London and Philadelphia

A Text book of Physiology Edited by William H Howell, Ph D M D Professor of Physiology in Johns Hopkins University, Baltimore Md Second edition, revised Vol ii Price 15*s* net

**SCIENTIFIC PRESS LIMITED**, 28 and 29, Southampton street Strand, W C

Burdett's Hospitals and Charities 1902 By Sir Henry Burdett K C B Price 5*s*

**SHARLAND R L**, 38 Churchfield road Acton W

The Scientific Roll and Magazine of Systematized Notes Conducted by Alexander Ramsay Bacteria Vol I, No 4 February 1902 Price 1*s*

**STOCK ELLIOT** 62 Paternoster-row, E C

*Woman's Best Work and Latent Capabilities* By Frederick James Gant F R C S Consulting Surgeon to the Royal Free Hospital, &c A new edition Price 2*s* 6*d*

**SWAN SONNENSCHEIN AND CO, LIMITED**, *London*

A Text book of Insanity By Charles Mercier M B, M R C P, F R C S Lecturer on Insanity at the Westminster Hospital Medical School and at the London Medical School for Women Price 6*s* net

## Appointments.

*Successful applicants for Vacancies Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to* THE LANCET *Office, directed to the Sub Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number*

**ACLAND H T D** F R C S Eng has been appointed Medical Officer to St Thomas's Home St Thomas's Hospital, vice H C Jonas M B B S Lond

**BRECHING D H** B A Syd Univ, M B, C M Edin has been appointed Medical Officer to the Post office at Huddersfield

**BRISCOE WILLIAM THOMAS**, A B M D, M Ch Dubl, has been re-appointed Medical Officer of Health for Chippenham

**BROWNE H S D** B A Cantab L R C P M R C S has been appointed Clinical Assistant in the Ear Department of St Thomas's Hospital

**CHILD, F J** M A M B, B C Cantab L R C P Lond M R C S, has been appointed House Surgeon to St Thomas's Hospital

**CLARKSON F** M B B S Durh has been appointed Junior Ophthalmic House Surgeon to St Thomas's Hospital

**COATES, J** L R C P Lond M R C S has been appointed Assistant House Surgeon to St Thomas's Hospital

**CROMPTON, K I** B A M B B C Cantab has been appointed Assistant House Physician to St Thomas's Hospital

**DAKEYNE T F** M R C S L R C P Edin, has been re-appointed Medical Officer of Health for the Rural District of Leek

**DICK GEORGE** M B Ch B Edin has been appointed Medical Officer of Health for Caithness shire Royal Burgh of Wick and Thurso Burgh

**DOWNES T W H** L R C P M R C S has been appointed House Surgeon to St Thomas's Hospital

**DUDGEON L S** M R C P M R C S, has been appointed Clinical Assistant in the Electrical Department at St Thomas's Hospital

**EASTON H A** L R C P Lond M R C S, has been appointed Clinical Assistant in the Skin Department at St Thomas's Hospital

**FRANCIS A B** L R C P Edin L F P S Edin has been re-appointed Medical Officer of Health to the Hadleigh Urban District Council

**GRANVILLE W M G** M A M B B Ch Oxon has been appointed House Physician to St Thomas's Hospital

**GRANGER EVANS** *Jessie D* M B Ch B Glasg, has been appointed Clinical Assistant New Hospital for Women

**HARCOURT J C** M B Lond has been appointed Medical Officer to the Derwent Valley Water Board

**HENDERSON T B** M A M B B Ch Oxon has been appointed House Physician to St Thomas's Hospital

**HILL W B** A Cantab L R C P Lond M R C S, has been appointed House Surgeon to St Thomas's Hospital

The elder girl became very pale and sat with her head outside the omnibus to avoid being sick. On reaching home—a few minutes' walk from the omnibus—I found that the baby was not well. He refused all food and was listless. All night he was feverish and restless and cried as though in pain. In the morning we found the right side of his face swollen and the gums of the right side of the upper jaw inflamed. This was followed by ulceration of the gums and the complaint affected in succession the left side of the upper jaw and then both sides of the lower jaw. He was ill for 10 days, feverish, and very restless, and in a good deal of pain, taking very little nourishment. The ulceration was accompanied by fœtor, his breath smelling like the lamp of phosphoretted hydrogen. The fever and ulceration were followed by enlargement of the submaxillary and sublingual glands and a fall in which the back of a chair struck the chin was followed by an abscess. I am, Sirs, yours faithfully,

(Mrs.) L. H. ANDREW BIRD, L.R.C.P. Irel.

De Beauvoir-road, N., March 3rd, 1902.

## THE BAEL TREATMENT OF DYSENTERY.

*To the Editors of* THE LANCET.

SIRS,—Seeing your remarks on my letter which you were so good as to insert in your issue of Jan. 4th last, Messrs. Bathgate of Calcutta, who prepare the dietetic bael to which I referred, write and refer me to the opinions expressed in Watt's "Dictionary of the Economic Products of India," vol. i., pp. 117, et seq., which greatly predominate in favour of the dried bael fruit as a remedy for dysentery and diarrhœa in comparison with the ripe fruit, the latter being chiefly looked upon as a laxative merely. I certainly agree with you nevertheless in the great value of the fresh fruit in cases of dysentery. I have no experience of Squire and Sons' preparation from the fresh fruit which, from what you say, must be excellent, but I have known Bathgate's preparation, their dietetic bael, which from their letter I presume they prepare from dried unripe fruit, to work marvellous cures. So the inference is that preparations such as Squire's and Bathgate's from either the ripe or unripe fruit are alike most excellent remedies. Would it not be well to have a good supply of such valuable remedies for dysentery kept in our field hospitals with sanction given for the most liberal use of the same, whereby many of our soldiers' valuable lives might be saved.—I am, Sirs, yours faithfully,

Southbourne, Feb. 26th, 1902. J. E. B. PARSONS.

## OVERPAID INCOME-TAX.

THE Income-tax Adjustment Agency, Limited, writes to remind our readers "that no claim for repayment of tax deducted from rents, dividends, annuities, &c., in respect of the year ended April 5th, 1899, will be allowed unless the same be lodged before April 5th next. Where the income has been received and tax paid a claim can now be made for four years." The Agency states that "with few exceptions, all persons whose incomes do not exceed £700 are entitled to exemptions or abatements; even when the income is said to be 'free of income-tax,' and on an income not exceeding £400 the amount repayable might amount to £42." All claims should be made with the least possible delay, as the time allowed for making some of them is strictly limited, and the Agency will be glad to advise gratuitously on receipt of particulars to the office, 9, 10, and 11, Poultry, London, E.C. A stamped addressed envelope should be inclosed.

## THE ACETYLENE LIGHT IN OMNIBUSES.

REFERRING to our annotation on this subject in our issue of March 1st, p 608, Mr. Thomas H. Lewis, manager to the "Portable Gaslight, Limited," of 109, Victoria-street, Westminster, states that they have a system at present in use on one of the London Road Car Company's omnibuses in which the acetylene is generated in a carbide of calcium cartridge containing a purifier which entirely absorbs phosphoretted and sulphuretted hydrogen before the gas passes from the purifier. This is exactly what, as we suggested, might be done. Assuming that the purifier does its work properly the acetylene would then be deprived of its poisonous properties.

## TRAVELLING TIME ALLOWANCE FOR LOCUM-TENENTS.

*To the Editors of* THE LANCET.

SIRS,—I would like to suggest through your columns that it would be only fair and reasonable in the case of locum-tenents who frequently have to make such long journeys to and fro a post, occupying either way the greater part of a day, that the length of the engagement should be reckoned from the time of starting to the time of return. The work is so uncertain and the wastage so great, whilst the convenience to established men of being suited to their own time for holiday-making, &c., so useful, that the allowance should not be grudged. I am, Sirs, yours faithfully,

March 12th, 1902. LOCUM.

◆

*A Forty Years' Subscriber.*—There have been a great many references to cremation in THE LANCET during the last 17 or 18 years. Two of these were leading articles—namely, on Feb. 7th, 1885, p. 259, and May 14th, 1893, p. 1338. Among the contributions specially favourable to cremation mention may be made of those which appeared on August 8th, 1891, p. 314; August 15th, 1891, p. 401; and June 17th, 1899, p. 1661. Sir Henry Thompson's book, "Modern Cremation" (Smith, Elder, and Co., fourth edition, 1901, price 2*s.*), should be consulted, and other literature will probably be obtainable from the Cremation Society, 324, Regent-street, London, W.

*Docmed* can obtain all the details concerning the medical curriculum from the Students' Number of THE LANCET, Sept. 7th, 1901. The average student, from start to finish, takes nearly six years in completing his curriculum. We cannot suggest a way in which our correspondent could earn anything during his student days, nor would he find that he had much spare time if he joined a medical school.

*Medico.*—Certainly THE LANCET has never recommended this quack treatment. Our correspondent will observe that no detailed reference is made to our columns. Occasionally we, or more often some of our contributors, may speak well of a drug in connexion with a certain disease. Then a quack will make some sort of concoction of this drug and will claim that his nostrum has our approval.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

# Medical Diary for the ensuing Week.

## OPERATIONS.

### METROPOLITAN HOSPITALS.

**MONDAY** (17th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.) West London (2.30 P.M.), London Throat (2 P.M.).

**TUESDAY** (18th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), S Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Wes minster (2 P.M.), West London (2.30 P.M.), University Colle (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Marl (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Thro (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. a 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

**WEDNESDAY** (19th).—St. Bartholomew's (1.30 P.M.), University Colle (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cro (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's Colle (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samarit (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northe Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M. London Throat (2 P.M.), Cancer (2 P.M.), Throat, Golden-squa (9.30 A.M.).

**THURSDAY** (20th).—St. Bartholomew's (1.30 P.M.), St. Thomas (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), S George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middles (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-We London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæc logical, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throa Golden-square (9.30 A.M.).

**FRIDAY** (21st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), S Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charin cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), G Northern Central (2.30 P.M.). West London (2.30 P.M.), Lond Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P.M. Throat, Golden-square, (9.30 A.M.), City Orthopædic (2.30 P.M.).

**SATURDAY** (22nd).—Royal Free (9 A.M. and 2 P.M.), London (2 P.M Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University Colle (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary (10 P.M.), London Throat (2 P.M.), Throat, Golden-square (9.30 A.M

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalm (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and th Central London Ophthalmic Hospitals operations are performed daily.

## SOCIETIES.

**MONDAY** (17th).—MEDICAL SOCIETY OF LONDON (11, Chandos-stree Cavendish-square, W.).—9 P.M. Mr. A. Pearce Gould: Lettsomia Lectures on Certain Diseases of the Blood-vessels. Lecture II Thrombosis:—Its Rarer Forms, Chronic, Recurrent, Thrombosis Spermatic, Mesenteric, Innominate, Azygos Veins.

**TUESDAY** (18th).—CHELSEA CLINICAL SOCIETY (Jenner Institute Preventive Medicine, Chelsea-gardens, Grosvenor-road, S.W.). 8.30 P.M. Annual Clinical Debate:—Cancer, its Nature, Origi and General Principles of Treatment. The following, amon others, will take part in the discussion—Sir Wm. M. Banks, Mr. A Pearce Gould, Mr. A. W. Mayo Robson, Mr. A. M. Sheild, Dr. B. Blacker (The present position of treatment by means of X Ray and Ultra-violet Rays, with demonstration of apparatus).

PATHOLOGICAL SOCIETY OF LONDON (Laboratories of the Roya Colleges of Physicians and Surgeons).—8 P.M. Laboratory Meeting Dr. F. W. Pavy, Dr. T. G. Brodie, and Dr. R. L. Sian: Phlorid Glycosuria.—Mr. W. Edmunds: Histological Changes in th Nervous System following Excision of the Thyroid.—Dr. Bain: Th Role of the Liver and Spleen in the Destruction of the Bloo Corpuscles.—Dr. Dixon and Dr. Brodie: The Effect of Suprarena Extract upon the Pulmonary Circulation.

**WEDNESDAY** (19th).—ROYAL MICROSCOPICAL SOCIETY (20, Hanove square, W.).—7.30 P.M. Mr. A. Earland: *Exhibition of Foraminife*

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY (20, Hanove square, W.).—8.30 P.M. Discussion on Chronic Affections of th

# Notes, Short Comments, and Answers to Correspondents.

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## PUBLIC VACCINATORS AND GUARDIANS OF THE POOR.

IN THE LANCET of March 1st, p. 639, we described the controversy which has been going on between the guardians of the poor for the Holbeach district of Lincolnshire and the public vaccinators for the same district. Certain members of the board were desirous that the present contracts with the public vaccinators should be terminated at the end of 28 days and accordingly a motion to this effect was brought up at the meeting of the guardians held on March 6th. The motion, however, was lost by nine votes to six. In the course of the discussion Mr. Dring made the very true remark that "no professional men work harder than medical men and none are worse paid." The main point at issue which determined the moving of the proposal to terminate the contracts was that many persons preferred being vaccinated at their own homes to calling at the surgery of the public vaccinator, this entailing a higher fee. This is only natural, and it is also only fair that if a public vaccinator has to make a journey to a patient's house he should then be paid at a higher rate than if the patient went to him. Naturally enough the average ratepayer thinks that he may as well get something when he gets the chance out of the rates as he has to pay for such a number of things which are of no use to him personally, although of great use to other persons, such as free libraries, wash houses, and board schools. But it is not fair—and we congratulate the Holbeach Board of Guardians on seeing the point—for ratepayers to make the medical men of the district pay for saving them trouble.

## "AMERICAN SPECIALISTS."

eorge Lillian, Emma Lillian, and Mabel Lillian, their daughter, alling themselves the "Lillian American Herbal Company," were harged at the Ennis Assizes before the Lord Chief Justice of reland with obtaining money by false pretences. The prisoners ere unqualified medical practitioners. The trial commenced on arch 4th and, as reported in the Clare *Saturday Record* of March 8th, t reads like a scene from "Handy Andy." In the end the jury disagreed and the prisoners were put back to take their trial at the next assizes. George Lillian's bail was fixed at the following amounts:—That on or before March 15th he paid £23 to the Crown Solicitor and that he entered into his own recognisances for £50. Emma Lillian and Mabel Lillian were to enter into their own recognisances of £10 to appear. It will be interesting to see the result of the new trial if it ever comes off.

## ADVERTISEMENT.

CORRESPONDENT has drawn our attention to the fact that the illustrated price catalogue issued by Parkes's Drug Stores, Limited, ontains a list entitled "Consultants in London." Of course such ists are quite useless to the public but we do not suppose that the roprietors of Parkes's Drug Stores, Limited, know this. The list onsists of names only and does not pretend to recommend individual actitioners. It cannot be said to advertise anyone though one or o medical men are misdescribed in it.

## WANTED—A HOME.

*To the Editors of* THE LANCET.

SIRS,—I am seeking the publicity of THE LANCET to ascertain if there is any home or institution that would be willing to take charge of a poor creature seriously afflicted with chorea. For 20 years this woman, now 35 years of age, has suffered from this terrible malady, though absolutely helpless she is perfectly sane and conscious of her dreadful position. Her father and mother, aged respectively 74 and 75 years, are past work, one delicate sister lives at home and assists to the best of her ability, another sister, in service, out of her earnings gives what help she is able. The invalid herself is in receipt of a pension from the Royal Hospital for Incurables which is annually augmented by a few kind friends [illegible] that she is in a position to make a small payment if a home can be found for her. Any information or suggestions addressed to the Rev. H. Brass, St. Matthew's Vicarage, Redhill, who has known the family for many years, or to me at aglands, Reigate, would be much appreciated by

Yours truly,

A. D. WELCH.

March 10th, 1902.

## MR. YORKE-DAVIES.

N. E. YORKE-DAVIES, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., M.D. Dub., is singularly unfortunate. In THE LANCET of Nov. 9th, 01, p. 1313, we called attention to the fact that he had written a long etter in *M.A.P.* of Nov. 2nd lauding his own knowledge and his methods of treatment in cases of obesity. Mr. Yorke-Davies explained that he had written this letter to Mr. T. P. O'Connor as a personal friend and implied that Mr. O'Connor had made a mistake in publishing the letter and we published this explanation in THE LANCET of Nov. 16th, 1901. At the same time we pointed out that the editor of *Modern Society* had apparently also made a mistake and had published another long letter from Mr. Yorke-Davies about Marienbad and what "I have pointed out for many years." Mr. Yorke-Davies did not explain how this letter came to appear, but only remarked that he thought it hard that lay papers should not advertise medical men. Mr. Yorke-Davies has now broken out in a fresh place and in the issue of *Modern Society* of March 8th gives his views upon fat people and the coronation. He is much exercised because each person will be allotted only 16 inches of seat room. He also points out that Professor Schweninger's experience in obesity is entirely borne out by his own. This is curious for in the article in *M.A.P.* to which we have referred above Mr. Yorke-Davies said: "If a person wants to lose weight advise them to go to the expert who can do it without harm. Many patients of Schweninger whose system of reducing weight is the dry one come to me." This looks rather as if Mr. Yorke-Davies's experience differs from that of Professor Schweninger. This point however is of no importance but Mr. Yorke-Davies proceeds in his old unblushing manner to dilate upon obesity and its treatment and to say: "I have pointed this out for years. "I think it will be admitted that I speak with some authority on the matter. I know your paper circulates among those who make a point of enjoying life and they will be apt to think me rather a lugubrious preacher, but life has greater and more lasting pleasures than the pleasures of the table." To this last platitude no one can take exception but Mr. Yorke-Davies must know perfectly well that he owes something to his profession, and it is not fitting that a member of that profession should write to lay papers and practically say "I am the man to go to for the treatment of obesity." The various bodies from whom Mr. Yorke-Davies has obtained his diplomas might, we think, suggest to him to mend his manners. Of course, the last effusion may have been a private letter to the editor of *Modern Society*, in which case we offer Mr. Yorke-Davies our warmest sympathy on being so constantly misunderstood by editors.

## FOUNDLING CHILDREN IN FRANCE.

*To the Editors of* THE LANCET.

SIRS,—I have read with great interest the article by Dr. Charles Goring on "Foundling Children in France," in your issue of Feb. 22nd, p. 541. Are we to understand, however, that *no responsibility* remains with the parents in such cases—that, in fact, the children are simply given up to the care of the State by the parents? Because if so, it seems to me to be merely putting a premium on improvidence and immorality.

I am, Sirs, yours faithfully,

WALTER DUNSTAN, M.R.C.S. Eng.

Liskeard, Feb. 25th, 1902.

## WANTED—A HOME.

*To the Editors of* THE LANCET.

SIRS,—I should be glad to know of a home for an old gentleman, 82 years of age. He is able to get about and to look after himself. His health is fairly good. He suffers from recurrent attacks of stricture, but is able to relieve himself with the catheter. His friends would pay about 5s. weekly. Thanking you in anticipation,

I am, Sirs, yours faithfully,

R. T. W.

The Limes, Hoe-street, Walthamstow, N.E., Feb. 26th, 1902.

## CIGARETTES MADE WITH SPECIALLY PURE PAPER.

IN an assortment of cigarettes sent to us for examination by Messrs. Baron and Co., of 1, Piccadilly, W., a special kind of paper is used as the wrapper which is said to be made from the purest material possible. Our analysis confirms this statement. The paper yields not more than 6 per cent. of ash, consisting chiefly of calcium carbonate, while the weight of each wrapper only just exceeds half a grain. The wrapper labelled "Parasimos" has a design upon it which we find to be in Dutch gold or fine copper leaf. The cigarette marked "King's Guard Argent" contains a very good quality of Dubec tobacco. The lettering on the wrapper is printed in nickel according to our examination. The "Pavilion" straight cut cigarette has no metal lettering upon it at all but chocolate coloured type. Steps are evidently taken to render these cigarettes free from reproach, the tobacco, both the Virginia and Dubec, is of excellent quality and the paper wrapper is pure, of a minimum weight, burning freely and yielding no acrid products of combustion.

## MANUFACTURE OF OZONE.

*To the Editors of* THE LANCET.

SIRS,—I shall be much obliged if any reader of THE LANCET can inform me through your columns where a patient of mine can obtain, on loan or otherwise, local apparatus for the production of ozone. My patient suffers from purulent bronchitis.

I am, Sirs, yours faithfully,

INQUIRER.

March 11th, 1902.

## PHOS-LIGHT.

*To the Editors of* THE LANCET.

SIRS,—Early in the year I had occasion to travel from 4.25 to 5 p.m. with three children aged 12, 7, and a year and 10 months in a "Stamford Hill" omnibus. The baby was tired and fell asleep at once and remained asleep until the end of the journey. The smell from the lamp (Phos-light) was so disgusting that the elder children felt sick and wanted to leave the

## Communications, Letters, &c., have been received from—

**A.**—Monsieur J. Astier, Asnières; Army Medical Department, Lond., Director-General of.

**B.**—Mr. Giuseppe Bellei, Bologna; Messrs. Burroughs, Wellcome, and Co., Lond.; Mr. H. Brooks, Lond.; The Bayer Co., Lond.; Dr. Charlton Bastian, Lond.; Miss Bridie, St. Leonards-on-Sea; T. B. Browne, Ltd., Lond.; Brins Oxygen Co., Lond.; Mr. J. H. Brown, jun., Newcastle-on-Tyne, Birmingham and Midland Hospital for Skin Diseases, &c., Secretary of.

**C.**—Messrs. Callard and Co., Lond.; Messrs. Condy and Mitchell, Lond.; Caledonian Railway Ambulance Brigade, Glasgow, President of; Messrs. J. and A. Churchill, Lond.; Chesterfield and North Derbyshire, &c., Hospital, Secretary of.

**D.**—Mr. Theo. Domela, Tunis; Messrs. S. Deacon and Co., Lond.; Mr. E. Darke, Lond.; Lieutenant-Colonel J. D. Day, R.A.M.C., Dublin; Durham County Hospital, Secretary of; Rt. Hon. Sir William Hart Dyke, Bart., M.P.

**E.**—Messrs. Evans, Lescher, and Webb, Lond.; Examination Hall, Lond., Secretary of; E. T. T.; Messrs. Eason and Son, Dublin; Messrs. Eisenhardt and Co., Lond.; Mr. J. W. Eastment, Buntingford.

**G.**—Sir W. R. Gowers, Lond.; Mr. W. W. Green, Lond.; Mr. W. J. Greer, Newport, Mon.; Dr. W. Herbert Gregory, Beverley; *Gazette Hebdomadaire des Sciences Médicales*, Bordeaux, Editor of; General Hospital, Tunbridge Wells, Secretary of.

**H.**—Dr. J. Hurd-Wood, Farnham; Hanley, &c., Joint Hospital Board, Hanley, Clerk of; Mr. A. Hannam, Lond.; Humphreys, Ltd., Lond.; Mr. J. Heywood, Manchester.

**I.**—International Congress of Medicine, Madrid, Secretary of.

**J.**—M. F. Jaffrey, Lond.

**K.**—Messrs. Knight and Co., Lond.; Messrs. R. A. Knight and Co., Lond.; Dr. W. Kingdom, Lond.

**L.**—Mr. T. Lovett, Manchester; Messrs. Longmans, Green and Co., Lond.; Mr. H. K. Lewis, Lond.; London Lock Hospital and Rescue Home, Lond., Secretary of.

**M.**—Maltine Manufacturing Co., Lond.; Mr. E. Merck, Lond.; Messrs. Mather and Crowther, Lond.; M. L. C. N.; M. M.; Mr. J. McMurtrie, Glasgow; Surgeon O. Mills, R.N., Haslar; Dr. R. Moynahan, Kilrush; Mr. W. K. McDougall, Lond.; Mr. J. Mackenzie, Kirkby-in-Ashfield.

**N.**—Mr. T. Nash, Plymouth; Messrs. Neyroud and Sons, Lond.; Mr. H. Needes, Lond.; Mr. J. C. Needes, Lond.

**O.**—Otological Society of the United Kingdom, Lond., Hon. Secretary of.

**P.**—Mr. Y. J. Pentland, Edinburgh; Messrs. Parke, Davis and Co., Lond.; Dr. Paramore, Lond.; Mr. Victor G. Plarr, Lond.; Messrs. Preston Bros. and Co., Huddersfield; Messrs. Peacock and Hadley, Lond.

**R.**—Dr. Y. M. Rowland, Lichfield; Dr. H. M. Robertson, Victoria, British Columbia; Dr. W. A. Reid, Wellington, New Zealand; Mr. E. J. Reid, Lond.; Messrs. J. Richardson and Co., Leicester; Messrs. Reynolds and Branson, Leeds; Dr. A. Rose, New York; Mr. Joshua Rowntree.

**S.**—Dr. S. Savage, Birmingham; Sanitary Wood Wool Co., Lond.; Messrs. Spiers and Pond, Lond.; Mr. F. H. Shubrook, West Kirby; Dr. H. Sinigar, King's Langley; Messrs. W. H. Smith and Son, Manchester; Sanitary Institute, Lond., Secretary of; Mesdames Sykes, Josephine, and Co., Lond.; Messrs. G. Street and Co., Lond.; Messrs. W. B. Saunders and Co., Lond.; Messrs. W. H. Smith and Son, Lond.; Scholastic, Clerical, &c., Association, Lond.

**T.**—Dr. J. Kay Tomory, Kimberley, South Africa; T. F.

**U.**—University of London, House Secretary of; United States Patent Office, Washington, U.S.A., Chief Clerk of.

**V.**—Dr. R. Vincent, Lond.

**W**—Mr. M. C. Walsh, Lond.; Dr. Arthur Waddell, Potters Bar; Dr. Andrew Wauchope, Glasgow; Messrs. J. Wright and Co., Bristol; Wills, Ltd., Lond.; Surgeon A. T. Wysard, R.N., Lond.; Mr. J. Williams, Bradford; Mr. F. F. Wellington, Lond.; Messrs. Wilcox and Co., Lond.; Mr. R. Walker, Aberdeen; Dr. C. P. White, Leeds; Dr. F. T. Waldron, Somerset West, Cape Colony; Messrs. Willows, Francis and Co., Lond.; Messrs. Wright, Layman, and Umney, Lond.; Messrs. W. Wood and Co., New York.

## Letters, each with enclosure, are also acknowledged from—

**A.**—Ashwood House, Kingswinford, Proprietor of; Accrington Corporation, Accountant of; Mr. J. E. Anderton, New Mills; A. D. L. T.; A. E. L.; A. J.; A. L; A. W. D.; Alexander Manufacturing Co., Lond.

**B.**—Dr. E. F. Buzzard, Lond.; Mr. W. D. Bennett, Braunston; Miss F. Beechey, Folkestone; Bolton Infirmary, Secretary of; Dr. W. Bromilow, Grantham; Messrs. Baiss Bros. and Stevenson, Lond.; B. and H.; Messrs. Battle and Co., Neuilly-sur-Seine; Mr. G. A. Brown, Tredegar; Dr. Duncan Brown, Northampton; Dr. L. H. Bruce, West Cornforth; Mr. W. Bishop, Elham; Mr. R. A. Brehm, St. Johns, Newfoundland.

**C.**—Dr. J. Cooke, Lincoln, New Zealand; Mr. A. V. Clark, Porth; Mr. R. Cresswell, Maidenhead; Dr. H. J. Cardale, Wheathampstead; Dr. H. Carmichael, Lond.; Mr. W. Crooke, Egremont; Mr. E. J. Carter, Tunbridge Wells; C. E. P.; C. R. G.; C. S. A. F.; C. N.; C. F. C. S.; C. W. L., Croydon.

**D.**—Dr. G. H. R. Dabbs, Shanklin; Messrs. A. De St. Dalmas and Co., Leicester; Mr. N. R. Dharmavir, Mexborough; Durham County Asylum, Winterton, Steward of; D. F.; Mr. W. F. Dale, Richmond; Messrs. C. Dreyer and Co., Lond.

**E.**—Mr. F. B. Ede, Porth; E. M.; East Suffolk and Ipswich Hospital, Secretary of; E. C. W.; E. A. O.; D. P. S.

**F.**—Dr. T. R. Fraser, Edinburgh; Mr. T. B. Fawsley, Lond.; F. G.

**G.**—Dr. F. W. Goodbody, Lond.; General Medical Council, Lond.; Messrs. Gilyard Bros., Bradford; Mr. G. H. Gemmell, Edinburgh; Dr. J. Gillan, Ryhope.

**H.**—Mr. A. Homewood, Lond.; Mr. J. Hartill, Willenhall; H. J.; Dr A. Hamilton, Windermere; Mr. T. Homer, Whitchurch; Dr. H Handford, Nottingham; H. E. M.; Dr. H.; Mr. W. H. Hosking, Masterton, New Zealand; Mr. N. Holland, Lond.; Dr. C. Harrison, Lincoln; Messrs. J. Haddon and Co., Lond.; Mr. F. Hall, Beverley; Mr. J. H. Harris, Gayton.

**I.**—Invernith Lodge Retreat, Dumfries.

**J.**—Mr. E M. Jones, Denbigh; Mr. G. H. Jones, Deddington; Messrs. Jewsbury and Brown, Manchester; J. F. P; J. M. B.; J. K.; J. L T.; J. P.; J. C. J., J. H. B., Hastings; J. R.

**K.**—Dr. A. Kershaw, Farnworth; Dr. G. L. Kerr, Periavurrai, India.

**L.**—Dr. D. Lawson, Banchory; Mr. T. Leahy-Lynch, Lond; Dr. J. Lee, Clacton-on-Sea; Dr. J. S. Lyttle, Cilfynydd; Messrs. C. and E. Layton, Lond.; L. P.; L. R. G.; Leeds General Infirmary, Manager of.

**M.**—Dr. S. Messulam, Manchester; Medical Graduates' College and Polyclinic, Lond.; Mr. W. A. Mallam, Lond.; Medica, Lond.; Maghull Home for Epileptics, Liverpool, Hon. Treasurer of; Messrs. F. L. May and Co., Lond.; Medicus, Manchester; Manchester Medical Agency; Macclesfield General Infirmary, Secretary of; M. Y.; Mrs. McCalman, Everton.

**N.**—North of England Medical Agency, Sunderland; Nucleolus, Liverpool; Northern Medical Association, Glasgow.

**O.**—Ochil Hills Sanatorium, Glasgow, Secretary of; O. S. K. Mr. C. A. P. Osburne, Norwich

**P.**—Dr. J. C. Pounden, Coalville Dr. R. L. Pitfield, Philadelphia U.S.A.; P. W. E. H.; Presto Royal Infirmary, Secretary of Mr. J. R. Palmer, Bangor Erris Mr. R. D. Pedley, Lond.; P. B Rev. A. B. Peacock, Lond.; Mr C. Pollard, Worcester.

**R.**—Dr. C. J. Ross, Lenzie; Dr W. D. Rose, Luton; Mr. A. W Mayo Robson, Leeds; Mr. R. A Ross, Inniskeen.

**S.**—Mr. C. C. Skardon, Evershot Dr. A. Somerville, Leek; Mr. C Stonham, Lond.; S. H. P.; Dr C. S. Storrs, Concordia, Cap Colony.

**T.**—Dr. W. E. F. Tinley, Whitby Rev. J. Turnbull, St. Monans Mr. W. Thomas, Pontefract Mr. J. J. Tate, Bideford; T. G. T. W. B.; T. H. M.; T. R. J T. S. D. E.

**V.**—Victoria Children's Hospital Hull; Mr G. Vogt, Kendal Messrs. G. Van Abbott and Sons Lond.

**W.**—Mr. Williams, Pontypridd Dr. F. J. Woollacott, Dartford Messrs. T. A. Ward and Co. Blackburn; W. J. M.; W. F. R Rev. R. J. Williams, Liverpool Mr. W. Webb, Newport, Salop Mr. J. J. Walkinshaw, Edinbugh; W. J. P.; W. D.

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THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Discussion on the Collection and Disposal of Refuse in Large Towns (opened by Mr. H. P. Boulnois).

**THURSDAY** (20th).—HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Titchborne-street, Edgware-road, W.).—8.30 P.M. Clinical Cases will be shown by Mr. W. Cheyne, Mr. J. Clarke, Dr. A. Thorne, Dr. R. Russell, Dr. L. Guthrie, Mr. E. Roughton, and others.

**FRIDAY** (21st).—EPIDEMIOLOGICAL SOCIETY (11, Chandos street, Cavendish-square, W.).—8.30 P.M. Paper:—Dr. Daniels: Infantile Mortality in the Tropics.

## LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

**MONDAY** (17th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M Prof. C. Stewart: Organs of Respiration.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.).—4 P.M. Dr. J. F. Payne: Clinique. (Skin.)

POST-GRADUATE COLLEGE (Lecture room, West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. S. Taylor: Diagnosis of Small-pox.

**TUESDAY** (18th).—ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Dr. F. T. Roberts The Comprehensive Study of Thoracic Phthisis. (Lumleian Lecture)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. G. Rankin: Clinique. (Medical.)

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Dr. A. Turner: Peripheral Neuritis.

**WEDNESDAY** (19th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. C. Stewart: Organs of Respiration.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. J. Berry: Clinique. (Surgical.)

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL (Gray's Inn-road, W.C.).—8 P.M. Mr. C. Nourse: Cases illustrating the Correlation of Diseases of the Throat, the Nose, and the Ear.

**THURSDAY** (20th).—ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Dr. F. T. Roberts The Comprehensive Study of Thoracic Phthisis. (Lumleian Lectures)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.).—4 P.M. Mr. J. Hutchinson, jun.: Clinique. (Surgical.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Still: Convulsive Conditions in Infants.

ROYAL LONDON OPHTHALMIC HOSPITAL (Moorfields, City-road).—4.30 P.M. Clinical Demonstration (open to all Practitioners).

**FRIDAY** (21st).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. C. Stewart: Organs of Respiration.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. T. Collins: Clinique. (Eye.)

# EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

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*It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.*

*Lectures, original articles, and reports should be written on one side of the paper only.* AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

*Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.*

*We cannot prescribe or recommend practitioners.*

*Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."*

*Letters relating to the publication, sale, and advertising departments of* THE LANCET *should be addressed "To the Manager."*

*We cannot undertake to return MSS. not used.*

# MANAGER'S NOTICES.

### THE INDEX TO THE LANCET.

THE Index to Vol. II. of 1901, which was completed with issue of Dec. 28th, and the Title-page to the Volume, are given in THE LANCET of Jan 4th.

### VOLUMES AND CASES.

VOLUMES for the second half of the year 1901 are now ready. Bound in cloth, gilt lettered, price 18s., carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2s., by post 2s. 3d.

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WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid and *not* to THE LANCET Offices.

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SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE. It has come to the knowledge of the Manager that in some cases higher rates are being charged, on the plea that the heavy weight of THE LANCET necessitates additional postage above the ordinary rate allowed for in the terms of subscriptions. Any demand for increased rates, on this or on any other ground, should be resisted. The Proprietors of THE LANCET have for many years paid, and continue to pay, the whole of the heavy cost of postage on overweight foreign issues; and Agents are authorised to collect, and do so collect, from the Proprietors the cost of such extra postage.

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## METEOROLOGICAL READINGS.

(*Taken daily at 8.30 a.m. by Steward's Instruments.*)

THE LANCET Office, March 13th, 1902.

| Date | Barometer reduced to Sea Level and 32° F. | Direction of Wind | Rainfall. | Solar Radia in Vacuo | Maximum Temp Shade. | Min Temp | Wet Bulb | Dry Bulb. | Remarks at 8.30 a.m. |
|---|---|---|---|---|---|---|---|---|---|
| Mar. 7 | 29.92 | S. | ... | 62 | 53 | 35 | 37 | 39 | Foggy |
| " 8 | 29.90 | S.W. | ... | 63 | 53 | 33 | 45 | 48 | Raining |
| " 9 | 29.75 | W. | 0.01 | 55 | 62 | 46 | 49 | 50 | Fine |
| " 10 | 29.93 | S.E. | 0.06 | 54 | 52 | 43 | 44 | 45 | Overcast |
| " 11 | 30.00 | S.W. | ... | 53 | 51 | 44 | 45 | 46 | Overcast |
| " 12 | 30.03 | S. | ... | 81 | 51 | 44 | 43 | 45 | Cloudy |
| " 13 | 30.06 | S.W. | ... | 81 | 55 | 42 | 42 | 45 | Overcast |

**During the week marked copies of the following newspapers have been received:**—*Cornishman, Cornish Telegraph, Torquay Directory [illegible], Devon Journal, Hertfordshire Mercury, Windsor and Eton Express, Portadown News, Sunday Magazine, Kensington News, Daily Telegraph, St. James's Gazette, Revue Américaine de Sciences Médicales, Pharmaceutical Journal, Manchester Guardian, Dublin Evening Telegraph, Southampton Echo, Bedford Advertiser, Coventry Herald, Belfast News, [illegible] Daily Mail, Municipal [illegible], Allgemeine Medicinische Central Zeitung, Il Policlinico, [illegible] Courier, Aberdeen Free Press, [illegible] Weekly [illegible], de San Paulo, [illegible], Bristol Mercury, Liverpool Daily Post, La Caducée, Hong Kong Weekly Press, Herts Advertiser, Times of India, Reading Mercury, Mining Journal, Local Government Chronicle, &c.*

eight divisions is considered by Mayr to be a genus and each of the sub-divisions a species—that is to say, a distinct disease and not a mere variety. This is clearly shown by the sub-divisions of Genus V.—viz., small-pox, measles, and scarlet fever—which are obviously distinct diseases. I may at once draw attention to the remarkable fact that he includes pulmonary phthisis among fevers as the only species of Genus VIII., entitled "Febris lenta, hectica." He does not, however, tell us whether he considers phthisis a *contagious* fever or not, but he probably did, as throughout the southern parts of Europe it has always been considered a contagious disease. His first genus is continued fever, of which he considers that there are two species. His second is typhus, of which he describes five species, which he styles "diversae species," as follows:—

"Primo. *Typhus verus pestilens contagiosus seu Pestis orientalis.*" By this he no doubt meant true contagious typhus fever, with which the oriental plague was associated and confused up to that time and later still, for he says further on in his treatise that to the genus called typhus belong "the fever of hospitals, prisons, camps, ships, and many others, as also especially the true Pestis orientalis." He therefore recognised that his first species of typhus was the fever of prisons and other crowded places.

"Secundo. *Typhus verus gangraenosus, contagiosus, icterodes, pestilens*, vocatur etiam *Pestis occidentalis*, seu *Febris pestilens, contagiosa, epidemica flava americana.*" Or true contagious yellow fever

"Tertio. *Typhus verus non-contagiosus putrido-biliosus* seu *bilioso-putridus*, seu *Febris putrida sanguinea* STOLLII, seu *putrida saburralis* STOLLII qualem sordes putridae e systemate gastrico in sanguinem attractae generare solent. In *putrida sanguinea* vero vitium in systemate sanguineo primario natum; a colluvie bilis putridae in sanguine seu secundis viis abundantis nata, vel ex primis viis in secundas delata; vocatur quoque *Typhus mitior*, lentius decurrens, non contagiosus, vel *Febris putrida non contagiosa*" A perfectly clear and unmistakeable definition of one of the varieties of typhoid fever, of which he further says, so that there cannot be the slightest doubt about the matter: "Haec Species *Typhi* potissimum cum inflammatoria febre aut topicis affectionibus complicata esse solet, cum aut sine exanthematibus; inde Peripneumoniae malignae, Hepatitides, Dysenteriae et Mesenteritides gravissimae etc. observantur."

"Quarto. *Typhus verus nervosus seu pituitosus non contagiosus*, seu febris nervosa, seu febris lenta nervosa anglorum, vel febris putrida pituitosa Stollii, a pituita acri et putrescente ortus, tarde decurrens." Another well-known variety of typhoid fever of which he remarks: "Haec Species *Typhi* cum inflammatoria et biliosa febre ac topicis affectionibus, cum aut sine exanthematibus permixta et complicata esse solet." And further adds the following shrewd observation which anyone who has had anything to do with the treating of cases of typhoid fever will agree with: "In nullo morborum genere tanta opus est patientia, exspectatione cunctationeque ad bene et feliciter medendum: est enim difficilis hujus morbi Diagnosis et Therapia." Typhoid fever is described as "nervous fever" by Gilchrist, Huxon, and Manningham; as "nerven fieber" by German writers; "fièvre nerveuse" by the French; and "low fever" or "brain fever" by many English writers.

"Quinto. *Typhus spurius seu fictitius.*" Apparently equivalent to the *embarras gastrique* of French authors. He says that it is often confused, as might be expected, with the *typhus verus* of the third or fourth species—i.e., with typhoid fever.

These five species of "typhus" Mayr considered to be distinct diseases, but his third, fourth, and probably fifth, were evidently our typhoid fever, in which he thus recognised either two or three diseases; and who shall say even now that he was wrong? It would not be in the least degree surprising if it were definitely proved that under the term "typhoid fever" we now include at any rate two quite distinct diseases. Mayr, therefore, clearly distinguished between typhus and typhoid fevers. He put them down as separate diseases belonging to the same genus, typhus being a contagious fever and typhoid, including the third, fourth, and fifth species of the genus, being non-contagious. It becomes now exceedingly interesting to ascertain what further differences he points out between the two diseases. He says under the heading, "*Diagnosis Primae et tertiae Speciei Typhi*": "The symptoms of the first and third species of (that is to say, of typhus fever and typhoid fever) are in common and very similar except that in the first species of typhus more bad symptoms appear in the sick than in the third species of typhus, and that in the first species of typhus bubones, anthraces, vibices, are more often observed than in the third species of typhus, and that the first and second species of typhus (i.e., typhus and yellow fever) often prostrate even the most healthy men by contagion contracted, which does not happen in the third non-contagious species, but (in which) the prodromata precede a long time before the disease breaks out; and that in the first and second species of typhus on account of their contagious nature the mortality is far greater than in the third and fourth non-contagious species of typhus." Under the heading, "*Causæ harum febrium*," Mayr says: "Besides contagion, which affects different people in various ways, there is also a pestilential contagious *poison* which is transferred and communicated to others in the *first species of typhus* from the infection of one suffering in a similar way; as in the typhus of the first species, so also in the *non-contagious typhus* of the third species it supplies the cause, it deprives of all the force of life, it depraves the humours, it relaxes the system." He then gives a number of predisposing causes, among which are warm and moist air, the close atmosphere of ships, hospitals, vaults, camps, crowded cities, &c. Air contaminated with the effluvia of pools, of animals, and vegetables, especially of putrid things, &c. It will be noticed that he mentions overcrowding first and that he no doubt refers to as the cause of true typhus fever. He then goes on to putrid substances, but it is too much to conclude from this that he therefore understood that these were the causes of the third, fourth, and fifth species of his genus of typhus—that is to say, of typhoid fever. Further on in his book he refers again to contagion at some length in a chapter entitled *De Contagiis*, towards the end of which chapter he says: "It is, moreover, to be noted that certainly not all the typhode contagions are of so volatile a nature that they are always and absolutely spread abroad and volatilised in the atmosphere, and therefore (other things being equal) can act only in true epidemic fashion, but that many of them, and some of the most virulent and malignant, as long at least as a strong degree of heat does not act upon them, show a sufficiently fixed character and remain fixed for a longer or shorter time upon various other bodies which catch them—viz., upon different goods, especially those of wool and cotton, of silk, of leather, feathers, flax, or the hairy skins of animals, clothing, paper, wood, beds, walls, and buildings, and often after many months they break out from these hiding-places still in full force, they infect the atmosphere, and propagate disease and death far and wide."

I must now direct your attention to another remarkable treatise, the work of J. Val de Hildenbrand, Professor of Practical Medicine at the University of Vienna, which was published there in 1810, and a translation of which was published in Paris in 1811. In this treatise the author maintains that the word "typhus" has been improperly employed to designate a *genus* of disease, and that it ought to be used as the name of a particular *species*. He says that the true typhus has often been mistaken for another fever, just as certain other fevers have been mistaken for typhus. "But," he says, "in order to avoid all further dispute about the name of a disease of which the primitive meaning has been lost by an abuse of language, I declare that I treat in this work of the true *contagious typhus* alone, which develops in the human body its special poison by means of which it afterwards spreads, which is everywhere and always perfectly like itself, and of the same essential nature, because it proceeds from a poison *sui generis* and always the same, which disease in fine ought alone to bear the name of typhus because it possesses the special characters expressed by that word. Contagious typhus is an essential fever the course of which displays a constant uniformity. It is a fever of a *special species*—as small-pox, for example. It is contagious because by means of a special substance which develops during the disease it is transmitted and communicated to those who are predisposed to it. By reason of an eruption which is peculiar to it it belongs to the family of the exanthematic fevers, among which the contagious fevers ordinarily find their place. It has a course determined in measured periods and also different characters in its different periods, but with a constant symptom throughout the whole course of the disease, which is stupor with delirium or 'typhomania.'" And he goes on to distinguish it from the fevers known by the names of malignant, nervous, asthenic, putrid, and bilious—in fact,

# The Milroy Lectures

ON

# THE ETIOLOGY OF TYPHOID FEVER AND ITS PREVENTION.

*Delivered at the Royal College of Physicians of London on Feb 20th, 25th, and 27th, 1902,*

BY W. H. CORFIELD, M A, M D. OXON., F.R C P. LOND,
PROFESSOR OF HYGIENE AND PUBLIC HEALTH AT UNIVERSITY COLLEGE, LONDON, CONSULTING SANITARY ADVISER TO HIS MAJESTY'S OFFICE OF WORKS

## LECTURE I

*Delivered on Feb 20th, 1902*

MR PRESIDENT AND GENTLEMEN,—When the Council of the College paid me the unusual compliment of requesting me to deliver the Milroy Lectures this year I felt that although my time was more than fully occupied I could not refuse the honour so graciously offered me and I therefore accepted the duty without hesitation Had I, however, known that I should have to go through a serious illness towards the end of last year—an illness from which I have not yet fully recovered—I should certainly have shrunk from the ordeal I have chosen the subject of typhoid fever partly because it has not been treated before in these lectures (although Dr P Horton Smith delivered his Goulstonian Lectures on the Typhoid Bacillus in 1890), and partly because I have had an unusual experience of that disease from many points of view I studied it under William Jenner—of whose part in elucidating it I shall have something to say further on—35 years ago Soon after that I went through a severe outbreak of it while prosecuting my post-graduate studies as Radcliffe Travelling Fellow of the University of Oxford at Lyons—an epidemic which filled all the medical wards and half-filled all the surgical wards in the hospitals of that city with cases of typhoid fever of every variety Since then much of my time has been occupied in investigating both large and small outbreaks of the disease, in studying the conditions under which it spreads and the means of preventing it, whether in the form of widespread outbreaks or of cases in households During these investigations I have, of course, been exposed to the infection of the disease on very numerous occasions, of which I may especially allude to one where I traced a severe outbreak in a small country town to the contaminated water of the well at the hotel in which I was staying I attribute my immunity during all these numerous exposures to the fact that I well remember suffering when a boy from what was called "brain fever" The first medical paper I wrote was entitled "On the Alleged Spontaneous Origin of the Poison of Enteric Fever" It was read before the Epidemiological Society of London in March, 1874, and will be alluded to at length further on

I have used the name "typhoid" in the title of these lectures in preference to "enteric" fever, as it is the oldest name now in use—the name which Jenner used and of which Louis says, "it is almost free from objection," and also a better name than "enteric," as it expresses the fact that it is a disease which resembles typhus fever—a fact which cannot be gainsaid, as it was confused with it by all the astutest physicians up to near the middle of the last century "Typhoid" is also a better name than "enteric" for a general disease, for we do not call other fevers by names merely denoting the organs in which their most specific lesions occur. As Dr Charles Murchison says "It would not be desirable to have any name derived from the abdominal lesion, tending, as this would do to revive in the minds of many the exploded doctrines of Broussais"—viz, that the fever was caused by the intestinal inflammation I may also add that the name of the organism now identified with the disease is "bacillus typhosus" and not bacillus entericus or enteritidis

The historical part of the subject has been so fully treated by Dr Murchison, who has given us a summary of the history of typhoid fever from the time of Hippocrates onwards, that it is quite unnecessary for me to go into the early part of it in any detail I think it desirable, however, that I should go at some length into the question of the knowledge of this disease at the beginning of the last century and of the development of such knowledge since, by giving an account in some detail, and as far as possible in the words of the authors themselves, of the most important works on the subject since the early part of the last century—works which have really advanced our knowledge, written by great masters, the medical giants of their day.

In the first place I wish to introduce to your notice a hitherto unknown author, a copy of whose work I have found in the library of the Royal Medical and Chirurgical Society I refer to him as an unknown author because his work is not referred to by Dr Murchison, although he cites a great number of authors both on typhus and typhoid fever, nor, so far as I can find, is it referred to by any other writer. There is no copy of this work in the library of our College or in that of the Medical Society of London, or even in that of the British Museum The copy that I found in the library of the Royal Medical and Chirurgical Society has been there for many years, but has been read by no one, as its leaves had not been separated when I found it. It is written in Latin and is entitled, "Specimen Practicum de Remediis Efficacissimis in Morbis Contagiosis ac Pestilentialibus adnexa Commentatione de Contagiis et Febribus Typhodeis" It was written by Christopher Mayr, Doctor of Medicine, "olim Variorum Nosocomiorum Medico Secundario, ac Quondam S S Caes Reg Apost Maj Status Militaris Medico Supremo, et Magni Nosocomii Militaris Vindobonensis Medico Primario Collegii Medici Vindobonensis Sodali and was published in Vienna in the year 1806 In this treatise fevers are divided into eight classes or genera (see Table I)

TABLE I

*Conspectus Febrium —Febres Principes Elementares seu Cardinales*

I
Synochus imputris seu Febris Continua non putris
1 Febris Inflammatoria
2. Febris biliosa
3 Febris pituitosa

II
Synochus putris utplurimum Malignus, seu Febris continua putrida utplurimum maligna
Typhus Quinque species Typhorum

III
Febris intermittens

IV
Febres continuæ remittentes seu composita
et
Febris ardens seu καυσος

V
Febres epidemicæ intercurrentes
Variolæ
Morbilli
Scarlatina

VI
Febris indeterminata, nova, incognita

VII
Febres Sporadicæ et Singulares
Febris lactea
Febris puerperalis

VIII
Febris lenta, hectica
Phthysis pulmonalis

The five species of typhus under Genus II are shown in Table II, as follows —

TABLE II.

*Quinque Species Typhorum*

Primo *Typhus verus pestilens contagiosus seu Pestis orientalis*
Secundo *Typhus verus gangraenosus, contagiosus, Icterodes, pestilens vocatur etiam Pestis occidentalis, seu Febris pestilens contagiosa epidemica flava americana*
Tertio *Typhus verus non contagiosus putridus biliosus seu bilioso-putridus seu Febris putrida sanguinea seu putrida saburralis*
Quarto *Typhus verus nervosus seu pituitosus non contagiosus, seu febris nervosa seu febris lenta nervosa anglorum vel febris putrida pituitosa a pituita acri et putrescente ortus, tarde decurrens*
Quinto *Typhus Spurius seu fictitius*

By this most interesting classification of fevers we are able to understand exactly the view taken of them at the beginning of the last century, and from the accurate descriptions given of some of them in Mayr's book we are able also to understand how much was known about them and how far they were distinguished one from another Each of these has not fixed the attention of those who have described epidemics of typhus." And only three pages further on he says: "From the present time it must be acknowledged that every acute affection which is not accompanied in its course with the special alteration of Peyer's patches is not a typhoid affection, although one does not find in the autopsy the signs of any other affection, and thus the typhus fever of the English is necessarily a very different disease from that with which we are engaged." And then speaking of the observations of Dr. Shattuck of Boston he adds: "That which reasoning forces us to admit direct observation has proved, and we must recognise henceforth that there exist in England, and in London in particular, two febrile affections hitherto confounded together, but really very distinct, which only resemble one another in a general manner, of which one only attacks young persons, is accompanied ordinarily from the outset with local symptoms in the abdomen, afterwards with an eruption of *taches roses lenticulaires;* whilst the local symptoms, the diarrhœa, the meteorism, are more or less completely absent in the other which is accompanied by an eruption very different from the first and also much more abundant, and attacks person of every age." He adds much to his chapter of causes and points out that in typhoid fever "passing the night in places situated low down and inhabited by too many persons cannot be one of the causes, as only the eighteenth part of the cases fulfil this condition." He actually gives one case, "Observation 54 bis," where the use of a putrid water in which a certain amount of chopped-up hay had been mixed was followed by a well-developed and fatal case of typhoid fever in which the ulcerations of the Peyer's patches were found after death. With regard to the question of contagion, which he did not touch in the first edition of his work, he comes positively to the conclusion that it is a contagious disease, and that the Paris physicians had denied this because in a great city it is difficult to trace the course of contagion. He quotes largely from the work of M. Gendron of Château-du-Loir on epidemics of small places to prove that the disease is transmitted directly and indirectly from person to person. He also quotes from the same author some remarkable instances proving the immunity conferred by an attack of the disease, and at the same time proving its contagious character. These are so interesting that I think them worth quoting, as follows:—

1. Three journalists contracted the disease at a certain house, two communicated it to their families, the third did not do so, he was looked after by his wife who had had the disease several years before.

2 A domestic servant of Contereau transmitted typhoid fever to his sister, the niece of his master and mistress, and these visited her without danger. They had had the typhoid affection four years before.

3 At Petit-Gênes a young man infected all who looked after him except his father and mother; these had both previously had dothinenterie; the husband 20 years and the wife two years before the epidemic which this very son started.

4. In 1829 the same disease was imported into a fresh family at Petit-Gênes and did not go beyond it, in spite of the visits of the inhabitants of the hamlet, which had already been once attacked.

5 At eight years apart two epidemics attacked Coemont and the second spared all those whom the first had not spared.

He concludes, then, first that the disease observed in these country places by MM. Bretonneau, Leuret, and Gendron whether in the sporadic or epidemic state was unquestionably typhoid fever, because the characteristic anatomical lesion was commonly found among those who died from it and "it must be recognised therefore that the typhoid affection is contagious, at any rate in the departments." But he adds that others have since made similar observations in Paris. Thus, M. Putegnat "has reported that after a visit made to a person who returned from a village where typhoid fever prevailed a woman was attacked by this disease and a few days afterwards her husband and their six children were also attacked. A single person escaped—she was 82 years of age. M. Putegnat also reports other similar facts which leave no doubt as to the contagious character of the disease." And he finally concludes: "It seems to me henceforth impossible, after all that goes before, to deny the contagious character of the typhoid affection, even in Paris."

I will next draw your attention to the work of Professor A E Chomel entitled "Leçons de Clinique Médicale (Tome I., Fièvre Typhoide)," published in 1834, but delivered before then. Dr. Chomel considered typhoid fever a separate and distinct disease from typhus fever and gave it the name of typhoid fever. In his introductory remarks he says that the fevers described by different authors, including himself, "under the name of grave continued fevers, under whatever form they show themselves, whether inflammatory, bilious, mucous, adynamic, ataxic, nervous, are only varietie of one of the same affection which has received differen names (entero-mesenteric fever of MM. Petit and Serre intestinal exanthema of M. Audral, *dothinentérie* c *dothinentérite* of M. Bretonneau, *iléo-diclidite* of M. Bally follicular enteritis of many pathologists). We shall prefe ably call it by the name of *typhoid fever* or *disease*, becaus of the analogy which it offers in its symptoms with th typhus of camps." He goes on to add that the variou fevers mentioned above have common characters whic forbid them being considered as separate diseases "*an are especially bound together by a series of anatomica lesions which one does not meet with in any othe disease.* The typhoid affection will therefore occupy i nosology a position of great importance because it almos takes the place by itself of a whole class of diseases." H then describes most minutely the symptoms and course o the disease, describing, among other things, the specia eruption in the following words: "One sees appear ordinaril from the seventh to the ninth day that altogether peculia eruption which is special to typhoid fever and consists i small *taches rosées*, disappearing by pressure, of from half line to two lines in diameter, round in shape, withou elevation or scarcely elevated above the skin, scattered ove the abdomen, sometimes over the chest, more rarely over th thighs, the arms, and the forearms." Further on he point out that "the *taches rosées lenticulaires* are easily distinguished from the petechiæ and from the bites of fleas, because in these latter there is extravasation of blood at the surface of the dermis, and that their colour, instead o lessening under the influence of pressure, becomes more pronounced by the discolouration of the skin which surround them. In the typhoid spots, on the contrary, the rednes disappears altogether, as in erysipelas, where there i evidently congestion, and where, when the pressure ceases, one sees the redness reappear immediately." Further on, again, he points out that in a certain number of cases there is intestinal hæmorrhage and sometimes perforation, of which he says: "Perforation of the intestinal walls is the most grave of the accidents which can happen in the course of the typhoid affection, for it almost inevitably results in the death of the patient." He mentions that M. Louis reported that he had observed intestinal perforation eight times in 55 persons who had died from typhoid fever, a proportion of one in seven. In discussing the lesions produced during the course of the disease he says: "The anatomical lesions which constantly or almost constantly accompany the typhoid affection are situated in the follicles of the intestines and the mesenteric glands. These are the only lesions which one meets with in almost every case." He includes in the follicles of the intestines the isolated ones (Brunner's glands) and the agglomerated ones (Peyer's patches) and further on he describes minutely the ulceration of the follicles. Like all the other authors of the time he finds that "the causes of typhoid fever are involved in the greatest obscurity." With regard to the question of contagion he points out that "there is a great difference of opinion among medical men—the majority in France deny every kind of contagion in this disease. A few, however—perhaps 1 per cent.—think that typhoid fever ought to be classed among the contagious diseases." He then states the arguments of the non-contagionists, which he says were generally received and admitted without opposition until the time when M. Bretonneau in 1829 adopted the opposite opinion. He points out that the first reason why contagion has been denied to this malady "is that of all the persons who can surround a patient attacked with typhoid fever there are few who are susceptible of contracting the disease. One understands in effect that the father, the mother, the doctor, the nurses, many of the sick in hospitals, are immune to the contagion either because most of them have already passed the age at which the typhoid disease is most commonly developed, or because they have already been attacked by it, or, lastly, because they are among the number of those who are immune by constitution Another reason is that in hospitals on account of the good ventilation such diseases even as small-pox are not readily transmitted from one patient to another." He also points out that the negative proofs on which the anti-contagionists rely are entirely from observations made in Paris. "But it is not in cities as large as Paris that one can study contagious diseases from the point of view of their transmissibility, because of the difficulty, or even of the impossibility, in most of the cases to trace there the course of the contagion. ...... It i from the fever which we now know under the denomination of typhoid. He then describes the varieties of contagious typhus under the names of pestilential or oriental typhus (the plague), perhaps also occidental typhus (the yellow fever of America) and ordinary typhus Of the latter he says that it is peculiar to Europe and we must include under it, *but only as so many varieties*, the typhus of hospitals and lazarettes, of prisons, of camps, of vessels, and of besieged cities, showing clearly that by it, he means what we understand as typhus fever and that he was quite aware of the circumstances under which it flourishes In Section VI of this work he discusses the causes and modes of development of the disease He says that it is always produced by contagion and that one attack of it almost always destroys for a certain time, but rarely for the whole of life, the susceptibility to the disease He says that the contagion is spread by means of clothes, woollen stuffs, furs, linen, dirty bedclothes, and even by beds of straw or of hay on which typhus patients have lain He disputes the view that the air of marshes has anything to do with the disease, pointing out that it produces fevers of the intermittent type For him overcrowding is the cause of typhus fever, although he gives all credit to previous observers in the following sentence "Army doctors by exact researches have been the first to show us under what circumstances and how the air can become the cause of typhus, R Minderer, D Monro J Pringle, and others have specially pointed out the dangers which air produces when it is overcharged with human exhalations *There is in truth the source of the contagious matter and of the contagion of typhus* It is equally recognised and too much confirmed by terrible examples that the exhalations of healthy men crowded and pressed together in too small a space have also the most harmful influence upon health In prisons, houses of correction small rooms of vessels, and in all the establishments where many men otherwise healthy live together in too great a number the air offers the same danger' He also insists that the disease may be avoided by preventing overcrowding "As the atmosphere of hospitals, or of any other establishment deteriorated and overcharged with exhalations, especially with exhalations of sick persons is the only originating cause of typhus and as the best method for preserving against this terrible disease consists solely in diverting these causes and in insuring a pure and respirable air, every authority, as soon as it is convinced of the importance and utility of this object, should take care to have recourse to measures which are the most salutary and the most suitable to attain this end Such is certainly the duty of Governments they watch over the sick with so much solicitude, they go to so much expense for food medicines, and commodities of all kinds, and why should they neglect to pay attention to that which is the most necessary to the sick, to the purity of the air as the indispensable element of life and of which the bad qualities are so often dangerous?" The next sentences are so remarkable and so much in advance of the time that I am sure I shall be pardoned for quoting them also "What is there beneficial to suffering humanity when in a hospital and in a military lazarette a considerable number of sick persons are found crowded together and infected one after the other by the foul air? Would it not be more suitable to place these sick persons in barns or in attics in the open air than to crowd them in rooms? One would avoid in that way many dangers and misfortunes One is even sometimes prodigal in providing warmth for sick persons. Why should one not be so in ensuring pure and sufficient air? Air is more useful than warmth Want of warmth can sometimes be replaced by diet or medicines, want of air can never be replaced either by the best diet or by the most expensive remedies Civil and military authorities ought never to lose sight of this important truth It is the duty of all those who are called upon to work for the good of humanity to have their minds imbued with this idea in order to attain the desired object.' It is thus quite evident that this author in the early years of the nineteenth century had a perfectly clear idea of what typhus fever was, of its causes, and of the way to prevent it He says in the most positive manner that it is a distinct disease from the other continued fevers which we now know as varieties of typhoid

The most important early work on typhoid fever, however, is that of M. Louis the first edition of which appeared in 1829 under the title of "Researches on the Diseases known under the Names of Gastro-enteritis Putrid, Adynamic, Ataxic, or Typhoid Fever," &c It was dedicated to M Chomel, Professor of Clinical Medicine at the Paris School In this first edition M Louis describes, with the hand of a master, typhoid fever in the minutest manner He maintains that the ulceration of the Peyer's patches is its characteristic lesion and he says "*Except the alteration of the elliptic patches* all the lesions of the mucous membrane of the smaller intestine observed in cases of the typhoid affection existed in persons who had succumbed to very different acute diseases' And again "The elliptic patches of the small intestine having only shown alterations in the subjects dying from the disease which is the principal object of these researches this alteration having been constant, ordinarily very severe, always developed according to the same law whether death has arrived after eight days of the disease or after a much more considerable length of time, and in some cases, so to speak, the only lesion, it must not only be considered as special to typhoid affections, but as forming their anatomical character just as tubercles form that of phthisis whatever has been the cause which has excited their development' He also even in this first edition, describes the "*taches roses lenticulaires*" (N B —He calls them thus by other writers they are generally known as "*taches rosées*"), their distribution and successive crops With regard to the causes he says "While the causes of enteritis are often evident those of the typhoid affection are unknown And again "The most profound obscurity then reigns over the causes of the affection we are considering" The second edition of the work was published in 1841 and was also dedicated to M Chomel[1] In the preface to this edition he refers to the confusion which previously existed as to the continued fevers and says triumphantly "Now that the confusion has ceased it is recognised that the fevers of Pinel, apart from the plague only form one and the same disease of which the anatomical character consists not in an inflammation of the stomach and intestine but in a profound and special lesion of the elliptic patches of the small intestine. Those who up to this time had defended with the greatest energy the doctrine of the fevers have abandoned their point of view and have recognised as M Chomel has done, the exactitude of the facts which I have observed and that of the conclusions which I have deduced from them[2] This change of opinion has taken place not only in France but everywhere where observant medical men have followed the movements of science, and among foreigners the American medical men have been the first to recognise the correctness of my researches" He then quotes a number of American medical men "who, having studied for the most part the typhoid affection at Paris have afterwards many times observed it in their own country with the symptoms and anatomical characters which I have described In this second edition the chief additions that he makes are as follows In the first edition he had stated that the "*taches roses*" were found in other diseases In this one he says "Since the publication of this work I have in vain searched for the spots in question on a number of patients attacked with other acute affections than typhoid fever and I presume that being less familiarised with the typhoid spots 10 years ago than I am now I must have confused small papules with the eruption in question, which explains the apparent contradiction which I have just pointed out This is the confession of a great and truthful observer Further on he complains that "the state of the viscera of individuals who have perished from the different epidemics of typhus has often been neglected, and in this case the most certain and easy means of assuring oneself of the identity or difference between typhus and the typhoid affection escapes us He then quotes M Gaultier de Claubry and authors of other writings and says that "after a fashion these descriptions, although assuredly very incomplete seem nevertheless to show, as far as they go, that the comparative study of the symptoms indicates the identity of typhus and the typhoid affection' It will be noticed how very guarded this sentence is but M Louis was not content with that very guarded statement for he goes on instantly to make the following astute remark:—"One cannot be too much astonished however in admitting this identity that a formidable accident, the perforation of the small intestine it best, for they suggest that "the pyrexia, called in France 'typhoid fever,' *may be* nothing else than a gastro-intestinal inflammation," and M. Bouillaud defines it as follows: "Typhoid fever, or adynamic fever, or entero-mesenteric fever, or dothinentérite, or iléo-diclidite, &c., consists in the inflammation of the small intestine and its follicles plus a *typhoid element*, the nature of which is not agreed on." On the other hand, during the discussion M. Rochoux says positively, "Typhus and typhoid fever are two essentially distinct diseases, as M. Petit has proved, and as I have stated in a treatise myself."

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[1] In this edition the title was somewhat altered (the name typhoid fever being given a prominent position before the other names of the disease).

[2] In a footnote he here acknowledges the recognition given him by Professor Bright in his treatise on Follicular Enteritis which had just been published

At about the same time that Dr. Lombard of Geneva was making his observations which led him to the conclusion that there were "two distinct and separate fevers in Great Britain, one of them identical with contagious typhus, the other a sporadic disease identical with the typhoid fever or *dothienenteritis* of the French, Gerhard and Pennock of Philadelphia were arriving at the same conclusion from observations of an epidemic of typhus which prevailed in that city in the spring and summer of 1836. Both had previously studied the enteric fever in Paris and were familiar with it in their own country. They at once recognised the difference of the new disease, and after a time they were never deceived in their diagnosis." Their observations were published by Gerhard in February and August, 1837. Gerhard maintained that the typhus of Philadelphia was identical with British typhus, and with the gaol, camp, ship, petechial, or spotted fever, and that it was eminently contagious, while, on the other hand, typhoid fever was rarely communicated. He showed that the lesions of Peyer's patches and of the mesenteric glands, invariably present in the latter, were never found in the former, and remarked that English observers erred in regarding the intestinal disease as a mere complication of typhus. He insisted on the marked difference between the petechial eruption of typhus and the rose-coloured spots of typhoid fever, and he showed that a peculiar train of symptoms very different from those of typhus was associated with the intestinal affection, and that the distinctive characters of the two diseases were such as in practice could not allow them to be confounded. To Gerhard and Pennock certainly belongs the credit of first clearly establishing the most important points of distinction between the two diseases. M. Valleix of Paris, in a review published in January and February, 1839, thus alluded to Gerhard's observations: "M. Gerhard établit d'abord un fait bien important, c'est qu'il peut exister, et qu'il existe en effet, concurremment dans le même pays, deux maladies, qu'on peut parfaitement diagnostiquer, et dans lesquelles on peut prédire pendant la vie du malade, les lésions qui seront trouvées après la mort; ce sont la fièvre typhoïde et le typhus proprement dit."

After this several authorities, especially Dr. Staboroh, Dr. Shuttuck of Boston, M. Valleix, and M. Rochoux, published memoirs pointing out the differences between the two fevers. Of the last mentioned Dr. Murchison says: "He insisted that nothing could be more unlike than the eruptions of the two fevers and that while typhus was highly contagious and generally believed to result from overcrowding the contagious character of dothienenteritis was doubtful and it was independent of overcrowding" (Rochoux, 1840).

On Feb. 6th, 1840, Dr. H. G. Barlow read a very important paper on "The Distinction between Typhus Fever and Dothienentérie" before the Parisian Medical Society, an abstract of which will be found in THE LANCET of Feb. 29th of that year. He insisted that these two fevers were not only different in their lesions but also that "the *fièvre typhoïde* of France is an endemic disease; it is endemic in those localities, as in Paris, where it principally prevails and where the influence of contagion is extremely doubtful and is by many positively denied. The typhus fever of Great Britain and Ireland on the contrary is a highly contagious disease." Further on he says: "I would suggest that two diseases so different in their modes of origin, however nearly in the course of their symptoms they may come to resemble each other cannot be essentially identical. Dothienentérie chiefly attacks those who have only been a short time resident in Paris or in a large city; typhus fever observes no such distinction of persons; the former rarely occurs above the age of 40 years or below that of 10, the latter on the contrary very frequently does. Dothienentérie is at its maximum in autumn and at its minimum in winter. ...... In typhus no such connexion is observed to exist and that disease is often at its greatest height in winter when the former is comparatively rare." He also points out that in typhoid fever "diarrhœa is one of the earliest and most constant symptoms. It usually sets in at the beginning of the disease and continues to its close. It does not appear to be essential, as three fatal cases are mentioned by M. Louis in which it did not occur, neither is there any obvious relation between its amount and the degree of organic lesion which exists, yet its occurrence is almost invariable. In typhus an opposite state prevails and diarrhœa is comparatively rare." After mentioning other differences he describes the eruptions of the two diseases with the greatest minuteness and accuracy. "At about the eighth or ninth day the typhoid eruption, consisting of lenticular rose-coloured spots, *taches rosées*, appears on the abdomen, back, and chest; it is not an abundant eruption and not always present. The spots are about a line in diameter, regular in form, slightly elevated, and disappear on pressure, but return again. They come out in succession, four days being the average duration of each." After describing the sudamina he adds, "Petechiæ have been chiefly noticed in particular epidemics. They vary in diameter from one to several lines and neither project nor disappear on pressure. Vibices occasionally occur." On the other hand, "in the typhus fever of Great Britain and Ireland the eruption is chiefly petechial, often mixed with vibices, appears earlier, on the fourth or fifth day, sometimes before, and is commonly profuse, the amount of eruption bearing a certain ratio to the intensity and duration of the disease. The duration of dothienentérie may be stated on an average of from 20 to 30 days. ...... The average duration of typhus in 43 fatal cases mentioned by Dr. Reid was 12½ days ...... so that typhus appears to run its course much more rapidly than dothienentérie." He sums up the differences between the two fevers as follows: "A difference in the manner of origin, a difference in the seasons of occurrence, and a difference in the modes of attack; a difference in the series of symptoms, a difference in the external appearance, and a difference in the duration of the diseases; a difference in the ages at which they occur, a difference in the sexes in which they principally prevail, and a difference in the mortality which they respectively occasion. While the great and crowning difference of all is the existence of a particular anatomical lesion in one, and the absence of any obvious anatomical lesion in the other. Surely two diseases which differ in all these particulars cannot be identical." No wonder that Dr. Murchison says: "This paper has received less attention from subsequent writers than it deserves." I will go farther than that and will say that although previous writers had foreshadowed the differences between the two diseases, and although some of those writers whom I have mentioned had gone so far as to declare that the two diseases were different from one another, Dr. Barlow was the first man to give a detailed and complete account of the differences between the two diseases and to establish once and for ever that they are entirely distinct from one another. The only important fact in connexion with the two diseases that he does not point out is the difference in their *causes*.

In the same year—viz., on April 16th and 23rd, 1840—Dr. A. P. Stewart read a paper, also before the Parisian Medical Society, entitled, "Some Considerations on the Nature and Pathology of Typhus and Typhoid Fever applied to the Solution of the Question of Identity or Non-identity of the Two Diseases." This paper is an admirable summary of the state of knowledge on the subject at the time and contains an excellent description of the two diseases and their differences. He alludes to the cause of typhoid fever, of which he says: "With regard to the producing cause of typhoid fever all is vague and uncertain, ...... but what chiefly concerns us to know is whether the conditions we have seen to be so powerful in the production of typhus are the same, or anything like the same, in regard to typhoid fever. Exactly on this point Louis remarks: 'No more can the dwelling in places, low and inhabited during night by too great a number of individuals, figure among the causes in question, one-eighteenth only of the patients being in that condition,' and he concludes from a comparison of all the assigned causes with the facts ascertained by himself in these remarkable words: 'The deepest darkness, then, prevails regarding the causes of the affection under consideration.' Chomel likewise uses the same words in beginning his third article: 'The causes of typhoid fever are wrapped in the greatest obscurity.'" As to Dr. Stewart himself he merely says without hazarding any decided conclusion on a not, therefore, by negative proofs collected in a city like Paris that one can support an opinion unfavourable to contagion." Typhoid fever, according to him, only affects the same person once. "This circumstance is an important fact, for there are only a few diseases which attack but once the same person, and among these diseases there is not one which is not obviously contagious; typhoid fever would then be the only exception to this law if it were not contagious like the other diseases with which it shares this important character. Lastly, another point which is in favour of contagion is the analogy which exists between the typhoid affection and the typhus of camps, of which no one disputes the contagious character" He then discusses the resemblances and differences between these two diseases and formulates his conclusions as follows: "1. The opinion adopted by most French medical men that the typhoid affection is not contagious cannot be admitted as demonstrated. 2. If this disease is contagious it is only so to a feeble degree and with the concurrence of circumstances as yet ill-defined. 3. If further observations show in typhus fever anatomical lesions resembling those which one meets with in the typhoid disease the identity of the two affections would be placed beyond doubt and the question of contagion would be solved." Thus, after his minute and accurate account of typhoid fever and his evident conviction that it is a separate disease, he is obliged from his ignorance of typhus to suggest that it may be possible that after all they may be the same disease.

I am relieved from the necessity of describing the works of various other authors before 1835, as in that year two most important memoirs were awarded prizes by the Royal cademy of Medicine of Paris and were published in the Memoirs of that academy. These memoirs were answers to the question, "faire connaitre les analogies et les différences qui existent entre le typhus et la fièvre typhoide dans l'état actuel de la science." The first was by M. Gaultier de Claubry. In this paper he, like everyone else up to that time, considers the oriental plague to be a variety of typhus fever. He states that MM. Petit and Serres gave to a typhoid outbreak at the Hôtel Dieu in 1812 the name of "fièvre entéro-mésentérique" and that they, like MM. Louis and Chomel, consider it a separate disease. Even in the page of introduction to his memoir M. Gaultier de Claubry shows the bent of his mind, for, after describing typhoid fever as "that grave continued fever, so-called by MM. Louis, Chomel, Bouilland, &c., which has as constant anatomical characters the alteration of the elliptical patches and scattered follicles of the small intestine and that of the lymphatic ganglia of the mesentery," he goes on to say: "We are about to set forth a complete parallel between the two affections (typhus and typhoid fevers) in order to bring out the analogies and the differences, *if there are any*." And so we find that quite early in his memoir at the end of the second chapter he actually concludes with (under the head of "Symptomatology") "*Typhoid and typhus fever present not only analogy but the most perfect resemblance*," and this apparently merely because they both present different forms with different degrees of intensity. Later he tells us that in the two fevers the lenticular eruption is the same but that in typhus it is more abundant and petechial, but that sometimes it is the same in typhoid, and in this latter statement he is quite correct, as the eruption in typhoid may occasionally simulate that of typhus fever so completely as to be indistinguishable from it. I remember well an instance in University College Hospital of a young woman, a patient in one of Sir William Jenner's wards, who contracted *typhoid* fever while in the hospital, and developed the *typhus* rash so completely that one of the best clinical physicians of the time brought his class to see what the typhus eruption was like. The girl was sent to the London Fever Hospital as a case of typhus fever and she died there with ulceration of the Peyer's patches. There was no doubt, therefore, that the girl had typhoid ever. It was known from whom she contracted it and it was quite certain that she could not have contracted typhus ever while in the hospital

Of the intestinal lesions, as of the symptoms, M Gaultier de Claubry concludes that because in typhus fever alterations have sometimes been found in the mucous membrane of the intestines "there is not only a greater or lesser analogy but an *incontestable identity* of organic changes in the two fevers," and he makes this statement in spite of the fact that a little further on he praises the work of M. Lombard of Geneva who says that throughout the six years during which he has studied the subject with the greatest attention he has never seen a single case of typhoid fever in which the intestinal canal did not present after death the lesion of the elliptical patches of the smaller intestine, but that he saw with the greatest surprise that the cases (of typhus fever) at Glasgow and Dublin had no such lesion or affection of the mesenteric glands, and that this was the general experience of the medical men there. As to causes, M. Gaultier de Claubry shows that all authors agree that overcrowding is the cause of typhus fever, but he points out that Louis showed that this could not be the cause of typhoid fever, as only one-eighteenth part of the subjects of it were found to be under that condition, and that most of the cases were among the newcomers to Paris It is a pity that M. Gaultier de Claubry did not pay more attention to this point. If he had he would hardly have concluded his memoir with the sentence: "Typhus fever and typhoid fever are one and the same disease to which it would be convenient to give the name of typhode fever in order to avoid the expression typhoid, which only indicates an analogy of form and the word typhus which frightens people."

The other memoir was by M. Montault. It, like the former one, is a very exhaustive memoir, but, unlike it, commences without any *parti-pris*, as he gives no hint of any preconceived notions, indeed, he says in his introduction that he has "specially shown himself jealous of giving proof of a mind free from preconceived ideas and occupied by an ardent love of truth and guided by observation and reasoning after the well-known precepts of Hippocrates, Baglivi, and Bacon." In the first two parts of his memoir he gives what he calls the history of the two diseases under which he includes causes, symptoms, lesions, and treatment. In the third part he discusses the analogies and differences between them. Persons of all ages are exposed to attacks of typhus, while it is certainly not so for the typhoid fevers (he always speaks of typhoid fevers, not "fever"). Typhoid fever often occurs without overcrowding. Contagion, generally admitted for typhus, is not proved for typhoid fever, which is also more often sporadic than epidemic. He here quotes Hildenbrand as distinguishing completely typhus from the typhoid fevers, because of contagion which is peculiar to typhus. He then points out the differences of the symptoms of the two diseases and says that it is only in typhoid fever that death is sometimes caused by peritonitis following perforation of the intestines, and with regard to the ulceration in the intestines he says that one cannot in typhus fever assign different degrees or various forms to the lesion of Peyer's patches "because it is now probable that this lesion is absent in typhus fever" He also notices the differences in the times of the eruptions: "In the typhoid fevers the special eruption appears from the eighth to the twelfth day; in typhus from the fourth to the seventh day. This eruption which is constant in typhus does not constantly exist in the typhoid fevers. It is more general and more abundant (that is, the spots are more numerous) in typhus. It appears in the nervous period in the typhoid fevers; it disappears on the contrary in the nervous period of typhus. According to M Rochoux it forms a morbilliform eruption in typhus and consists of slight elevations in typhoid fever; according to M Chomel this eruption takes place on the abdomen and chest in the latter disease, whilst in typhus the face and the limbs are especially affected by it; lastly, petechiæ are rare in typhoid fever but very common in typhus." At the end of his memoir he gives a summary of the analogies of the diseases in the form of a table, but although he thus clearly points out the differences between these diseases he does not commit himself to the statement that they are two different diseases He contents himself by stating that Hildenbrand, F. de Sauvages, and P. Frank regarded them as different diseases; that M. Bouillard recognised a "want of identity" at a certain period of the diseases; and that M. Brettoneau had expressed no definite opinion on the matter. It is a great pity that the modesty of M. Montault was so great as to prevent his stating definitely the opinion to which his admirable researches undoubtedly led him. Had he done so it would, perhaps, have prevented the erroneous views of M. Gaultier de Claubry from taking possession of the medical profession in France

A report by M Louis, M. Bricheteau, M. Bouillaud, M Double, M Bally, and M. Andral, on a paper by M. de Larroque on "The Treatment of Typhoid Fever by Purgatives," published in the *Bulletin de l'Académie de Médecine* for 1836, shows how vague was then the knowledge of typhoid fever even among those who knew it best, for they suggest that "the pyrexia, called in France 'typhoid fever,' *may be* nothing else than a gastro-intestinal inflammation," and M. Bouillaud defines it as follows: "Typhoid fever, or adynamic fever, or entero-mesenteric fever, or dothinentérite, or iléo-diclidite, &c., consists in the inflammation of the small intestine and its follicles plus a *typhoid element*, the nature of which is not agreed on." On the other hand, during the discussion M. Rochoux says positively, "Typhus and typhoid fever are two essentially distinct diseases, as M. Petit has proved, and as I have stated in a treatise myself."

At about the same time that Dr. Lombard of Geneva was making his observations which led him to the conclusion that there were "two distinct and separate fevers in Great Britain, one of them identical with contagious typhus, the other a sporadic disease identical with the typhoid fever or *dothienenteritis* of the French, Gerhard and Pennock of Philadelphia were arriving at the same conclusion from observations of an epidemic of typhus which prevailed in that city in the spring and summer of 1836. Both had previously studied the enteric fever in Paris and were familiar with it in their own country. They at once recognised the difference of the new disease, and after a time they were never deceived in their diagnosis." Their observations were published by Gerhard in February and August, 1837. Gerhard maintained that the typhus of Philadelphia was identical with British typhus, and with the gaol, camp, ship, petechial, or spotted fever, and that it was eminently contagious, while, on the other hand, typhoid fever was rarely communicated. He showed that the lesions of Peyer's patches and of the mesenteric glands, invariably present in the latter, were never found in the former, and remarked that English observers erred in regarding the intestinal disease as a mere complication of typhus. He insisted on the marked difference between the petechial eruption of typhus and the rose-coloured spots of typhoid fever, and he showed that a peculiar train of symptoms very different from those of typhus was associated with the intestinal affection, and that the distinctive characters of the two diseases were such as in practice could not allow them to be confounded. To Gerhard and Pennock certainly belongs the credit of first clearly establishing the most important points of distinction between the two diseases. M. Valleix of Paris, in a review published in January and February, 1839, thus alluded to Gerhard's observations: "M. Gerhard établit d'abord un fait bien important, c'est qu'il peut exister, et qu'il existe en effet, concurremment dans le même pays, deux maladies, qu'on peut parfaitement diagnostiquer, et dans lesquelles on peut prédire pendant la vie du malade, les lésions qui seront trouvées après la mort; ce *sont la fièvre typhoide et le typhus* proprement dit."

After this several authorities, especially Dr. Staboroh, Dr. Shuttuck of Boston, M. Valleix, and M. Rochoux, published memoirs pointing out the differences between the two fevers. Of the last mentioned Dr. Murchison says: "He insisted that nothing could be more unlike than the eruptions of the two fevers and that while typhus was highly contagious and generally believed to result from overcrowding the contagious character of dothienenteritis was doubtful and it was independent of overcrowding" (Rochoux, 1840).

On Feb. 6th, 1840, Dr. H. C. Barlow read a very important paper on "The Distinction between Typhus Fever and Dothienentérie" before the Parisian Medical Society, an abstract of which will be found in THE LANCET of Feb. 29th of that year. He insisted that these two fevers were not only different in their lesions but also that "the *fièvre typhoïde* of France is an endemic disease; it is endemic in those localities, as in Paris, where it principally prevails and where the influence of contagion is extremely doubtful and is by many positively denied. The typhus fever of Great Britain and Ireland on the contrary is a highly contagious disease." Further on he says: "I would suggest that two diseases so different in their modes of origin, however nearly in the course of their symptoms they may come to resemble each other cannot be essentially identical. Dothienentérie chiefly attacks those who have only been a short time resident in Paris or in a large city; typhus fever observes no such distinction of persons; the former rarely occurs above the age of 40 years or below that of 10, the latter on the contrary very frequently does. Dothienentérie is at its maximum in autumn and at its minimum in winter. ...... In typhus no such connexion is observed to exist and that disease is often at its greatest height in winter when the former is comparatively rare." He also points out that in typhoid fever "diarrhœa is one of the earliest and most constant symptoms. It usually sets in at the beginning of the disease and continues to its close. It does not appear to be essential, as three fatal cases are mentioned by M. Louis in which it did not occur, neither is there any obvious relation between its amount and the degree of organic lesion which exists, yet its occurrence is almost invariable. In typhus an opposite state prevails and diarrhœa is comparatively rare." After mentioning other differences he describes the eruptions of the two diseases with the greatest minuteness and accuracy. "At about the eighth or ninth day the typhoid eruption, consisting of lenticular, rose-coloured spots, *taches rosées*, appears on the abdomen, back, and chest; it is not an abundant eruption and not always present. The spots are about a line in diameter, regular in form, slightly elevated, and disappear on pressure, but return again. They come out in succession, four days being the average duration of each." After describing the sudamina he adds, "Petechiæ have been chiefly noticed in particular epidemics. They vary in diameter from one to several lines and neither project nor disappear on pressure. Vibices occasionally occur." On the other hand, "in the typhus fever of Great Britain and Ireland the eruption is chiefly petechial, often mixed with vibices, appears earlier, on the fourth or fifth day, sometimes before, and is commonly profuse, the amount of eruption bearing a certain ratio to the intensity and duration of the disease. The duration of dothienentérie may be stated on an average of from 20 to 30 days. ...... The average duration of typhus in 43 fatal cases mentioned by Dr. Reid was 12½ days ...... so that typhus appears to run its course much more rapidly than dothienentérie." He sums up the differences between the two fevers as follows: "A difference in the manner of origin, a difference in the seasons of occurrence, and a difference in the modes of attack; a difference in the series of symptoms, a difference in the external appearance, and a difference in the duration of the diseases; a difference in the ages at which they occur, a difference in the sexes in which they principally prevail, and a difference in the mortality which they respectively occasion. While the great and crowning difference of all is the existence of a particular anatomical lesion in one, and the absence of any obvious anatomical lesion in the other. Surely two diseases which differ in all these particulars cannot be identical." No wonder that Dr. Murchison says: "This paper has received less attention from subsequent writers than it deserves." I will go farther than that and will say that although previous writers had foreshadowed the differences between the two diseases, and although some of those writers whom I have mentioned had gone so far as to declare that the two diseases were different from one another, Dr. Barlow was the first man to give a detailed and complete account of the differences between the two diseases and to establish once and for ever that they are entirely distinct from one another. The only important fact in connexion with the two diseases that he does not point out is the difference in their *causes*.

In the same year—viz., on April 16th and 23rd, 1840—Dr. A. P. Stewart read a paper, also before the Parisian Medical Society, entitled, "Some Considerations on the Nature and Pathology of Typhus and Typhoid Fever applied to the Solution of the Question of Identity or Non-identity of the Two Diseases." This paper is an admirable summary of the state of knowledge on the subject at the time and contains an excellent description of the two diseases and their differences. He alludes to the cause of typhoid fever, of which he says: "With regard to the producing cause of typhoid fever all is vague and uncertain, ...... but what chiefly concerns us to know is whether the conditions we have seen to be so powerful in the production of typhus are the same, or anything like the same, in regard to typhoid fever. Exactly on this point Louis remarks: 'No more can the dwelling in places, low and inhabited during night by too great a number of individuals, figure among the causes in question, one-eighteenth only of the patients being in that condition,' and he concludes from a comparison of all the assigned causes with the facts ascertained by himself in these remarkable words: 'The deepest darkness, then, prevails regarding the causes of the affection under consideration.' Chomel likewise uses the same words in beginning his third article: 'The causes of typhoid fever are wrapped in the greatest obscurity.'" As to Dr. Stewart himself he merely says without hazarding any decided conclusion on a point so keenly debated: "I would simply direct attention to the differences as regards the probable origin and propagation of the two diseases which the foregoing facts appear to establish and also to the interesting question whether, if typhoid fever really depends on and is propagated by a specific poison, that poison is or is not generated under the same circumstances as the infection of typhus." So that as far as the cause is concerned Dr. Stewart does not advance us at all, neither does he venture to say that typhoid and typhus fevers are distinct diseases, for he sums up the matter as follows: "On a review, then, of all that has been advanced, it would appear that typhus and typhoid fever present important differences, as regards their probable origin, their approximate causes, their course, many of their symptoms, their diseased appearances, and the treatment applied to each. Are they, then, identical, or are they not? I feel that it would be presumptuous in me to hazard a direct reply; nor do I demand an answer in the affirmative merely on the faith of what I have stated. All I can ask or wish for is careful, extensive, and minute inquiry without prepossession or love of system, and a satisfactory solution must soon be arrived at." So that he does not really lead us as far as Dr. Barlow had already done.

In the year 1841 a work entitled "Traité de l'Entérite Folliculeuse (Fièvre Typhoide)," by C. P. Forget, Professor of Clinical Medicine at the University of Strasburg, was published in Paris, consisting, in fact, of lectures previously given by that physician to his students, to whom it is dedicated. (The preface is dated November, 1840.) In these lectures he speaks of the *essential distinctions* between typhus and typhoid fevers, saying that they have only been determined within recent times. He gives Hildenbrand the credit of being the author who had done more than any other to point out the specific nature of typhus fever, but he does not agree that the other fevers from which Hildenbrand distinguishes it are necessarily non-contagious. He then discusses the views of M. Gaultier de Claubry and other authors who maintain that typhus and typhoid fevers were the same diseases. M. Forget excuses himself for quoting so many authorities by saying that he has not had the sad privilege of observing epidemic typhus. He is evidently much impressed with the views of M. Gaultier de Claubry and admits that it is possible that many of the grave febrile affections referred to may be identical, but he defines his own object as follows: "That which I profess to show is that our *sporadic* typhus *nostras, typhoid fever*—in a word, the grave continued fevers of our country—are, and certainly always have been, associated with follicular enteritis. *Let this be well understood. We do not profess to talk of that which we have not seen* (i.e., of typhus fever); it is follicular enteritis, commonly called typhoid fever, which is going to occupy us exclusively." He is perfectly clear about the fact that the disease has this special lesion and he gives the following definition: "Follicular enteritis is defined by itself—that is to say, that the lesion which names it is its fundamental character. Follicular enteritis is the inflammation of the intestinal follicles, as pneumonia is the inflammation of the lung." And again: "Follicular enteritis is a material fact, as pneumonia, hepiditis, cancer, variola, &c. Why, then, should we refuse to make a disease of it? ...... What we have to do here is to establish the reality of follicular enteritis as an evident morbid fact; it is to recognise its right to a place in the catalogue of diseases.[3] For him, among several alterations in the intestinal canal those of Peyer's patches are the most characteristic, and he describes them in great detail, referring to the observations of Bretonneau, Louis, Chomel, and Montault on perforation of the intestine in this disease. Although he mentions the *taches rosées* he evidently does not consider them as especially characteristic of the disease any more than the sudamina or the petechiæ which he also mentions. As to the cause of the disease, while he considers that it may be produced by foul air and decomposing foods, he says that the causes "sont très variables et n'offrent rien de spécifique." It is evident, however, that he attached some importance to foods as a possible means of conveying the disease, for he says: "Is it not, indeed, singular that some would deny that food, for instance, has the power of directly producing follicular enteritis, when they attribute to it without difficulty gastritis, colitis, and villous enteritis itself?" After quoting a number of other authors, some of whom maintain that the disease is contagious and others that it is not, he gives his own opinion as follows: "As for me, a pupil of the Paris School, I have denied the contagion until after my removal to the country, as indisputable facts showed me that typhoid fever can affect persons who stay near sick persons. Whether it is by the inoculation of a specific virus (contagion) or by inspiration of air vitiated in any other manner (infection) I do not know; but this is positive, that the disease *is communicated* in certain circumstances somewhat rare and still undetermined." Th sentence, I think, expresses the view that is held mos generally now. However, he in fine concludes "that ther is nothing invariable and essential in the causes of follicula enteritis; nothing essential and invariable except follicula enteritis itself."

Such was the position when Dr. William Jenner (afterwards Sir William Jenner, Bart., G.C.B., one of the ablest Presidents the College ever had) undertook the investigation of the question. Having been resident medical officer of the London Fever Hospital he had had an excellent opportunity, of which he made the best use, of making observations on cases of both typhus and typhoid fevers, and in 1849 his paper "On the Identity or Non-identity of Typhoid and Typhus Fevers" appeared in the *Monthly Journal* and was published in a separate form by John Churchill in 1850. In the introduction to this paper he points out "that with few exceptions British physicians have laboured to prove that typhoid and typhus fevers are identical. The results obtained by this analysis justify the assertion that they are essentially distinct diseases." He commences by stating the differences between scarlet fever and small-pox and in a masterly manner proceeds in his paper to show that similar differences are observed between typhoid fever and typhus fever. "We assert that small-pox and scarlet fever are different diseases for the five following reasons: 1st. In the vast majority of cases the general symptoms differ. 2nd. The eruptions, the diagnostic characters if present, are never identical. 3rd. The anatomical character of the one is never seen in the other. 4th. Both being contagious diseases, the one, by no combination of the individual peculiarities, atmospheric variations, epidemic constitutions, or hygienic conditions, can give rise to the other. 5th. The epidemic constitution favourable to the origin, spread, or peculiarity in form or severity of either has no influence over the other excepting that which its exercises over disease in general." With regard to the third of these he explains as follows: "By the anatomical character of a disease I intend to signify that lesion or those lesions of structure which are the invariable concomitants of a disease if it has continued for a given time, which time must be determined by a separate series of observations for every distinct affection. The anatomical character is not, be it remarked—and this is of immense importance—necessarily the cause of the disease, for it may be merely a symptom; but then, if the disease be not cut short by death it is an invariable symptom." Jenner saw that the crucial question was the determination of the facts with regard to the intestinal lesions. He remarks: "London alone of all the cities of Europe, from the fact of fever, with and without intestinal disease, being almost constantly present within its bounds, afforded a field for observation capable of setting the vexed question at rest. In Edinburgh, writes Dr Christison, the intestinal lesion is seen often enough only to prevent physicians being ignorant of its characters. In Dublin it appears to be equally unfrequent, while on the continent fever without lesion of the agminated glands is so rare that many eminent practitioners have doubted the existence of such an affection. The London Fever Hospital, by collecting within its walls cases of continued fever from all parts of the great metropolis, offered peculiar facilities for its study." During two years he made notes of nearly 1000 cases of acute disease, of which 66 were fatal cases of continued fever which were examined by him after death. This was necessary, as it was essential that the presence or absence of the intestinal lesion should be demonstrated. Of the 66 cases he found that in 23 the disease of Peyer's patches existed. These were cases of typhoid fever. In the remaining 43 the agminated glands, so far as the unassisted eye could determine, were in a healthy condition and these were cases of typhus fever. He then describes with the greatest minuteness the differences in the symptoms of the two diseases and concludes by combating two assertions that had been put forward "to account for the differences in symptoms which existed in continued fever with and without entero-mesenteric disease." 1. That typhoid fever is merely typhus fever complicated with lesions of a particular organ and it is therefore to be expected that certain symptoms referable to, and dependent on, that lesion will be present and so far modify the symptoms of the disease. He maintains, on the contrary, that the general symptoms of the two diseases in the cases he examined differed widely, "such differences having no apparent connexion with the local affection but being probably, like it, dependent on some common cause acting on the whole system simultaneously. Thus the remarkable differences in the kind—no small amount —of the rash of the two diseases, and the tendency to local inflammations, to erysipelas, and to ulceration, observed in the cases of typhoid fever here analysed, cannot with any show of reason be considered to have been dependent on the disease of Peyer's patches—i.e., in the same way as the abdominal signs undoubtedly were. The fact also that the duration of typhoid fever, and even of fatal cases of it, is considerably greater than is that of typhus fever also struck me very forcibly. The short comparative duration of the cases of typhus fever here considered is another remarkable point of difference, totally inexplicable by the hypothesis that typhoid fever is typhus fever with intestinal ulceration. Had the cases eventually recovered it might have been said that the intestinal lesion prolonged the disease in the cases of typhoid fever, but that all the fatal cases of fever, with a local lesion of so severe a nature as that recorded to have been present in the cases of typhoid fever, should have had a much longer course than all those other fatal cases of fever in which no organic change of structure could be detected after death appears to me inexplicable on the supposition that the former is simply the latter disease, with this serious lesion superadded. Let me repeat, by this hypothesis, we are asked to imagine that death is retarded in fever by extensive ulceration of the small intestines and enlargement, softening, and even suppuration of the mesenteric glands. Surely it behoves the supporters of such a statement to bring forward cogent proofs of the identity of the specific cause of the two affections ere they ask us to admit its truth." After pointing out other important differences he adds: "Thus tried by facts—i.e., by recorded symptoms and lesions—the assertion that typhoid fever is merely typhus fever with abdominal complication is completely refuted." 2 But another mode of explaining the differences which exist between the two diseases has been given—i.e , that the differences observed depend on variations in the epidemic constitution. These cases afford a complete answer to this assertion, for a majority of the cases here analysed of both diseases were observed during the same epidemic. "The cases of typhoid fever—which disease is rarely absent for a fortnight from the wards of the hospital—preserved their symptoms unchanged and presented the same lesions whatever the epidemic constitution that prevailed; the same is true of typhus fever. Cases of the latter disease are also rarely absent from the wards of the same institution. It is there common to see the patients occupying beds side by side and presenting respectively the well-marked characters of either disease. If, I repeat, the two affections were really the same disease, then the same epidemic constitution ought to have impressed on both the same general features, implanted in both the same local lesions, and given to both the same tendency to cadaveric change, and this allowing for all the modifying influence which the accidental presence of the abdominal lesions in the one and the absence from the other group might have occasioned. The analysis of every symptom and every lesion shows that the two affections were not thus assimilated by the prevalence of any particular epidemic constitution. But if this epidemic constitution, by any stretch of the imagination, could be supposed to change from week to week, to cause the case attacked to-day to have typhus fever, the individual who takes the disease to-morrow to have typhoid fever, still it could not account for the fact, as well established as any fact in medicine, that typhoid fever rarely, if ever, affects persons more than 50 years of age, while age exerts little influence in determining the occurrence of typhus fever. Thus, then, the assertion that typhoid fever is merely typhus fever modified by the prevailing epidemic constitution is as irreconcilable with facts as that the former disease is simply the latter with abdominal complication " He then repeats the distinctions between small-pox and scarlet fever and concludes: "If, then, the above are the grounds—and after mature deliberation I am able to assign no others—for the separation of small-pox from scarlet fever, I think it is indisputably proved that typhoid fever and typhus fever are equally distinct diseases—not mere varieties of each other, but specially distinct—specific distinction being shown in typhoid and typhus fevers, as in small-pox and scarlet fever, by the difference of their symptoms, course, *duration*, lesions, and *cause*."

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[3] He thus gives the disease the name of what he regards as its important and characteristic lesion, calling it "follicular enteritis"—even a worse name for it than "enteric fever."

Thus Jenner, as all who knew him knew, always had the courage of his opinions. He was not afraid, as some others before him had been, to state definitely, succinctly, and without circumlocution, the conclusions to which his investigations had led him, even though those conclusions were at variance, as he himself says, with the great majority of medical opinion at the time both in this country and on the continent. But this was not all. On Dec. 11th, 1849, Dr. William Jenner read a paper before the Royal Medical and Chirurgical Society entitled "On the Identity or Non-Identity of the Specific Cause of Typhoid, Typhus, and Relapsing Fever." For this purpose he analysed the cases admitted into the London Fever Hospital during the years 1847, 1848, and 1849, and the summary of his results is as follows: "In 1848 one-fourth of the cases admitted into the hospital had typhoid fever; while from 34 foci of typhus fever, yielding 101 cases, there was brought to the hospital once only a case of typhus fever and a case of typhoid fever from the same house; and during the same time among five localities affording nine cases of typhoid fever, one locality only ...... yielding a case of typhoid and one of typhus fever. That in 1849, although 18 foci of typhus fever yielded 51 cases and four foci of typhoid fever afforded 10 cases, not a single example of the two diseases being received into the hospital from one house occurred." And he concludes: "The facts contained in this paper appear to me to prove incontestably, so far as induction can prove the point, that the specific causes of typhus and typhoid fevers are absolutely different from each other....... I have throughout this paper expressed myself as if the specific cause respectively of typhoid fever, typhus fever, and relapsing fever was an influence emanating from the bodies of those affected with either disease. With respect to the contagious nature of typhus fever, I know no one who entertains a doubt. If typhoid fever be contagious it is infinitely less so than typhus fever. My experience leads me to regard it as contagious. Those who believe typhoid fever to be non-contagious while they admit the contagious nature of typhus fever cannot for a moment doubt the difference in the specific causes of the diseases. It would not, it ought to be observed, have weakened the force of the facts adduced if I had regarded these diseases as non-contagious, because the question here considered is not how the individuals respectively got the disease, but if the same cause, whether contagion or any other, can produce typhoid fever, typhus fever, and relapsing fever."[4]

Thus Dr. Jenner carries us, at any rate, one step farther. He not only asserts, as Dr. Barlow and others had done, that the two are distinct diseases, and proves it up to the hilt, but he also proves that they must have essentially different causes.

Dr. Murchison read a paper before the Royal Medical and Chirurgical Society on April 27th, 1858, entitled, "Contributions to the Etiology of Continued Fever, or an Investigation of Various Causes which Influence the Prevalence and Mortality of its Different Forms." In this admirable paper, describing the results of his observations at the London Fever Hospital, he establishes the following important points (besides many others) which I will give in his own words:—

1. Typhus and relapsing fever are quite independent of the season of the year, whereas typhoid fever is almost invariably most prevalent during autumn at the time that diarrhœa is most common, and it has been observed to be specially prevalent in seasons remarkable for their high temperature.

2. Sex has no influence over the prevalence of continued fever nor over that of any of its forms.

3. Typhoid fever is pre eminently a disease of childhood and adolescence, at which periods of life we know that there is a marked proneness to enteric affections. Less than one seventh of the cases of typhoid are above 30 years of age. Typhus and relapsing fever exhibit no predilection for youth—of typhus one half, and of relapsing fever one-third, of the cases are above 30.

4. Typhus and relapsing fever appertain exclusively to poverty and destitution, and seldom or never occur among the wealthy except from direct contagion. Typhoid fever attacks both poor and rich without distinction.

5. In large cities typhus and relapsing fever are for the most part limited to those localities remarkable for the overcrowding of their

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[4] Transactions of the Royal Medical and Chirurgical Society vol. xxxiii., 1850.

inhabitants, and in country districts they are seldom or never met *with except as the result of direct importation* Typhoid on the other hand, occurs alike in the centre and suburbs of cities, in the crowded houses of the poor and in the spacious mansions of the great, and also in isolated houses and hamlets in the country, without any traceable sources of contagion

6 When fever breaks out in a house or locality it seldom or never happens that some of the cases are typhus and others typhoid, but typhus and relapsing fever occur not unfrequently together

7 Overcrowding with deficient ventilation and destitution appear to be the essential causes *of typhus and relapsing fever and to be capable* of generating them *de novo*, [?][5] while there is no evidence that they *have any such influence over the production of typhoid fever*

8 There are many circumstances which tend to the belief that the emanations of decaying organic matter or organic impurities in drinking water or both of these causes combined are capable of generating [?] typhoid fever, but there is no authenticated evidence whatever to prove that such causes can give rise to typhus or relapsing fever

9 Typhus is eminently contagious Typhoid fever is also contagious but in a more limited degree and possibly through a different medium Again, typhus has in no instance been proved to communicate typhoid, nor typhoid to communicate typhus An attack of either confers an immunity from a future attack of itself, but not of the other

10 In all of the fevers there is not much difference in the mortality of the two sexes

11 *The mortality from* typhus is *greater among* the very *poor* than among those in better circumstances Typhoid fever appears to be *equally mortal in all classes*

12 Typhus and relapsing fever are strongly assimilated in the causes which give rise to them, *if they be not mutually convertible diseases* Typhoid fever on the contrary appears to be a perfectly distinct affection dependent upon totally different causes

It is very interesting *to note* that in the course of this paper Dr Murchison observed "that out of 10 *cowkeepers* admitted with fever in nine the fever was typhoid," and also that he "*ascertained that in several instances* patients entered as 'labourers' had been *employed in the drains*, in every such case the fever was typhoid" Of the patients admitted to the fever hospital "most of those who may have been supposed to have occupied the best conditions have been admitted with typhoid fever Thus the proportion of family servants admitted with typhoid has been three times that of typhus, of policemen six times, and of shopmen more than double On the other hand among '*paupers*' typhus and relapsing fever taken together *have been eight times as frequent as typhoid, and of* 64 'vagrants' admitted with fever in not a single instance was this typhoid" Again "Typhus fever among the rich, *except* as the *result* of *contagion*, is excessively rare, while cases of typhoid originating without any traceable contagion are far from uncommon I think, then, it may be concluded that typhus and relapsing fever are for the most part confined to the poor, but that typhoid fever makes no distinctions between one class and another" He shows that typhus fever prevails in overcrowded localities, whereas "a careful study of a great number of recorded outbreaks of fever in country towns and villages throughout England has convinced me that these outbreaks are almost invariably typhoid It is also a fact worthy of notice that several instances have come under my own observation of typhoid fever making its appearance in an isolated house in the country, in a family living in easy circumstances without any traceable source of contagion, of its attacking several individuals, and then disappearing without *spreading beyond that house* Dr Bartlett also makes similar observations as the results of his experience in America On the other hand, I am acquainted with no instance of typhus or relapsing fever *originating in* this way" He agrees with Dr Jenner that typhus fever and typhoid fever originate from *different foci of infection* "In no single *instance during* the 10 years have I *met with a case* of typhus and typhoid admitted from the same family, or even from the same house except (and the exceptions have been *only one or two*) *after the lapse of many* months or even years He then gives a number of cases in which typhoid fever was associated with "putrid emanations from *decomposing organic matter in drains*, cesspools, churchyards &c., and organic impurities in drinking water." These cases (actually dating from 1747 onwards) included the *celebrated outbreak in the* Westminster School and Abbey Cloisters in 1848, known as the Westminster fever, which attacked 36 persons, all of the better class, with three *fatal cases* A very bad *smell had* been complained of in the houses where these cases occurred during two or three days of very hot weather and 'it was found that the disease followed very exactly *in its* course the line of a foul and neglected sewer in which fæcal matter had been accumulating for years without any exit and which communicated by direct openings with the drains of all the houses in which it occurred" He also relates that towards the end of 1852 an outbreak of typhoid fever took place at Croydon, which was investigated by a committee of the Epidemiological Society consisting of Dr. A. P. Stewart, Dr Jenner, and Dr Sankey, and which was found to be caused by fæcal emanations of various kinds *and* also by contamination of the drinking water And at the end of this evidence he concludes "that typhoid fever is often, if *not always, generated by the putrid emanations from drains* and other sources, or by decomposing organic matter in drinking water" While, then, Dr Jenner proved that typhus fever and typhoid fever must proceed from different causes, Dr Murchison took us a step further and showed in the most masterly manner that typhoid fever was not produced under circumstances of overcrowding as it was well known that typhus fever was, but that although spread partly by direct contagion it was chiefly spread by means of foul emanations from sewers and drains and the pollution of drinking water with foul organic matters

I may here insert the opinion of the great French clinician, Trousseau, who says "Dothienentérie is a general disease, acute, *febrile*, very akin *to the eruptive fevers of which* we have spoken and with which it offers more than one striking analogy" He also says "La contagion de la dothienentérie est *incontestable*"

In 1862 Dr Murchison issued his "Treatise on the Continued Fevers of Great Britain," and in 1873 the second edition of it appeared In this work he gives an excellent historical account of typhoid fever which he calls enteric or pythogenic fever, the last name being suggested by him as an expression of what he believed to be the origin of the disease This is shown in his opening lines wherein he defines it as "an endemic disease generated and propagated by certain forms of decomposing organic matter" This treatise is so well known that I need not summarise it. I will merely give his own summary of its etiology, which is as follows —

1 *Enteric fever is either an endemic disease or its epidemics are* circumscribed 2 It is most prevalent in autumn and after hot weather 3 *It is independent of overcrowding and attacks rich and* poor indiscriminately 4 It may be generated independently of a previous case by *fermentation of fæcal* and *perhaps other forms of* organic matter 5 It may be communicated by the sick to persons in health but even then the poison is not, like that of small pox given off from the body in a virulent form but is developed by the decomposition of the excreta after their discharge 6 Consequently an outbreak of enteric fever implies poisoning of air, drinking water, or other ingesta with decomposing excrement

With regard to No 1, I will note that typhoid fever epidemics are often very widely spread Nos 2 and 3 are universally admitted and I will say no more about them Nos 4, 5, and 6 imply the view so strongly held by Dr Murchison that the disease is caused by a poison produced by decomposing fæces, which poison is not contained in the fresh excrement, and therefore amount to a denial of the fact that the *disease is produced by an organism* which is transmitted from one case to another This view, like that of M Gaultier de Claubry (who proclaimed the identity of typhus and *typhoid* fever) in France, obtained a great hold on the medical profession in this country and has been with considerable difficulty eradicated

In 1873 Dr William *Budd produced his work* on "Typhoid Fever, its Nature, Mode of Spreading, and Prevention,' in which he maintains that *it was proved long ago* that "typhoid fever is in its *essence a contagious or self-propagating fever*,' and he adds 'It is scarcely to the credit of the medical profession that this great truth should still be disputed" He then quotes *a number of authors who did dispute it*, but mentions 'Sir Thomas Watson who in his admirable work on the Practice of Medicine has not only lent his powerful sanction" to *the doctrines of the contagious origin and mode* of spread of typhoid fever, "but has given an exposition of them in that terse and lucid style of which he is so great a master, and I *may add that in Sir Thomas Watson's small* work on the Abolition of *Zymotic* Diseases, published in 1879, he says referring to typhoid fever, "When we reflect how readily this *origin of the disease* (*through water or milk*) may escape suspicion or may elude detection even when suspicion has been roused, we find continual reason for distrusting the argument *for the spontaneous development of* the disease based upon the difficulty of tracing the contagion to any conceivable source For my own part I cannot but deem this argument *altogether worthless*' *In his work Dr* Budd proves up to the hilt that the disease is directly contagious or communicable from one person to another and he gives the most remarkable examples of infection by direct contagion. As to this being one of the contagious fevers he well says: "The existence here, as in the other contagious fevers, of a latent period after the occurrence of the infection, the exemption conferred by one attack against any future attack, and, lastly, the immunity of large numbers of persons who though freely exposed to the fever poison yet remained proof against it, are characteristics of which the significance cannot be doubtful." He gives a graphic comparison between small-pox and typhoid fever. Each has a latent period; in each one attack protects against any future attack in the vast majority of instances, "so that if typhoid fever happens only once in life it is, as in small-pox, simply because the typhoid-fever poison *cannot grow again* in a body in which it has once bred," and after pointing out that what we actually *see* in small-pox takes place in the diseases of the same group, including typhoid fever, he sums up: "*The living human body, therefore, is the soil in which this specific poison breeds and multiplies, and that most specific of processes which constitutes the fever itself is the process by which the multiplication is effected.* As in small-pox, so in typhoid—to spread by this mode of reproduction is not only a characteristic but the *master*-fact in its history." For him, "*all* the emanations from the sick are in a certain degree infectious At the same time it is one of the principal objects of this work to show that what is cast off from the intestines is incomparably more virulent than anything else." Outbreaks of typhoid fever such as he describes, according to his view, "never occur except under one condition—that is to say, where no sufficient provisions have been made for preventing the discharges from the human intestine from contaminating the soil and air of the invaded area. Where these provisions are wanting the most spacious rooms and the freest internal ventilation afford no certain security against the spread of the fever." Finally: "Like malignant cholera, dysentery, yellow fever, and others that might be named, this is one of the great group of diseases *which infect the ground*. Hence the quasi-miasmatic character attaching to them all, which has misled so many observers as to their true mode of spreading."

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[5] The bracketed interrogation mark after the words *de novo* in this paragraph is mine, as is that also in paragraph 8 following the word generating

It is not too much to say that in this admirable treatise Dr. Budd proves his contention up to the hilt, sufficiently, at any rate, to convince the highly-trained scientific mind of Professor Tyndall who, in a powerful letter to the *Times* dated Nov. 6th, 1874, referring to one of the outbreaks described by Dr. Budd, says: "How could a disease whose characteristics are so severely demonstrable have ever been imagined to be non-contagious? How could such a doctrine be followed out, as it has been to the destruction of human life?"

In March, 1874, I read a paper before the Epidemiological Society "On the Alleged Spontaneous Production of the Poison of Enteric Fever," from which I may be allowed to make the following quotations:—

> We are, however, told that the intestinal discharges from a patient suffering from enteric fever are not infectious when fresh and only become so after decomposition has set in, and in proof of this it is advanced that medical attendants do not take it from the patients, that nurses do not get it, and that other patients in the same ward, although using the same utensils, scarcely ever take the disease. Now it must be admitted that such cases are uncommon, though they are by no means unknown; indeed, I find that while Murchison, on page 461 of the second edition of his "Treatise on Continued Fevers," says, "I have never known or heard of a case where the fever has been communicated to the medical attendant not residing in the infected house," he says (p. 469) of Putegnat, who thought he had caught it from making a post mortem on a case, "It is true that he was seized a few days after the autopsy, *but he had attended both the patient and her mother during their illness*"; so that on one page we are told that the fever is not communicable because medical men do not get it from their patients, and 10 pages farther on we find that the fact that a medical man got it after making an autopsy is considered to be no proof that the body was contagious, because he had been attending the patient and her mother during their illness!
>
> But is it proved in any sense of the word that the fresh fæces of a patient do not contain the poison of the disease? Certainly not. All that can be deduced from the facts is that they do not give out the poison in any considerable quantities into the air, and this makes it probable, without reasoning from mere analogy, that the poison consists, like the active principle of vaccinia, of solid particles, which do not evaporate from liquids in which they are, but may be carried up mechanically by the volumes of gas given off when such liquids ferment, or after the evaporation of the liquid may be desiccated and blown about; thus we see how it may be that the fæces have come to be regarded as more poisonous when decomposing than when fresh, or even as developing the poison during decomposition.
>
> I say that there is not one iota of proof that the fresh stools do not contain the poison of the disease, and that to say so is like saying that a solution of sugar of lead or of corrosive sublimate, scented with, say, attar of roses, is not poisonous, because you can stay in the same room with it without being poisoned, or that a vessel of vaccine matter does not contain the active principle of vaccinia, because you can handle it without being affected by vaccinia.
>
> I can understand the position taken up by Andral who "declared that he had never seen it exhibit the slightest contagious character", or by Dr. Stewart who wrote in 1840, "In no case, though questioned with the greatest care, either in Scotland or in the hospitals of Paris, have I ever found the disease referred to contagion."
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> I can understand that taken up by Trousseau, by Dr. Budd, and by others, who maintain that the disease is essentially contagious. But I cannot understand the anomalous, as it seems to me, position of those who in effect say, "Well, it's not a contagious disease, but as you've certainly brought forward some cases in which it appears to have been communicated from man to man, we must admit that occasionally it is contagious."
>
> That it is contagious, and most virulently so, I have not the slightest doubt; but I quite understand what those mean who say it is not: they mean that if you attend upon a patient suffering from enteric fever you are not likely to get it, while if you attend on one suffering from typhus or scarlet fever you are very likely to do so, unless you have had the disease before; they do not consider that this fact is not due to a difference in the contagious nature of the disease but to a difference in the form in which the poison is excreted from the patient, most of it being in the one case given out into the air which the attendants breathe, while in the other most of it is swamped in a mass of liquid which is removed as soon as possible. Those accustomed to small-pox, scarlet fever, and the like, of course said that enteric fever was not contagious when it was first brought to their notice, and there is no doubt that it is, under ordinary circumstances, very slightly so in their limited sense of the word; but that is not what is meant by those who now deny that, except under certain circumstances, it is not communicable from one person to another.
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> When we point to undoubted instances where a person suffering from enteric fever has taken it into a place where it was before unknown, but in which it has spread from that person, it is at once admitted "that there are unequivocal cases of enteric fever propagated in the manner described," but we are told that "such occurrences are exceptional, and that *the number of cases where the disease is introduced into a new locality without spreading far exceeds that in which it is propagated*," which means that the expedients adopted to get rid of the excretal matters were, in the cases observed (probably chiefly in large towns), generally sufficient to ensure the immediate removal of the infected fæces from the premises in a short time.
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> But I would put the facts in another light and would say: We see in how many cases we can prevent this disease from spreading; we can almost always point out the reason why it spreads in a house or town when it does so, and we ought to prevent its spreading much more frequently than we do.
>
> Are we, then, able to trace every case of enteric fever to a previous case? Certainly not; and it would be very wonderful if we could. When we consider that a person suffering from this disease may go about for weeks, leaving the poison in several different places every day; that he may go about his work until so prostrate that he goes to bed to die; that he may fall down dead from perforation of the intestines without the disease having been recognised; that the poison which he has left in so many different places may be distributed broadcast in water, milk, sewer air, or some other vehicle,—when we consider all these things, we may well wonder, not that we are often unable to trace the disease to infection from a previous case, but that we are so often able to do so. From the fact that we are able so frequently to point out the source whence the contagion has been derived, and to trace it to a previous case, we have at any rate a strong presumption in favour of the view that when isolated cases occur, and there appears to be no connexion with previous ones, the fact is that we are unable to trace any such connexion, and it is clear from the nature of the disease that this must very frequently be the case; and, moreover, we have no right to assume that we even yet know all the methods by which the poison of this disease may be conveyed. It is only comparatively recently that milk has been recognised as a vehicle of contagion, and there may be, and probably are, many other media of which we have not yet any knowledge, by which the poison is conveyed from place to place.
>
> It is clear that in towns, large and small, where strangers are continually coming and going, and where commodities of various kinds are brought from outside, and houses are connected with public sewers, it is not merely "difficult," as Dr. Murchison says, but on the face of it *impossible*, "to exclude the possibility of contagion," and so we may dismiss such cases at once. But then it must be allowed that many instances are on record where outbreaks of this disease have occurred in isolated villages and country houses, and where every effort has failed to trace any importation of the poison. It will be found on reading the published accounts of such cases that the possibility of importation in a variety of ways has been overlooked. A great many of them are cases of schools or other places where a number of people are collected together. No number of such cases would be sufficient to warrant the assumption that the disease arose *de novo* in any one of them. In most of the other instances we find that old cesspools, stopped-up drains, &c., have been disturbed, or have drained into wells, or leaked into the basements of houses. How are we justified in assuming anything more than that the filth contained the poison of the disease? How can we pretend for a moment to say that we have excluded the possibility of its introduction into masses of excrement which have been going on accumulating perhaps for years? The thing is manifestly impossible. And when we consider how many persons—visitors, servants, and vagrants—go to and from "isolated country houses," and their premises (stable-yards, &c.), we shall be disposed to hesitate before saying that we have excluded all possibility of importation.
>
> I must confess that these considerations prevent my accepting any of the cases on record as cases where non-importation has been proved, and I cannot therefore accept the dictum that the disease "may be generated independently of a previous case by fermentation of fæcal and perhaps other forms of organic matter." Were this true, would not the disease be much more prevalent? How is it that a house or town may be in a condition eminently suited for the existence of this fever, as shown by the fact that when a case is imported the disease ~~spreads, and often becomes~~ a severe epidemic, and yet no case is heard of there for many years, until the importation takes place? One town that I have already alluded to is a most filthy, overcrowded place; it has been several times decimated by cholera, but no enteric fever

occurred there for many years, until one day a case was imported, and the disease spread like wildfire, showing that the conditions for its existence were most favourable; and such instances might easily be multiplied were it necessary. Besides, we know very well what disease sewer air causes—it causes diarrhœa. Over and over again have I seen whole households prostrated with diarrhœa, when air from a foul sewer has leaked into the house, or air from a blocked up sewer or soil pipe has found its way into the drinking water cistern through the waste pipe and has fouled the water.

I therefore maintain that foul air contaminated by decomposing animal matters is capable of producing mere diarrhœa and that when it produces enteric fever it contains the poison of that disease, and that the arguments adduced to prove that this poison can be generated from ich decomposing matters independently of a previous case of the isease are inadequate to do so, that in many of the cases where non-mportation is supposed to have been all but proved it has not been ven rendered a fair presumption, and therefore that in the present tate of our knowledge we are not justified in saying that the disease ver arises *de novo*.

The correctness of the views maintained in the above paper has now been demonstrated by the discovery of the *bacillus typhosus*.

ABSTRACT OF

# Three Lectures

ON

# THE PULMONARY CIRCULATION, MORE PARTICULARLY IN RELATIONSHIP TO VARIATIONS IN CARDIAC ACTIVITY.

*livered before the Royal College of Surgeons of England on Feb. 17th, 19th, and 21st, 1902,*

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PREVIOUS workers upon the circulation through the lungs have mainly confined their attention to a study of the pressure changes in a pulmonary artery or vein in comparison with the pressure records in the aorta, and from these operations they have drawn conclusions as to the general variations of the circulation through the lungs. The close relationship of the two sides of the heart to the pulmonary vessels renders it, in most cases, a matter of considerable difficulty to decide, from observations of pressure changes alone, whether or not any active change has taken place in the pulmonary vessels. Hence the observations forming the subject-matter of the main portion of these lectures have been conducted by Dr. W. E. Dixon and myself during the past two years and took their origin from the application of another method—the plethysmographic—to the lung. This method has already proved of very great value in the study of the circulation in organs on the systemic circulation and has also proved a most valuable means of studying the circulation through the lungs under various conditions.

The operation consists in first exposing the lower lobe of the lung by the resection of two or three ribs. The lobe is then thoroughly freed up to the root of the lung, and if the object is to study the vascular changes one of two methods is adopted. In our first experiments we prevented the entrance of air into the lung by gently compressing it before inserting it in the oncometer. In this way the lobe does not expand with the ordinary air pressure used in artificial respiration. In a second series of experiments we first distended the lobe to its normal extent and then plugged the bronchus leading to the lobe by a pledget of cotton-wool soaked in vaseline, inserted by means of a long probe passed down the trachea. The lobe was then fixed in the oncometer and its variations in capacity recorded by connecting the oncometer to a piston or bellows-recorder. We have always simultaneously registered the aortic pressure by a mercury manometer. The advantages of the method lie chiefly in that it gives us at once a record of the changes in amount of blood contained within the lungs, thus showing immediately the production of an anæmia or congestion of the lung capillaries. By combining the information thus gained with the pressure changes in the four chambers of the heart we can often definitely determine the nature of the change that has been produced in a more certain way than can ever be obtained from records of the pressure changes only.

Variations in the flow of blood through the lungs may be caused by changes in the activity of the right heart or in the resistance offered by the pulmonary vessels and capillaries, and to this extent the problems offered for our study are similar to those so fully studied in the systemic circulation. Whereas, however, variations in the activity of the right heart produce but small effects upon the flow through the systemic capillaries, unless those changes be very pronounced, variations in the working of the left heart produce at once marked changes in the blood contents of the lungs. As Stolnikow has pointed out, the liver acts to a considerable extent as a blood reservoir on the systemic circulation, so that the right heart may take a greater or less volume of blood from the great veins without materially modifying the systemic pressure. So the lungs play a similar part to the left heart, acting as a reservoir in which blood may be stored if the left heart for some reason diminishes its output, and conversely contains a reserve of blood upon which the left heart draws when its output increases. It is this very close relationship to the two sides of the heart which makes the study of the pulmonary circulation of such difficulty and has led many workers into considerable errors.

In these lectures we shall therefore discuss the various experiments which we have performed in the following order: (1) the alterations in the pulmonary circulation due to purely cardiac changes; (2) the alterations due to variations in the systemic circulation, which may effect changes by alterations in the output of the left heart or by modification in the flow to the right heart; and (3) an examination of any changes due to alterations in the resistance offered by the pulmonary vessels.

The blood volume curve given by a lobe of the lung in which the bronchus has been plugged in the manner described above gives the following features. There is a small increase in volume at each inflation by the artificial respiration apparatus of the remaining lobes of the two lungs, and there is a very marked volume pulse occurring with each heart beat. This volume-pulse is systolic in time and is therefore due to the output from the right heart.

Turning in the first instance to the effect of alterations in cardiac activity upon the pulmonary circulation we may first of all discuss the changes caused by excitation of the augmentors and accelerators on the one hand and of the inhibitory fibres on the other. Stimulation of the accelerator fibres which also usually causes augmentation, as a rule, leads to an increase in the volume of the lung and a rise in the aortic pressure. The increased volume of the lung usually persists longer than the rise in aortic pressure. In a few instances no increase in lung-volume is recorded and these cases are usually accompanied by a more marked rise in aortic pressure. Simultaneous records of the blood-pressure in the pulmonary artery and aorta show a marked rise in the former which may or may not be accompanied by a rise in aortic pressure. From these results we conclude that the nerves chiefly affect the right side. The output from this side usually shows a greater increase than that from the left; hence the blood volume of the lung is increased. The various effects upon the aortic pressure show how variable the action is upon the left heart.

Stimulation of the vagus also gives very interesting results. With weak stimulation, resulting in much slower beat, the aortic pressure falls gradually and a marked decrease in the volume of the lung is recorded. A stronger stimulation, resulting in a much more marked fall in aortic pressure, leads to a quicker decrease in the lung-volume which, however, is no more extensive. In these cases the right auricle pressure rises considerably, but the effect upon the left auricle is much less marked. Hence we must conclude that the action of the vagus upon the heart is more particularly felt upon the right side. The diminution in volume of the lung can only mean a larger diminution in output of the right ventricle as compared to that of the left.

The next series of changes to be studied are those due primarily to an alteration in the systemic circulation. Of these we must distinguish two groups—namely, those in which respectively a rise or a fall in the aortic pressure is produced. These may exert an effect upon the pulmonary circulation either through a change in the rate of flow of blood into the right auricle, or by affecting the output from the left heart. At present the latter of these two factors has been chiefly studied.

As the simplest case we may take the effect of restricting the outflow from the aorta by partially or completely blocking the aorta at the lower end of the thorax. Waller and later observers have shown that the result of clamping the aorta is to cause a big rise in the aortic pressure, followed quickly by one in the left auricle. There is no rise in the pulmonary artery pressure unless the compression is kept up longer than about 15 seconds. There is usually no effect upon the right auricle pressure. We have found that the effect upon the lung as observed by recording its volume changes is to produce a very marked congestion, the mode of production of which is in the failure of the left ventricle to empty itself against the raised aortic pressure. In consequence of this fall in output from the left side the blood in the pulmonary veins cannot flow in normal quantities into the left auricle and is therefore accumulated in the pulmonary veins and capillaries. There is no incompetence of the mitral valves. A quite analogous series of changes is also observed when other procedures for raising the systemic pressure, apart from a direct action upon the heart, have been adopted, such as stimulation of the medulla, the vagi having been previously divided, stimulation of the divided splanchnics, or stimulation of the upper surface of the spinal cord which has been divided in the lower cervical region.

We next come to the effects produced by methods which act upon the heart as well as the blood-vessels. Of these one of the most important is suprarenal extract. This is known to cause a large rise in aortic pressure due chiefly to constriction of the peripheral arterioles; but it also acts upon the heart, whose rate is increased and output nearly doubled. The effect on the heart, however, is complicated, if the vagi be undivided, by a marked inhibition of the heart occurring mainly during the period of heightened aortic pressure. The effect of suprarenal extract upon the blood-volume of the lung is to cause first a small diminution in volume, soon followed by a marked increase which persists during, and for a short time after, the rise in aortic pressure. Thus the main effect is to produce a distinct congestion of the lungs. The effect upon the pulmonary blood-pressure is a rise to nearly double its original valve, commencing with, but lasting rather longer than, the rise in aortic pressure. The left auricle pressure at first falls, but rises rapidly when the aortic pressure has reached a high point. The effect upon the right auricle pressure is a gradual and slight rise following the rise in aortic pressure. From these results we may conclude that the effects are mainly due to the action of the peripheral blood-vessels in causing the large rise in aortic pressure. They are, however, complicated by the action upon the heart. The increased output observed at first explains the preliminary diminution in volume of the lung and the rise in pulmonary pressure. The later effects are due to the rise in the aortic pressure and the consequent inability of the left ventricle to empty itself. The more reflex inhibition there is produced, the more marked, as a rule, is the pulmonary congestion. These facts have an important bearing upon the question whether suprarenal extract can be advantageously used in hæmorrhage from the lungs Certainly in the doses which we have employed, and with intravenous injection, our experiments strongly contraindicate its employment for such a purpose. Whether a smaller dose, given by the mouth, so that the admittance into the circulation is much more gradual, can produce a pulmonary constriction unaccompanied by a congestion is now being investigated. Some further points in regard to the action of the extract upon the pulmonary vessels are described below

A drug of importance to us, in that it causes a fall in the systemic pressure, is amyl nitrite. This is known to produce its main effect by dilatation of the peripheral blood-vessels. The disadvantage against us here is that we are not quite certain of the details of its action upon the heart. In the cat a small dose of amyl nitrite sufficient to cause a marked fall in aortic pressure causes a large congestion of the lung, which takes place in two stages. There is a primary and moderate increase in the blood-volume, followed by a slight diminution, and this again is succeeded by the main volume increase, the nature of the record seeming to show that we are dealing with at least two different effects. The blood-pressure changes, so far as we have at present decided, have shown only slight changes, the main one being a rise in the left auricle pressure. The effect upon the pulmonary pressure is very slight and mainly in the direction of a late rise. We think, therefore, that the probable explanation of the congestion produced in the lung is a preliminary dilatation due to the increased flow to the right side of the heart, followed by a later effect due to the action upon the heart which is mainly expressed upon the left side. This fails to empty itself so completely and thus accounts for the rise in the pressure in the left auricle. In the dog the effect is not quite so striking. The changes are in the same direction but are much less in degree. There is probably a much better compensation in this animal than in the cat.

### ARE THERE VASO-CONSTRICTOR NERVES TO THE PULMONARY ARTERIES?

This question has been already worked at by many observers; but we need here only consider the facts brought forward by Bradford and Dean and by François-Franck. All these observers came to the conclusion that there are vaso-constrictor nerves. The evidence looked for by Bradford and Dean was in one of three directions. First, a rise in the pulmonary pressure out of proportion to the aortic pressure; secondly, a rise in the pulmonary pressure with no accompanying rise in the aortic pressure; or, thirdly, a rise in pulmonary pressure accompanied by a fall in aortic pressure. In one series of their experiments they excited the vaso-motor centre in the medulla, having previously divided both vagi. This caused a large rise in the aortic pressure and a fairly well-marked rise in the pulmonary pressure. The spinal cord was then divided between the sixth and seventh dorsal nerves and the stimulation repeated. The aortic-pressure rise was now less than before, but there was the same rise in the pulmonary pressure. Direct evidence was also sought by stimulation of the anterior roots of the upper dorsal nerves. This caused a rise varying in amount, but never very marked, in the pulmonary pressure, accompanied at times by a fall in the aortic pressure, at other times by a rise varying with different animals and with the nerve stimulated. From experiments such as these they concluded that the only explanation of the pulmonary rise is an active constriction of the pulmonary arterioles.

François-Franck's main method was to simultaneously measure the blood-pressure in the pulmonary artery and in the left auricle, and he considers that a rise in the former, accompanied by a fall in the latter, must mean pulmonary constriction. In his experiments he stimulated the sympathetic chain in the thorax from the sixth thoracic nerve up to the ganglion stellatum. The usual results he obtained were a rise in the pulmonary pressure, a fall in the pressure of the left auricle, and, as a rule, a fall in the aortic pressure On some occasions he observed a rise in the aortic pressure In some of his experiments he recorded the blood-volume of the lung by a plethysmographic method, and invariably obtained an increase in volume as the result of the excitation of these nerves. This is an effect the reverse to that which we should *a priori* expect, and he supposes the result to be due to the great distensibility of the pulmonary arteries. If the arterioles are constricted over the whole lung the blood would be stored in the large vessels, and he supposes that the increase in volume thus caused is more than sufficient to compensate for the diminished volume in the capillaries and veins.

Our criticism of the results of all these experiments lies in two directions. First, the effects obtained are always very small, and all observers agree that the influence of the nerves on the blood-vessels can only be of slight degree. But the main objection to these experiments is that they have not sufficiently excluded the action of the nerves upon the heart; and until this is done it is impossible to rely on experiments of this class. Bradford and Dean consider that by taking into account those tracings only in which no apparent cardiac acceleration is to be seen any changes must be due to an action upon the pulmonary blood-vessels Roy and Adami, however, have shown that excitation of some of the sympathetic fibres running to the heart gives rise to augmentation without acceleration, and many of our experiments have quite clearly corroborated this. If augmentation takes place without acceleration the pulmonary pressure will rise because the output from the right side is increased. The aortic pressure will also tend to rise because the output from the left side is increased; the pressure in the left auricle will fall because the left ventricle is taking more per beat; and these are the effects which we think have in reality taken place in the records of these observers. The only difficulty lies in explaining the fall in aortic pressure which they have commonly obtained. Bradford and Dean experienced exactly the same difficulty and concluded that their experiments were not sufficient to decide the cause of this fall. That augmentation has taken place in many of François-Franck's experiments is quite clear from his own tracings, for where he includes the volume-curve of the lung there is always a quite marked increase in the volume-pulse which can only indicate an increased output from the right heart.

Turning next to our own experiments we have stimulated the white rami communicantes of the upper thoracic nerves, the sympathetic chain itself, and the fibres from the ganglion stellatum. We have also attempted to exclude any possible cardiac action by a preliminary division of all the branches of the sympathetic that we could find running into the heart. We have, however, found that it is quite impossible to divide all these fibres without injuring those running to the root of the lung. We have also stimulated the fibres at the root of the lung, but in this position we have only obtained completely negative results. The usual effect of stimulating the fibres leaving the ganglion stellatum is a fall in the volume of the lung, quickly followed by an increase. In some cases we recorded an increase in the volume of the lung from the start, and in a few cases, which, however, are very rare, we have observed a diminution in the volume of the lung during the whole time of stimulation. Wherever we got a diminution in the volume of the lung we invariably found an increased volume pulse, and simultaneously a rise in the aortic pressure. We think that the whole effect is best explained by the cardiac augmentation which these results indicate, and that it is not necessary to invoke any action upon the pulmonary vessels for their explanation. In those cases in which there is an increase in volume of the lung from the start there is usually an increased volume pulse and the aortic pressure shows in many cases practically no change, and lastly in those cases, the commonest, in which a preliminary diminution is followed by an increase in the volume of the lung the increase in volume pulse is well marked, especially at first, and there is a decided rise in aortic pressure, followed by a gradual fall as the volume of the lung increases. Stimulation of the accelerator nerve itself, after it has left the ganglion stellatum, produces as a rule an increased volume of the lung, with increased volume pulse. Hence we conclude that all the results that we have obtained can also be explained in the simplest manner as of purely cardiac origin, and we therefore attempted to detect vaso-constrictor nerves, if any are present, by a different type of experiment. The nerves to be stimulated having been isolated the animal was killed by bleeding; the blood was whipped and was placed in a reservoir. Meanwhile cannulæ were tied in the pulmonary artery and in the left auricle. One lung was then ligatured at the root. The cannula in the artery was then connected to the reservoir and blood perfused at constant pressure through the intact lung. The outflow was then recorded by a graphic method. We never obtained the least effect on stimulating any of the fibres leaving the ganglion stellatum, and hence we conclude that there are no vaso-constrictor fibres to the pulmonary vessels. Experiments of this type, we think, would certainly have given us a positive result had such fibres been present, for it is easy to obtain such results with, for instance, the nerves to the vessels of a limb

### THE ACTION OF SOME DRUGS UPON THE PULMONARY CIRCULATION.

We have already stated the general effects of suprarenal extract upon the lung and pulmonary circulation. We have also investigated the action of the suprarenal on the pulmonary arteries by direct perfusion. It gives us a very striking result; whereas perfusion of very dilute suprarenal extract through any of the systemic vessels causes their almost complete closure, the effect upon the pulmonary vessels is in nearly all cases exactly the opposite—namely, a markedly increased rate of flow. Only in one instance have we obtained constriction, and then the effect, though marked, was in no degree comparable to that which we should obtain, for instance, upon a limb. These experiments are, of course, of importance in considering whether suprarenal extract is of value in hæmorrhage from the lungs, but our conclusions up to the present must be somewhat guarded because our experiments have not yet sufficiently decided the action of small doses. With regard to the volume changes produced in the lung by suprarenal extract the dog again shows a difference from the cat. The changes, though in the same direction, are very much smaller and the dilatation is more accentuated if the vagi have been previously subdivided—a result which we should naturally expect from the much greater and more prolonged rise of aortic pressure that occurs under these circumstances.

The action of nicotine is somewhat similar to that of suprarenal extract, though, as it exerts less effect upon the heart, its action being mainly confined to the peripheral blood-vessels, the results are rather simpler. Still, they are in the same direction—that is, to the rise in the aortic pressure there follows a congestion of the lung and simultaneously a rise in the pulmonary vein pressure and pulmonary artery pressure.

Pilocarpine gives interesting results in that it tends to produce systemic vaso-constriction, the effect of which is, however, obscured by the marked cardiac inhibition simultaneously produced. If the cardiac inhibitory fibres be paralysed by atropine, pilocarpine produces practically the same results as nicotine. When given with the cardio-inhibitory mechanism intact it produces a great increase in the volume of the lung which is due to the cardiac inhibition. As this decrease in volume takes place it must mean that the output from the left heart is less diminished than is that from the right heart. Muscarine produces the same effects as pilocarpine.

# THE EDUCATION OF EPILEPTICS.

BY WILLIAM ALEXANDER, M.D. R.U.I., F.R.C.S. ENG.,
HONORARY SURGEON TO THE ROYAL SOUTHERN HOSPITAL, LIVERPOOL, ACTING CONSULTING SURGEON TO THE HOME FOR EPILEPTICS, MAGHULL.

TWELVE years ago the first step in improving the position and comfort of epileptics in England was taken at Liverpool by the establishing of the epileptic homes at Maghull. Previously to that time our epileptics, if they were poor, were consigned to the imbecile wards of the workhouse, and if they were rich they were looked after by relatives or by attendants, or were taken as boarders by people of various classes of life, who for a consideration relieved the parents of trouble and responsibility without being always qualified for the duties which they thus undertook. The condition of those epileptics whose relatives were unable to engage caretakers and who did not wish to send them to the workhouse was often miserable in the extreme. The relatives were always kept in a state of constant anxiety and dread, and the patients were frequently so confined to limited surroundings and denied all liberty that it was no wonder that they became imbecile, stupid, or even insane. In spite of all the precautions of anxious relatives and attendants dangerous and sometimes fatal accidents frequently occurred, and the death of the unfortunate patient was too often considered a special providence and relief to all concerned. In the workhouses the patients were simply "herded" with the imbeciles and the harmless insane inmates, without any effort being made for instruction, employment, or amusements. The primary objects of the establishment of the colony at Maghull were to keep epileptic patients safe, to occupy and to train their bodies and minds, and to give them as much liberty as possible with due regard to their safety and to the feelings and prejudices of their neighbours. These objects have been successfully carried out and to an unexpected extent. But it was found as the work of mental and physical training progressed that the education of the patients was often in a very backward state and required to be dealt with.

Defective education arose from various causes. In a considerable number of cases the patients were kept from school by order of their medical attendants, under the plea that the brain must not be excited or that the patient must not be "bothered." The patient was allowed to do whatever was most agreeable—and education that necessitates "going to school" is not generally agreeable to a large majority of young children. The relatives, following up the professional advice to its logical conclusion, allowed the patients to do as they liked in all other matters as well as in regard to education, and the little rascals soon found out that they could compel the relatives to give them whatsoever they wanted by simulating the symptoms of the onset of an attack. This course of treatment of young epileptics cannot be too the outflow from the aorta by partially or completely blocking the aorta at the lower end of the thorax. Waller and later observers have shown that the result of clamping the aorta is to cause a big rise in the aortic pressure, followed quickly by one in the left auricle. There is no rise in the pulmonary artery pressure unless the compression is kept up longer than about 15 seconds. There is usually no effect upon the right auricle pressure. We have found that the effect upon the lung as observed by recording its volume changes is to produce a very marked congestion, the mode of production of which is in the failure of the left ventricle to empty itself against the raised aortic pressure. In consequence of this fall in output from the left side the blood in the pulmonary veins cannot flow in normal quantities into the left auricle and is therefore accumulated in the pulmonary veins and capillaries. There is no incompetence of the mitral valves. A quite analogous series of changes is also observed when other procedures for raising the systemic pressure, apart from a direct action upon the heart, have been adopted, such as stimulation of the medulla, the vagi having been previously divided, stimulation of the divided splanchnics, or stimulation of the upper surface of the spinal cord which has been divided in the lower cervical region.

We next come to the effects produced by methods which act upon the heart as well as the blood-vessels. Of these one of the most important is suprarenal extract. This is known to cause a large rise in aortic pressure due chiefly to constriction of the peripheral arterioles; but it also acts upon the heart, whose rate is increased and output nearly doubled. The effect on the heart, however, is complicated, if the vagi be undivided, by a marked inhibition of the heart occurring mainly during the period of heightened aortic pressure. The effect of suprarenal extract upon the blood-volume of the lung is to cause first a small diminution in volume, soon followed by a marked increase which persists during, and for a short time after, the rise in aortic pressure. Thus the main effect is to produce a distinct congestion of the lungs. The effect upon the pulmonary blood-pressure is a rise to nearly double its original valve, commencing with, but lasting rather longer than, the rise in aortic pressure. The left auricle pressure at first falls, but rises rapidly when the aortic pressure has reached a high point. The effect upon the right auricle pressure is a gradual and slight rise following the rise in aortic pressure. From these results we may conclude that the effects are mainly due to the action of the peripheral blood-vessels in causing the large rise in aortic pressure. They are, however, complicated by the action upon the heart. The increased output observed at first explains the preliminary diminution in volume of the lung and the rise in pulmonary pressure. The later effects are due to the rise in the aortic pressure and the consequent inability of the left ventricle to empty itself. The more reflex inhibition there is produced, the more marked, as a rule, is the pulmonary congestion. These facts have an important bearing upon the question whether suprarenal extract can be advantageously used in hæmorrhage from the lungs Certainly in the doses which we have employed, and with intravenous injection, our experiments strongly contraindicate its employment for such a purpose Whether a smaller dose, given by the mouth, so that the admittance into the circulation is much more gradual, can produce a pulmonary constriction unaccompanied by a congestion is now being investigated. Some further points in regard to the action of the extract upon the pulmonary vessels are described below

A drug of importance to us, in that it causes a fall in the systemic pressure, is amyl nitrite. This is known to produce its main effect by dilatation of the peripheral blood-vessels The disadvantage against us here is that we are not quite certain of the details of its action upon the heart In the cat a small dose of amyl nitrite sufficient to cause a marked fall in aortic pressure causes a large congestion of the lung, which takes place in two stages. There is a primary and moderate increase in the blood-volume, followed by a slight diminution, and this again is succeeded by the main volume increase, the nature of the record seeming to show that we are dealing with at least two different effects. The blood-pressure changes, so far as we have at present decided, have shown only slight changes, the main one being a rise in the left auricle pressure. The effect upon the pulmonary pressure is very slight and mainly in the direction of a late rise. We think, therefore, that the probable explanation of the congestion produced in the lung is a preliminary dilatation due to the increased flow to the right side of the heart, followed by a later effect due to the action upon the heart which is mainly expressed upon the left side. This fails to empty itself so completely and thus accounts for the rise in the pressure in the left auricle. In the dog the effect is not quite so striking. The changes are in the same direction but are much less in degree. There is probably a much better compensation in this animal than in the cat.

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This question has been already worked at by many observers; but we need here only consider the facts brought forward by Bradford and Dean and by François-Franck. All these observers came to the conclusion that there are vaso-constrictor nerves. The evidence looked for by Bradford and Dean was in one of three directions. First, a rise in the pulmonary pressure out of proportion to the aortic pressure; secondly, a rise in the pulmonary pressure with no accompanying rise in the aortic pressure; or, thirdly, a rise in pulmonary pressure accompanied by a fall in aortic pressure. In one series of their experiments they excited the vaso-motor centre in the medulla, having previously divided both vagi. This caused a large rise in the aortic pressure and a fairly well-marked rise in the pulmonary pressure. The spinal cord was then divided between the sixth and seventh dorsal nerves and the stimulation repeated. The aortic-pressure rise was now less than before, but there was the same rise in the pulmonary pressure. Direct evidence was also sought by stimulation of the anterior roots of the upper dorsal nerves. This caused a rise varying in amount, but never very marked, in the pulmonary pressure, accompanied at times by a fall in the aortic pressure, at other times by a rise varying with different animals and with the nerve stimulated. From experiments such as these they concluded that the only explanation of the pulmonary rise is an active constriction of the pulmonary arterioles.

François-Franck's main method was to simultaneously measure the blood-pressure in the pulmonary artery and in the left auricle, and he considers that a rise in the former, accompanied by a fall in the latter, must mean pulmonary constriction. In his experiments he stimulated the sympathetic chain in the thorax from the sixth thoracic nerve up to the ganglion stellatum. The usual results he obtained were a rise in the pulmonary pressure, a fall in the pressure of the left auricle, and, as a rule, a fall in the aortic pressure On some occasions he observed a rise in the aortic pressure In some of his experiments he recorded the blood-volume of the lung by a plethysmographic method, and invariably obtained an increase in volume as the result of the excitation of these nerves. This is an effect the reverse to that which we should *a priori* expect, and he supposes the result to be due to the great distensibility of the pulmonary arteries If the arterioles are constricted over the whole lung the blood would be stored in the large vessels, and he supposes that the increase in volume thus caused is more than sufficient to compensate for the diminished volume in the capillaries and veins.

Our criticism of the results of all these experiments lies in two directions. First, the effects obtained are always very small, and all observers agree that the influence of the nerves on the blood-vessels can only be of slight degree But the main objection to these experiments is that they have not sufficiently excluded the action of the nerves upon the heart; and until this is done it is impossible to rely on experiments of this class. Bradford and Dean consider that by taking into account those tracings only in which no apparent cardiac acceleration is to be seen any changes must be due to an action upon the pulmonary blood-vessels Roy and Adami, however, have shown that excitation of some of the sympathetic fibres running to the heart gives rise to augmentation without acceleration, and many of our experiments have quite clearly corroborated this. If augmentation takes place without acceleration the pulmonary pressure will rise because the output from the right side is increased. The aortic pressure will also tend to rise because the output from the left side is increased; the pressure in the left auricle will fall because the left ventricle is taking more per beat; and these are the effects which we think have in reality taken place in the records of these observers. The only difficulty lies in explaining the fall in aortic pressure which they have commonly obtained. Bradford and Dean experienced exactly the same difficulty and concluded that their experiments were not sufficient to decide the cause of this fall That augmentation has taken place in many of François Franck's experiments is quite clear from his own tracings, for where he includes the volume curve of the lung there is always a quite marked increase in the volume pulse which can only indicate an increased output from the right heart

Turning next to our own experiments we have stimulated the white rami communicantes of the upper thoracic nerves the sympathetic chain itself, and the fibres from the ganglion stellatum We have also attempted to exclude any possible cardiac action by a preliminary division of all the branches of the sympathetic that we could find running into the heart We have, however, found that it is quite impossible to divide all these fibres without injuring those running to the root of the lung We have also stimulated the fibres at the root of the lung but in this position we have only obtained completely negative results The usual effect of stimulating the fibres leaving the ganglion stellatum is a fall in the volume of the lung, quickly followed by an increase In some cases we recorded an increase in the volume of the lung from the start, and in a few cases, which, however, are very rare, we have observed a diminution in the volume of the lung during the whole time of stimulation Wherever we got a diminution in the volume of the lung we invariably found an increased volume pulse, and simultaneously a rise in the aortic pressure We think that the whole effect is best explained by the cardiac augmentation which these results indicate, and that it is not necessary to invoke any action upon the pulmonary vessels for their explanation In those cases in which there is an increase in volume of the lung from the start there is usually an increased volume pulse and the aortic pressure shows in many cases practically no change, and lastly in those cases the commonest, in which a preliminary diminution is followed by an increase in the volume of the lung especially the increase in volume pulse is well marked, especially at first, and there is a decided rise in aortic pressure, followed by a gradual fall as the volume of the lung increases Stimulation of the accelerator nerve itself, after it has left the ganglion stellatum, produces as a rule an increased volume of the lung, with increased volume pulse Hence we conclude that all the results that we have obtained can also be explained in the simplest manner as of purely cardiac origin and we therefore attempted to detect vaso constrictor nerves if any are present, by a different type of experiment The nerves to be stimulated having been isolated the animal was killed by bleeding, the blood was whipped and was placed in a reservoir Meanwhile cannulæ were tied in the pulmonary artery and in the left auricle One lung was then ligatured at the root The cannula in the artery was then connected to the reservoir and blood perfused at constant pressure through the intact lung The outflow was then recorded by a graphic method We never obtained the least effect on stimulating any of the fibres leaving the ganglion stellatum and hence we conclude that there are no vaso constrictor fibres to the pulmonary vessels Experiments of this type, we think, would certainly have given us a positive result had such fibres been present for it is easy to obtain such results with, for instance the nerves to the vessels of a limb

### The Action of some Drugs upon the Pulmonary Circulation

We have already stated the general effects of suprarenal extract upon the lung and pulmonary circulation We have also investigated the action of the suprarenal on the pulmonary arteries by direct perfusion It gives us a very striking result, whereas perfusion of very dilute suprarenal extract through any of the systemic vessels causes their almost complete closure the effect upon the pulmonary vessels is in nearly all cases exactly the opposite—namely a markedly increased rate of flow Only in one instance have we obtained constriction and then the effect, though marked was in no degree comparable to that which we should obtain for instance upon a limb These experiments are of course of importance in considering whether suprarenal extract is of value in hæmorrhage from the lungs but our conclusions up to the present must be somewhat guarded because our experiments have not yet sufficiently decided the action of small doses With regard to the volume changes produced in the lung by suprarenal extract the dog again shows a difference from the cat The changes, though in the same direction are very much smaller and the dilatation is more accentuated if the vagi have been previously subdivided—a result which we should naturally expect from the much greater and more prolonged rise of aortic pressure that occurs under these circumstances

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Pilocarpine gives interesting results in that it tends to produce systemic vaso constriction, the effect of which is, however obscured by the marked cardiac inhibition simultaneously produced If the cardiac inhibitory fibres be paralysed by atropine pilocarpine produces practically the same results as nicotine When given with the cardio inhibitory mechanism intact it produces a great increase in the volume of the lung which is due to the cardiac inhibition As this decrease in volume takes place it must mean that the output from the left heart is less diminished than is that from the right heart Muscarine produces the same effects as pilocarpine

# THE EDUCATION OF EPILEPTICS

By WILLIAM ALEXANDER, M D R U I, F R C S Eng.,
HONORARY SURGEON TO THE ROYAL SOUTHERN HOSPITAL LIVERPOOL ACTING CONSULTING SURGEON TO THE HOME FOR EPILEPTICS MAGHULL

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Defective education arose from various causes In a considerable number of cases the patients were kept from school by order of their medical attendants under the plea that the brain must not be excited or that the patient must not be "bothered" The patient was allowed to do whatever was most agreeable and education that necessitates going to school is not generally agreeable to a large majority of young children The relatives following up the professional advice to its logical conclusion allowed the patients to do as they liked in all other matters as well as in regard to education and the little rascals soon found out that they could compel the relatives to give them whatsoever they wanted by simulating the symptoms of the onset of an attack This course of treatment of young epileptics cannot be too strongly or too publicly condemned. The growing brain that has been disturbed by a fit can only be strengthened and improved by judicious education, especially by teaching habits of self-control and of self-denial such as have to be taught to all other children. It cannot be wondered at that the very opposite treatment produces little savages that have developed habits very difficult to eradicate, and that any information which they possess is very often useless or of an undesirable kind. The most frequent cause of deficient education was, however, found to be the direct effect of the epileptic attacks We have had several examples of patients who before epilepsy developed were bright, intelligent, and even precocious children, and who promised to become good scholars and to be a credit to their parents and their teachers. Sometimes after the first attack, or sometimes after a series of attacks at the onset of the disease, the brains of these children have been, as it were, swept clean like that of a baby, and the patients have become suddenly dispossessed of all the knowledge they had acquired. In many of these cases, however, only certain of the mental faculties are impaired. The faculty of computation suffers very frequently (in some notable exceptions this faculty curiously has remained strongly developed amidst a very general wreck), and memory also suffers severely.

Re-education is a slow, difficult, and irksome process under such cerebral conditions and requires to be intelligently carried on and in directions suitable to each case Sometimes re-education has to be entirely of a mechanical kind as the patient does not appear to have any powers of continuous thinking but is well able to direct his physical energies. Others learn with avidity and soon regain what has been lost In other cases certain faculties are highly developed; the musical, the imitative, and introspective faculties are instances of this. In the latter most minute self-analyses are constantly being made and these do not conduce to the patient's happiness and welfare. Other children will labour diligently to re-learn to write, to read, and to cipher, but the task is a very uphill one on account of the great defectiveness of their memory. The lessons of the day, that seem at the time to be thoroughly studied and acquired, are to a large extent forgotten by the next afternoon, and teachers are prone to give way to despair until they find out that the normal rate of progress is necessarily slow; but still there *is* progress and that progress increases as the experience of the teacher in teaching epileptics increases. The education of epileptics can best be carried on after close consultation between the medical officer and the teachers, so that the latter may be prevented from wasting strength and enthusiasm in trying to educate a faculty of the brain that has been entirely lost and may devote their energies to the education of those powers which still remain, and so to educate them that they may be of practical use to the patient in after years. The education of our patients resolves itself into two classes—first, of all those who are of the ordinary school age, and secondly of older patients whose education has been defective, or in whom the results of early education have been lost through the disease from which they suffer.

The great majority of the patients at Maghull have had opportunities of being educated and have been to school up to puberty. An analysis of the notes of 385 patients shows that 162 did not leave school till the age of 15 years, that 63 did not leave school till they were 12 years of age, and that 58 did not leave school till they were 10 years old; 18 have been educated at home, while 37 have either not been at school at all or were so irregular that they had no education whatever. Of 39 we have no information as to how they have been educated. The state of the education of these patients when they were admitted to the home was in 45 cases *nil*, in 87 imperfect, in 119 fair, and in 134 good. In these 385 cases we find that in 47 cases epilepsy began soon after birth, in 38 cases before five years of age, in 87 cases before 10 years of age, in 25 cases before 12 years of age, in 39 cases before 14 years of age, and in 122 cases after 14 years of age, so that in 186 cases epilepsy did not set in till the children were over 10 years of age.

The children of school age whom we have at Maghull are under the care of a teacher who trains them as far as possible according to the capacities of their minds and with whom they spend a certain number of hours daily either at work or at play. The adults whose education has been defective or has been impaired by the disease go to an evening continuation school managed by teachers according to the requirements of the Board of Education. This continuation school has been very satisfactory in every way. It interests the patients, it improves their education, and it occupies in a useful way a certain number of evenings during the winter season. The school inspectors approved of it very highly and we have been able to obtain a small grant from the Education Department. The subjects taught are reading, writing, arithmetic, wood-carving, joinery, and different technical subjects.

The day-school for the children has been equally beneficial from every point of view, except that of the Education Department. When we applied to that Department for a grant to our day-school we found that we had to comply with certain regulations which seemed to us very unnecessary and even undesirable. Our establishment has *grown* up, the buildings being added according to what we, from experience, decided would best supply our wants. The Department has, however, laid down certain arbitrary rules for the education of epileptic children, conspicuous amongst them being the following—viz, that the children must live entirely on the ground floor, and not have to ascend stairs of any kind; that not more than 15 are to live in one cottage; and that there are not to be more than four cottages in any one establishment. The children must also be completely isolated from adults during the whole course of their school life. Now, we could not fulfil these conditions without recasting our colony, incurring great expense, and giving up principles of management too precious in our opinion to be abandoned without sufficient practical reasons for the change. At the time that we made this application the only other home in England was that at Chalfont, and on applying to the authorities there we found that although they had built cottages much smaller than any of our buildings and could have managed to comply with the "ground-floor law" they could not fulfil the requirements of the Education Department, and we believe that they have consequently arranged not to undertake the task of educating epileptic children under the Department. We persevered, however, with our application and the Department sent down an inspector. The final decision was that the Department would not assist us by any grant in educating the few children whom we had at our home at Maghull unless we would spend a large amount of money that we could ill afford to use for this purpose.

Now, the question that has sorely puzzled us is where the experience that dicated the regulations for the treatment of epileptic children was obtained. Our home at Maghull was the first establishment of its kind in Great Britain, and that at Chalfont the second, and although there are others being constructed none of them have yet come before the public as working institutions. The Maghull Home has been in existence for 12 years and now contains about 140 patients of all ages and sizes who have been going up and down stairs all these years, and we have not found that the stairs are so dangerous as to require their abolition Indeed, as far as our experience actually goes, the patients seem to be safer on the stairs than they are on the ground floor. Of course, this seems a ridiculous statement, but it has reason on its side, as patients when exercising their faculties do not as a rule have attacks. It proves that this idea of no stairs, as far as danger to epileptics is concerned, is an old woman's fancy. It is a view that appeals to the ladies and we have had often great difficulty in freeing strong and vigorous epileptics from the thraldom of affectionate relatives who are only content when their epileptic, the object of their care, is on a bed or a sofa with somebody sitting alongside. We have occasionally seen epileptic patients going down the stairs in their own houses. A nervous mother or other relative stands at the foot of the stairs calling out from below in a tone of anguish, "Be careful," or "Take care"; two other relatives hold the patient at either side, all in a state of dread and excitement that certainly should be sufficient to induce a fit if anything could possibly induce one; and probably a fourth walks behind calling out directions from above. The patients are, of course, very indignant—and, I think, justly indignant—at being treated as such helpless objects, and would it be any wonder if after years of such precautions such patients would actually at the last find themselves unable to go up or down stairs at all? Where did the Department of Education learn this experience of the dangers of stairs? Certainly not in Germany, for we have been through a good number of the institutions in that country, and we have not found any epileptic institutions where they have not stairs. In fact, the stairs seem to be more in evidence there than in any home in this country. We do not advise *steep* stairs. We have made safe stairs, and we take care that certain patients go down stairs in the morning and stay down as far as possible till the evening, and that they are watched by nurses during the time that they are going up or down stairs, and we do not think that anything more is necessary in regard to stairs. An epileptic may easily lose his life even in a padded room unless he is looked after, and when well looked after epileptics are safe under all usual conditions of life. We believe in *supervision*, and not in *architecture*, for our patients' safety, and our experience has fully justified our faith.

The Education Department does not propose that these children shall be kept in stairless houses all their days. They will grow up to adult life. They will go home or they will go to other institutions, and it is not practical to insist that people who have epileptics in their family must keep them down stairs all the time, or that institutions or people who have anything to do with adult epileptics should have rooms for them on the ground floor, and yet such would be the logical inference to be drawn from such regulations If not, it is certain that if children are not allowed to go up and down stairs during their school life they will be very much less fitted for going up and down stairs safely if they only begin the ascent and descent when their habits have been acquired. I think that we may therefore call upon the Education Department to show some valid reasons for this regulation or to delete it from the conditions of epileptic schools. Besides, at the present stage, when the practical education of epileptics is really confined to one or two institutions, it seems a mistake not to encourage efforts to correct this defect of the educational system until the Government or a local authority has established schools.

We now come to the second regulation—of not having more than 15 children in a cottage, and of their being entirely separate from adults. Of course, the idea of the Education Department is to imitate family life. Well, 15 is a large family, and the idea of calling this "family life" pleases philanthropists who have a crank that way more than it really imitates in any sense of the term what we understand by family life Family life means father and mother, big brothers and sisters, and small brothers and sisters, and servants and attendants of various kinds. The big ones look after the little ones and they do each other good in their offices towards each other. In family life they go to schools, they mix in the playground with all sorts of boys and girls, at home they come in contact with relatives and friends, and in the streets and lanes they meet with strangers old and young In these Government epileptic schools, limited by sex and by age, and with strangers looking after such a large number, where does the family life come in? The children in these schools will be useless and helpless noodles unless after leaving such a school they are "licked" into human shape by the influences that mould the best humanity. We maintain that we have the best family life at Maghull. The boys and the girls live in separate buildings, where they sleep, of course, in separate rooms from the adults. From each building they go to school—a mixed school. Here they are under the teacher for the day, but in the evenings they take part in social life, and share in entertainments with the bigger boys and girls, due precautions being taken through the constant supervision of nurses that the companions are suitable and that the bigger patients who would take up with a younger child are suitable for that companionship. We know that special care has to be taken with epileptics in these matters, but knowing that we think in this respect also that the careful looking after by attendants is far better for the training of all classes and both sexes under natural conditions than is government by stone walls.

Then, *again, the schools to be recognised by the Education* Department are not to have more than 60 children altogether. Now, it has been hinted at in the beginning how the minds of epileptics are altered by the disease and how various must be the means of education, how numerous must be the classifications, and how many teachers there must be to instruct each classified group in a school of only 60 children. The necessary teaching would be most unnecessarily expensive under such restrictions. Some classes would only consist of two or three children and in all cases the classes must be necessarily small. But if we had a larger number of children to group we could then manage to give each teacher the full number of children who can be taught together and so limit the expense in a reasonable way. At the same time we would be able to maintain the necessary amount of emulation in large classes that could not be kept up if the number in each class were too small.

We are looking at the matter from a practical point of view. We have no rates to fall back upon, and the regulations which I have described really put it out of the power of philanthropic institutions to overtake the education of the children according to the rules of the Education Department. But teaching the children as well as the adults is a therapeutic measure *We believe that it tends to the recovery of* the children that they should be educated, and for this reason we are retaining our school unassisted by the Education Department. We think, however, that an unnecessary obstacle has been placed in our way and that institutions having the care of epileptics have been discouraged where they should have been encouraged.

Liverpool.

# A SHORT CONTRIBUTION TO THE STUDY OF GENERAL INFECTIONS PRODUCED BY THE STAPHYLOCOCCUS AUREUS AND BY THE STREPTOCOCCUS.

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THE general infections produced by the pyogenic micro-organisms (staphylococcus and streptococcus) are well known; there is therefore no necessity to speak of them in general. But the narration of particular cases is always, I think, of great utility because in them it is often possible to find some interesting feature. For this reason I wish to describe briefly some cases that have come under my notice in *the course of my practice. Two of these, which I* published in an Italian medical journal, *Il Policlinico*, in 1898, were caused by the staphylococcus aureus.

CASE 1.—The first of these two patients was a medical man who suffered from a spot of chronic eczema behind the left ear This spot was very irritable and he was constantly scratching it, sometimes producing excoriations. One day he opened an abscess on the arm of a female servant and then went to disinfect his hands, but on the way he scratched the spot behind his ear. Two days afterwards he noticed near this spot a very red painful swelling which rapidly became larger and more painful and his temperature rose to about 102° F. A surgeon who was called in three days afterwards made a deep incision in the phlegmon, but very little pus came out. The wound was dressed frequently during the ensuing week and appeared to improve. In spite of this the general state of my patient became worse and worse and his temperature continued very high (from 102° to 104°). It was *not possible to find a local condition* adequate to account for this high temperature, so I supposed that a general infection had resulted from this abscess. A vein of one of his arms was punctured in order that a bacteriological diagnosis might be made and at the same time care was taken to isolate the micro-organism which caused *the abscess in the woman In both cases I found* the staphylococcus pyogenes aureus in pure culture. Some days afterwards small abscesses were observed in different parts of the male patient's body, all of them being caused by the staphylococcus pyogenes aureus. The only internal lesion that he presented was a serous pleurisy, in which I found, not the staphylococcus aureus, but the staphylococcus albus The abscesses that I opened, some of them as large as a man's fist, from the beginning to the end of the illness were about 60 in number The patient's temperature remained always very high and he died in two months with symptoms of cardiac paralysis.

The woman had many other abscesses in different parts of her body after the one in her arm, but she made a good recovery and it is necessary to observe that except for the pain caused by some large abscesses she was always free from fever or other complications and was able to attend to her work

From this case two inferences may be drawn 1. Considering that the staphylococcus pyogenes aureus produced in the woman only abscesses, whilst in the male patient it produced a general infection, which ended in his death, it appears evident that this result was due not to the inherent and necessary virulence of the micro-organism but to the special conditions of the male patient, imparting to the staphylococcus a virulence which it did not possess in the case of the female patient. 2. Laboratory investigations tend to demonstrate that the staphylococcus pyogenes albus is only an attenuated form of the staphylococcus pyogenes aureus. Now, the male patient was affected during his illness by a pleurisy which was serous and which always remained so, and I found in this serous exudation only and constantly the staphylococcus pyogenes albus. Hence when it is remembered that in every part of the body of the patient purulent lesions and the staphylococcus pyogenes aureus were found, it is permissible to suppose that the pleura possessed the faculty of attenuating this staphylococcus pyogenes aureus, which by virtue of this attenuation became converted into the staphylococcus albus and was no longer able to generate pus.

CASE 2.—The second of these two cases was that of a boy who was wounded by a nail in the right leg. Three days afterwards an abscess, which was opened at once, appeared at the seat of injury. In spite of this operation I noticed 48 hours afterwards that there were some abscesses on the boy's body and that he presented symptoms of meningitis. He died in six days. Blood withdrawn from one of the veins of his left arm contained the staphylococcus pyogenes aureus in pure culture.

This case was not of very great importance, but I have related it because it is useful to compare it with the preceding one. Both were cases of pyæmia, because I observed the formation of abscesses in each of them. But the course of the disease was very different in the two cases. In the first it was chronic, because the patient died only after two months' illness, whilst in the second it was very acute, death occurring six days after the beginning of the attack.

The two following cases were caused by the streptococcus and, I think, were also very interesting.

CASE 3.—The patient, who was not under my care but under that of other medical men, was a woman who for some years had suffered from a chronic inflammation of the gums and maxillary alveoli with production of pus. She consulted many specialists but did not derive any benefit from their suggestions. At the beginning of last year she caught a cold which was accompanied by pyrexia and was followed some days afterwards by inflammation of the throat and pharynx. The matter appeared to be of little importance at first, but a sudden severe pain in one of her ears, together with the continuance of the pyrexia, caused her medical advisers to suspect suppuration of the middle-ear. These conditions remained without change for some days until the symptoms of mastoid suppuration appeared. She was operated on at once, but a general infection caused by streptococci followed the operation, and as soon as this diagnosis was established Marmorek's serum was used. It, however, produced no effect and the patient died in a week, during which her temperature was always about 105° F.

CASE 4.—The patient was a man, 48 years of age, who had been in good health until the age of 40 years, when he began to suffer from chronic inflammation of the gums and the maxillary alveoli, accompanied by the formation of pus. He consulted many specialists, but no one was able to effect a cure. When he reached the age of 45 years I was obliged to remove his right testicle, because it was found to be affected by tuberculosis. He made a good recovery after the operation and apart from his dental trouble his health was otherwise satisfactory. One day in November last year he had a severe sore-throat, which he did not treat in any way, but went to his business as usual. In the evening he had a violent fit of shivering followed by high temperature and it was obvious that this sore-throat and pyrexia were caused by a phlegmon of the pharynx. In the course of the next few days an abscess formed in the right tonsil. This abscess was opened four days after the beginning of the inflammation of the pharynx; a moderate quantity of pus escaped, and this on cultivation showed the presence of a very small streptococcus and of a saccharomyces, of which I will speak subsequently. After the operation the patient felt very much better, the pain in his throat subsided so that he became able to swallow, and his temperature, which had hitherto been about 100° F., fell to 98°. But about 7 A.M. next day he was suddenly seized with a shivering fit, followed by a rise of temperature to 104°. The suspicion of a general infection produced by one of the micro-organisms that I had found in the pus of the abscess entered my mind at once, and with the view of confirming the diagnosis some blood was taken from a vein of his left arm. In order not to lose time and thinking that the infection was due most probably to the streptococcus I began to use Marmorek's serum. In the first 24 hours 50 cubic centimetres were injected, but the patient's condition grew worse, and his temperature remained permanently high, being always about 104°. The use of Marmorek's serum was continued during the next two days, but in spite of it the patient died from failure of the heart unaccompanied by any localised lesion.

The micro-organism isolated from the blood was a streptococcus which had the same microscopical character as had that found in the abscess. I made experiments on rabbits and guinea-pigs with this streptococcus, with the streptococcus isolated from the pus, and with the saccharomyces. The lesions produced by the streptococcus derived from the abscess corresponded with those due to a streptococcus of moderate virulence, whilst the streptococcus isolated from the blood possessed a great virulence. The saccharomyces injected either into the veins or under the skin, or into the peritoneum, caused the death of the animals. When it was injected into the veins the animals died in 44 hours with lesions of all the organs, especially of the liver and the spleen, which was 10 times larger than normal. After injections into the peritoneum some of the animals died in four or five days from acute peritonitis, others more slowly, without evident lesions, but in a profound marasmus and presenting a little swelling of the spleen. Injections made under the skin had a different result; either the animals died from marasmus with a little swelling of the spleen or else they lost weight for some days and then recovered.

Microscopical examination of the organs of the animals which died after the injection of saccharomyces into the veins showed the presence of many spots of inflammation in which, by appropriate methods of staining, the saccharomyces was found. All the organs, especially the liver and spleen, were profoundly degenerated.

From these last two cases of general infection some important information may be derived.

1. It has been already said that the death of the male patient (Case 4) was caused by the streptococcus, which was found in the blood. It is therefore logical to conclude that the saccharomyces found in the abscess had no influence upon the development of this general infection, but I nevertheless hesitate to adopt this conclusion. Without paying attention to the fact that the streptococcus found in the blood was more virulent than was that cultivated from the pus, because it would be easy to explain this fact by supposing that it acquired this virulence whilst in the tissues of the patient, it must be borne in mind that the abscess was caused, not only by the streptococcus, but also by the saccharomyces, which was very virulent. Had this saccharomyces no influence at all upon the migration of the streptococcus into the blood or had it a share in preparing the way for the streptococcus? Or, in other words, did not the phagocytosis, the natural defence of the living body against micro-organisms, become inefficient on account of the presence of the streptococcus and the saccharomyces acting together, although it might have been efficient if the streptococcus had been alone? I have now only hinted at this question with the view of suggesting that the saccharomyces which are found in the mouth may be dangerous, not only on account of their pathological properties, but also, perhaps, because when they act along with other micro-organisms they render the defence of the body more difficult.

2. Both of the patients, the female (Case 3) and the male (Case 4), had suffered for many years from disease of the teeth accompanied with the production of pus, and Professor Augusto Murri of the University of Bologna, who has had the opportunity in his large practice of seeing many patients, has assured me that he has often in inflammation of the throat seen suppuration of the adjacent lymphatic glands or, what is worse, the occurrence of general infections in persons who were the subjects of chronic disease of the gums and maxillary alveoli attended with the production of pus. What can happen in these cases? To explain these ill-effects following inflammation of the throat in persons suffering from this disease of the teeth it is necessary to admit that the micro-organisms which exist in the saprophytic state in the mouth become virulent when a chronic illness of

the alveoli and gums is present, because in the purulent material that is produced they find a very congenial soil and they thus acquire a certain virulence. In the next place they enter the tissues at points where the local reaction is insufficient to hinder them from migrating into the nearest lymphatic glands, or into the blood, where they cause a general infection. It would be of great scientific interest to test this hypothesis by experiments on animals.

3. In both cases Marmorek's serum was used and it appeared to be without influence upon the course of the infection.

Bologna.

# ELECTRIC SHOCKS AT 500 VOLTS.[1]

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A GOOD deal of misapprehension exists as to the circumstances under which shocks at 500 volts may be felt or the conditions which may lead to serious consequences. The electric pressure of 500 volts has become well established as the standard for electric traction, but apparatus designed for this pressure can be arranged to take another 100 or 150 volts without appreciable alteration. Conditions of commercial standardisation seem to set the limit for working at about 600 volts; and it is fortunate, from the point of view of safety, that no further extension of pressure under ordinary conditions is likely to be needed.

Since in a few cases shocks at 500 volts have been fatal newspapers have not hesitated to argue from the particular to the general and have assumed that all such shocks involve serious injury, if not death. For once they are in good company; the technical press and eminent practical electric traction engineers seem to have a horror of 500 volts. Such horror has its wholesome side, but ignorance brought face to face with imaginary horrors may result in panic. Modern journalistic sensationalism has made the most of the accident which occurred in Liverpool in February, 1901, and such was the scare that months afterwards, when a harmless necessary trolley-wire fell on to a tramcar, passengers, not only jumping to the conclusion that they were threatened with a hideous death, jumped to the ground and sustained serious injuries. Irresponsible correspondents have suggested in the newspapers that to fall on the electric rails of the Central London Railway is to be grilled alive; they knew no better. But when during the inspection of the last extension of the City and South London Railway I stood on the rails in wetted boots, and sat on the live conductor and slapped the running rails with my bare hands, engineers, electricians, railway employés, and others who ought to know better, were surprised, and they spoiled the effect of my demonstration by suggesting that I was peculiarly insusceptible to shocks. A pressure of 300 volts was used at first for electric traction, but when afterwards it was taken up and developed by Americans they settled by *experimenta in corporibus vilibus* that a pressure of 500 volts was high enough for economy and not too high for safety.

The chief object of this paper is to record a few experiments and to discuss the conditions under which shocks at 500 volts are devoid of danger. The subject may be divided into three parts: (1) the physiological and electrical conditions; (2) the dangers connected with trolley-wires; and (3) the dangers of third rails of electric railways.

*Physiological and electrical conditions.*—In dealing with the first part I need but barely allude to physiological matters, but I will refer first to the current, then to resistances, and lastly to pressure. The sensation may be a prick, a pleasant tingle, a hot burning, or a convulsive shock. The sensation does not depend directly on the actual current but on the current density. With four or five square inches (30 square centimetres) of contact between dry metal and bare skin (for example, grasping a trolley-wire) a steady continuous current of one or two milliampères is hardly perceptible.[2] From 3 to 8 are easily supportable, above 10 milliampères is painful, and above 35 almost unendurable. A larger current than 20 milliampères in seldom used for medical applications. Every electrical engineer is familiar with the sharp pricking shock given by a fine wire. In that case the current density is very high, but the current is so small that little else than the tactile nerve-endings in the skin are stimulated. With larger currents and more surface muscular contractions are added to the tactile sensations, especially if the current is at all unsteady. The electrical phenomena of nerve and muscle have been studied by physiologists; they are rather complicated and do not concern the general purpose of this paper. Alternating currents seem to be about four or five times more painful, but the sensation is of a different character. I have no knowledge of the relative danger of alternating and of continuous currents, and no further reference will be made to alternating currents in this paper. It is difficult to make any exact determination of the relation between current density and sensation. More than about 14 milliampères of steady continuous current at the finger-tip, making a poor contact of about one-sixth of a square inch (one square centimetre), is unendurable, but 35 milliampères from boot to boot, nearly the whole of the soles of the feet being in contact, is much less painful. Under prolonged shock the current increases owing to a fall of resistance, but that does not concern accidental shocks.

Passing now to resistances, the resistance from finger-tip to finger-tip on dry metal and under 100 volts is about 20,000 ohms. It varies a little with the volts, decreasing at higher pressures. Two coins nipped in the terminals of an Evershed ohmmeter serve very well for electrodes. This finger-tip resistance is of considerable importance in connexion with accidental light contacts at high pressures. The resistance is almost all at the skin. The thin skin on the inside of the wrist is much more sensitive than that of the palm of the hand The difference between the resistance from finger to finger of one hand and between one finger of each hand is inappreciable The resistance from hand to hand when grasping two pieces of dry trolley wire is about 5000 ohms; different individuals vary a good deal, probably owing to the dryness of the skin; I have found it as high as 14,000 The resistance between the body and the earth or an iron rail through the sole of the foot, stocking, and boot, is of considerable importance in connexion with electric railways I find that the resistance from boot to boot, the boots being dry and without nails, varies from 45,000 to more than 200,000 ohms. The lowest of measurements on 25 different persons made with 500 volts gave 25,000 ohms. Boots worn into holes and wetted by walking on wet pavement gave only 13,000. The values for resistance of the human body given in medical works are of little use for the present purpose, for care is taken as a rule to facilitate the passage of the current. "Under conditions of medical practice, and using moistened electrodes, the resistance of the body, when the skin is well wetted with warm water, is about 2000 or 3000 ohms—that is to say, an electromotive force of 12 volts (eight Leclanché cells) will pass a current of four to six milliampères."[3] Most of the measurements of resistance which I have given were made with from 100 to 500 volts and are calculated from the milliampères which passed. Taking the information which I have already given about the effect produced by various currents it follows that the mere touching of dry metal at 100 volts, finger to finger, gives hardly any sensation, but with a larger contact a shock is felt. At 200 volts a light touch gives an unpleasant prick, but the current through a firm contact is about from 12 to 18 milliampères, which most people can bear without considerable pain, especially if the contact be gradually made and broken There is no after effect; the sensation is very similar to that of heat. To grasp with bare hands two pieces of metal at 500 volts would give a very painful shock, but a light and quick touch is no worse than the shock from a half-pint Leyden jar, an experience more familiar to schoolboys than to

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[1] A paper read before the Institution of Electrical Engineers on Feb. 27th, 1902.

[2] If this paper be read, as I hope it may, by others than electricians it may be well to explain that one ampère of current passes through a resistance of one ohm when the electrical pressure is one volt. One milliampère, or one thousandth of an ampère, passes through a resistance of 1000 ohms when the pressure is one volt, and one milliampère passes when the resistance is 100,000 ohms and the pressure 100 volts, and so on in proportion.

| Volts. | Milliampère | Ohms. |
|---|---|---|
| 1 | 1,000 | 1 |
| 1 | 1 | 1,000 |
| 100 | 1 | 100 000 |
| 500 | 5 | 100 000 |

[3] Lewis Jones: Medical Electricity, p. 194.

engineers. A 500-volt shock may be described as worse than touching a kettle of boiling water, not so bad as touching a red-hot poker, about the same as touching a soldering iron at working heat, or as when an inexperienced blacksmith's boy picks up a black-hot horseshoe. These shocks are common incidents in the daily work of a careless linesman; nearly all those who are practically engaged in electric traction work receive more shocks than they like, but they agree that they might reduce the number by taking more care. This is an important measure of the severity of such shocks, and perhaps the only one which will be appreciated by those members of the public who do not care to try for themselves In such brief shocks the muscular sensations probably mask the contact sensations, but a bad 500-volt shock burns the skin.

Cases of fatal accident from 500 volts are so rare that the conditions can only be guessed at. If the skin resistance be reduced by moisture, especially if salt or chemicals be present, and if the contact be large and prolonged, 100 volts may be fatal. While repairing an arc lamp in a steam washing factory at Bradford in 1899 a man is said to have been killed by a shock at 225 volts; a fatal accident occurred in Germany with about 300 volts; but a man may be choked by a crust of bread under exceptional conditions. The death of a man by blood-poisoning arising from a burn caused by a short circuit on the Central London Railway in December, 1900, does not concern us; a death occurred on the Metropolitan Railway in Paris, when a platelayer fell and remained fallen on the third rail of 500 volts. But the case to which so much attention has been drawn and which has caused such a scare is the accident in Pembroke-place, Liverpool. Instead of the present system of well-earthed guard wires an attempt was made to keep fallen telegraph wires from touching the trolley wire, and the attempt was unsuccessful. Nearly 50 wires fell in a tangle across the street and lay on the trolley wire, which did not break The passers-by in the street upon whom they fell escaped with a few shocks. It was dark and snowing and a salted slush lay on the street. Two men walked blindly into the wires and were entangled, and, struggling, became entangled the more The current was not cut off for nearly half-an-hour. Here was a lamentable combination of seven circumstances: (1) the unusual conditions of weather, the snow freezing to the wires as it fell; (2) failure of the wood strip (which is still extensively used on the continent) to act as a guard; (3) the large number of wires, the long span (375 feet), and the tangle in which they fell; (4) the salt slush of snow in the street; (5) the darkness and invisibility of the wires; (6) failure of the police telephone signal service; and (7) the delay of 25 or 30 minutes before the current was cut off. If anyone of these seven causes had been absent it is probable that the fatal results would not have occurred. It is practically impossible that such an accident can occur again in Liverpool, for the telephone wires which crossed the tramways have been either diverted, placed underground, or cabled, at a great expense to the corporation, and a considerable number of the postal telegraph wires have been satisfactorily altered. I am tempted to digress into the question of guard-wiring, but this paper must be confined to shocks, and I hope that the discussion will be similarly restricted.

*Dangers connected with trolley wires*.—Neither the man in the street nor a man on a car runs any risk of taking 500 volts skin to metal. On several occasions during inspections of tramways when a trolley wire has been within reach from the top of a car I have grasped it with both hands, and with more or less difficulty I have persuaded others to do the same. In each case the weather was fine, the car was dry, and no shock, not even the least sensation, was perceptible. To show that there was no trick I have grasped the hand-rail and flicked the trolley wire with a finger; the shock is trifling. It follows, therefore, that if a live trolley wire fall on a crowded car, although it may give alarming flashes when it touches a hand-rail or tramway rail, the chances of a shock on a fairly dry day are nothing compared to the obvious mechanical injuries which might be occasioned Trolley wires do fall and trolley wires are very properly excluded from the leading cities of the world—London, Paris, Vienna, New York, Budapest, &c.—but as yet the damage done by the falls has not been electrical. A trolley-wire is an obvious thing; it sometimes springs back in large coils, but it generally falls and lies still or hangs, and it is regarded with a prudent solicitude which this paper is not intended to remove. But on a dry or frosty day anyone with tolerably good boots may fearlessly touch the live end even if he stand on the rail. I would not publish this statement had I not tried the experiment on some dozen persons, the majority being women and children. My son, seven and a half years old, stood on a rail and played with wires, there being 500 volts between rail and wires. The current was less than one-quarter of a milliampère and he felt nothing. His boots were new. A fallen telephone wire is not so obvious It does not stop the traffic; it is apt to writhe and to coil round a person; should he fall on the rails the short circuit might severely burn him. With wet boots and wet ground the conditions are different. Standing on damp granite setts in rather damp boots, and grasping a trolley-wire, I found that the current was 15 milliampères. The sensation was by no means unendurable; brief touches gave sharp pricks. Standing on a rail increased the current to 20 milliampères. With old boots worn into holes, and after walking a couple of miles on wet pavement, standing on a rail and grasping a trolley-wire gave 35 milliampères. I took this for several seconds, and I should be sorry to take more. I broke contact cautiously by raising the boot on one edge. There was no after effect; the sensation was merely that of heat, as though the trolley-wire were hot. Spilling half a bucketful of water on the ground increased the shock intolerably. I am inclined to attribute this to the better contact between boot and earth rather than to decreased resistance of the earth (in this case granite setts). Three others tried the experiments with me, and as far as we are able to compare experiences I am satisfied that I am not relatively insusceptible to shocks.

Besides the fall of trolley-wires, either on a car or in the street, there are roundabout and unlikely ways in which shocks may be conveyed to unsuspecting persons; for example, a linesman on a ladder, and somehow making a good earth, holding a wire while its broken end or a careless sag touches a trolley-wire; but the discussion of such accidents belongs to the subject of guard-wires.

*Dangers of third rails of electric railways*.—The first time that I stepped on the live rail of a third-rail railway I clutched the engineer lest my legs should give way under the shock, but I felt nothing. I went to where some water stood half an inch deep on a cement floor and "marked time" for two and a half minutes. With caution I stepped on to the live rail and then on to one of the running rails, felt nothing, and then stooped down and touched the running rail while standing with both feet on the running rail. I felt a slight tingle, which my subsequent experiments lead me to think was produced by a current of about six milliampères. To sit on the live rail without touching the running rails was easy, and I cautiously flicked the running rail, then touched it, and then laid my hands flat on it without the slightest sensation In the light of the figures which I have given this is not at all surprising, and I have invited several others to try the experiment, with the same negative result. Of course, the result depends on the dryness of the clothes. The resistance of dry cloth is very high. After walking in the wet for about an hour with sound but not thick shoes I stepped on 500 volt rails and felt nothing, but on touching with the finger I received a smart shock, perhaps 30 milliampères. I have already stated that with old worn-out and wet boots the resistance was only 13,000 ohms. This was found with only 400 volts. Standing on rails in my laboratory, the rails being connected to the outers of the Westminster Company, I could just support the current of about 30 milliampères The sensation was almost precisely like that of standing on hot steam-pipes. It was easy to turn it on gradually by beginning and ending with the edge of the sole. The shock would, of course, be very alarming to anyone who was not expecting it There was no perceptible after-effect. Ordinary nails in the heels of boots make no difference, but hob-nails give uncertain pricking stings which are rather painful, but under no circumstances need they be sustained. Until I tried these experiments I must confess that I did not enjoy the walks which I have sometimes taken in "tube" railways during inspections by the light of oil lanterns, but now, with dry boots, I take no care whatever. It is very desirable that the live rails of third-rail railways should be guarded by planks to prevent short circuits by tools, &c., and to make it less easy for a person falling on the rails to make contact with bare skin. While experience has shown that a person so falling may receive a serious and even fatal shock, this can only occur if he make contact with both a live rail and a running rail with bare skin, or thoroughly wetted clothes, and if he lie there for a time. As to the length of this time we know nothing, but so long as the fall has not injured the person so that he cannot rise it is very improbable that the shock would be maintained. A platelayer in the open-yard of the Waterloo and City Railway once accidentally sat on the third rail and made the circuit through his feet on wet ground; he shouted and was pulled off by his mates; the contraction of the muscles prevented him from rising. He could probably have rolled over and so released himself. He was back at work again in a few minutes.

Numerous accidents to horses show conclusively that these animals are peculiarly susceptible to electric shocks. Electrical conditions under which a human being would receive an unpleasant shock of from 10 to 15 milliampères cause instant death to a horse, and it appears that horses are terrified under conditions where a human being would feel no shock. But it must not be concluded that a given current produces more effect on a horse than on a man. A horse makes excellent contact with its shoes, and these are well connected by nails to its body. It is probable that the resistance is very small and the current very large; but even making this allowance the horse appears to be more susceptible.

*Conclusion.*—The dangers of electric shocks at 500 volts have been much misunderstood, greatly exaggerated, and little investigated. The pressure of 500 volts has been deliberately chosen by electrical engineers because it is not dangerous under ordinary conditions. The conditions under which serious shocks are not produced by 500 volts are discussed in the paper, and it is safe to assume that all shocks more serious than those which are recorded are dangerous. Dry wood and dry boots without large nails offer so great resistance to electric current that it is perfectly safe to touch a trolley-wire while standing on a dry tram-car, or even while standing on the ground or on the rails. Wet weather makes a considerable difference, but boots must be very wet to allow enough current to pass to produce a severe shock Men engaged in electric traction work receive many slight electric shocks at 500 volts, and they might avoid most of them by taking more care Dry clothing offers so great a resistance that no shock can be transmitted through it The peculiar conditions under which shocks at 500 volts have caused death are discussed and are shown to be very exceptional. Experiments have been made on some 30 persons, including 12 women and six children, and it is proposed to make other experiments. With sound dry boots hardly anybody can feel a shock when standing on the live rail of an electric railway with one foot and a running rail with the other. With damp or wet boots a shock is felt, but neither the sensation nor the degree of wetness of the boots can be measured accurately. It is not possible to receive a shock by sitting or lying on a live rail so long as the clothes are dry and continuous—that is to say, so long as the live metal is not touched by the bare skin.

# A CRITICISM ON THE VISUAL TEST AS USED IN THE BRITISH ARMY.

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SEEING the importance which is attached to good shooting under the altered conditions of modern long-range rifle-fire it becomes an important question whether the standard of vision at present in vogue is a sufficiently high one Let us then examine the means adopted for fixing a standard and endeavour to see in what respect it fails.

The visual power of the recruit is tested by means of Professor Longmore's "test dots," which consist of black dots one-fifth of an inch in diameter on a white background, so that by means of a covering card many variations in the number and position of the dots can be obtained This is held up at a distance of 10 feet from the recruit who is asked to count the number of dots exposed. The black dots as seen at 10 feet are supposed to bear the same relation to a bull's-eye three feet in diameter as seen at 600 yards The 10 feet being a convenient distance was first taken and then the proportionate size of the black dot found by a process of simple calculation—viz.: as 600 yards: three feet : 10 feet : one fifth of an inch.

Now let us see what relation this standard of vision bears to normal vision—in other words, what amount of bad sight does it allow a recruit to have in the service. According to Volkmann, the minimum visual angle at which an object can be clearly discerned is one of one minute, and the distance at which such ought to be seen can be easily calculated when we know the size of the object. The size of each dot is one-fifth of an inch, and therefore with a normal acuteness of vision each dot ought to be seen at a distance of 57 feet; but the distance required by the regulations is only 10 feet, or, roughly speaking, a fifth of what good vision ought to consist of. If the other medical requirements were taken on a similar basis the standard of health and strength would be of a very low order This lowness of requisite visual ability is even further reduced by the fact that for militia, volunteers, and departmental corps the dots need only be held five feet away.

Such a seemingly low standard would, one might think, admit into the service men with most inferior vision, without the additional opportunities which such a rough-and-ready method presents for "scraping through" A few statistics taken from notes of over 1000 cases seen by me whilst stationed in Aldershot may show what types do pass the test, the percentages due to "scraping through" being ignored on account of the obvious difficulty of discriminating between them. The state of the refraction was in all cases done under a mydriatic and the following is a fairly accurate summary Out of every 100, 82 were found to be hypermetropic and 18 to be myopic. Of the hypermetropes 16 per cent were found to be over 5 D. and below 10 D. No case of over 11 D. was met with. Of the myopes 2½ per cent. were over 5 D and under 10 D., and 1 per cent. were over 10 D and under 15 D No case of over 15 D. was met with. Of mixed astigmatism the proportion was 4 per cent., and of antimetropia the proportion was 2½ per cent. Thus we see that, roughly speaking, 25 per cent. of the men who complained of inability to see to shoot were justified in their complaints and had been admitted into the service by either too lax a test or by fraud. The proportion is, of course, misleading unless one bears in mind that the cases examined were only those who had made some complaint about their vision, but that such errors of refraction can pass the test dot is plainly shown

This leads us to ask, In what particular respect does the test dot fail? Turning to our figures again we note that it fails to detect first of all fairly high degrees of hypermetropia, secondly mixed astigmatism, and lastly cases of antimetropia and myopia of a degree above 5 D. For practical purposes all cases of myopia of 5 D. or more can be considered as having passed by "unfair or hurried tests." It is different though, in cases of mixed, compound, or simple astigmatism, as unless the degree be very marked but little difficulty is experienced in counting fairly correctly the exposed dots if not too many be shown and it be done in a good light. Again, in cases of high degrees of hypermetropia it signally fails because at the age (18 years) at which the recruit is generally examined nearly all the hypermetropia is latent. It is in this respect alone that for practical purposes the dots chiefly fail. For example, take a recruit with hypermetropia of 8 D, aged 18 years; his accommodation at this age is 10 D, so it is all latent, but test him again in a few years, or at the end of a long march, when his ciliary muscle is weakened, and the hypermetropia becomes manifest, and the result will be very different.

How are we to remedy this? If we move the dots further away he will still be able to read them, and we would be excluding myopes of a low degree of about 2 D. who are of even more use If we bring the dots nearer we admit myopes of a too high degree and may even then admit cases of hypermetropia of over 5 D, which is too high to be of value. If we adopt the plan of finding out the smallest reading type which can be clearly defined we should then exclude the patient with high degrees of latent hypermetropia and in conjunction with the test dots exclude the high myope who could easily pass the reading test. The test dot fails also to diagnose absence of binocular vision, which is shown by the admittance of men with alternating strabismus; but if the recruiting officer were to examine the external appearance of the eyes such would not happen, and, moreover, failure to detect corneal opacities and similar visual defects would not be so often passed over as is so commonly done

What, then, are the advantages possessed by the test dots over Snellen's test letters? They are as follows:—1. The ease and simplicity of the test, especially for men who are unable to read. 2 The reliability with which the test can be carried out by men not specially versed in ophthalmic work. 3 The small compass both of the test itself and the space required in which to use it. 4. By its very breadth of lowness of the visual standard combined with yet a certain limitation causing it to give every chance of obtaining recruits with vision which, though not perfect, is yet capable of being trained to the different branches of the service according to the ability to shoot.

We have seen that the test dots admit men with a certain amount of astigmatism This varies in degree according to the measure of the axis of the meridian with which they have taught themselves to see best. For example, to take five privates: (1) R E $+\substack{+1{\cdot}75\\+3}$, L.E. $+\substack{+1\ 25\\+1{\cdot}25}$; (2) R E. $+\substack{+3{\cdot}5\\-1}$, L E. $+\substack{+1\\+1}$; (3) R E. $+\substack{+6\\+2\ 5}$, L E. $+\substack{+2\\+2}$; (4) R E. $+\substack{+2\ 25\\+1{\cdot}5}$, L E. $+\substack{+1{\cdot}5\\+5}$; and (5) R.E. $+\substack{+4\\+2}$, L E $+\substack{+3\\+2\ 5}$. All the above could count the dots fairly well with the right eye and quite easily with the left and had therefore passed, but no one would deem their right eye as a good "shooting eye" or would have passed them if they had been tested with Snellen's test type.

Hence the question arises, What degree of astigmatism ought to disqualify for further service? and this the ophthalmic surgeon frequently finds that he has to answer when consulted by astigmatic patients who are sent to him on account of being unable to shoot correctly. In coming to an opinion each case must naturally be judged on its own merits, due consideration being given to the age of the patient, but as a general rule the amount of hypermetropia or myopia which exists in addition to the astigmatism is the chief guide to aid one in forming a definite opinion As a rule, high degrees of astigmatism do not pass the test dots, and it is chiefly those at the back of which lie larger errors of hypermetropia or myopia which subsequently cause trouble to the soldier. A bull's-eye, it must be remembered, is not a rectangular figure, and if to an astigmatic soldier the right and left edges appear blurred the top and bottom will have fairly sharp edges, and from these he can take his bearings. It is true that the rifle-sights are linear figures, but here, again, it is his inability, when a high degree of hypermetropia exists, which prevents him focussing them properly, the astigmatism only unless excessive aggravating the condition. Thus a man with H 5 D. $\bigcirc$ H·A. 1 D. is less able to shoot as well as one with H. 1 D. $\bigcirc$ H.A. 2 D., though neither would be considered as ever likely to become crack shots, yet the latter in one axis would be the more likely to have accurate vision, whilst it would not exist in either of the meridians in the former.

Seeing, therefore, that the standard of vision required by the Army Regulations is, roughly speaking, one-fifth below that of perfect vision—we must not forget the fact that very few persons have really perfect eyesight—is it incumbent upon us to raise the standard in view of the importance now attached to rifle-shooting, or should we, on the other hand, improve the vision by artificial means (that is, by spectacles) and thus have a wider field to draw upon for recruiting purposes? The best answer is given by Professor Longmore in his "Manual of Instructions ...... for testing ...... Vision of Recruits." He says: "At first, when the introduction of long-range rifles with graduated aims in place of smooth-bore muskets made it necessary to pay particular attention to the range and acuteness of vision possessed by recruits, efforts were made to obtain recruits with full range and perfect acuteness of vision. But it was found impossible to obtain recruits possessing such qualities of vision in sufficient numbers, and it therefore became necessary to relax the requirements in these respects. ..... In a country in which voluntary enlistment and highly paid wages are the rule it is the object not to accept any who are not fully qualified for the performance of the duties which will devolve on them in the army. And when only one rule exists for all alike evidently the standard for those parts of the army in which a high degree of visual acuteness is a necessity should be chiefly taken into account in framing rules on the subject, in order that the necessary degree of military efficiency may be attained." And in regard to the wearing of glasses he says: "Special difficulties would be experienced if glasses were allowed to be worn in the English army as they appear to be in some parts of the troops of continental armies. These difficulties particularly relate to the want of means of replacing them when injured or broken in many of the distant stations in which English troops are habitually employed. ...... If the glasses were damaged or broken while troops were on active service there would be almost insuperable difficulties in replacing them, and this would just be the time when they would be most urgently required. Moreover, though spectacles may be perfect, when dust, rain, condensed moisture, or other circumstances interfere with the transparency and therefore with their utility, accoutred infantry soldiers carrying rifles, or mounted troopers, are too fettered to be in a position to remove these impediments as they occur, and the spectacles would cease to be of any advantage."

These opinions of Professor Longmore carry the same weight to-day as they did in 1875 when they were written, but seeing that the test dots admit into the service a few who are unfit to shoot well unless provided with glasses the important question arises, Are we to remove such from the army or retain them in the service and provide them with glasses? The plan I adopt under such circumstances seems to me to be the best way out of the difficulty. If the disability be not such as totally to unfit the soldier and he has had a fairly long training in the service—this point being the one to which chief attention is paid—he is given a prescription for glasses and sent back to his regiment with advice to get permission to be allowed to use them when shooting or at other suitable occasions. If his commanding officer values the soldier this permission is generally readily granted and suitable duties are found for him; on the other hand, should his regiment not consider him worth retaining he is returned to hospital and then discharged. In all cases, too, in men who have but recently joined the service in whom visual defects are found of such a nature as will prevent them ever becoming efficient shots it is always considered advisable to recommend their discharge as being unlikely ever to make efficient soldiers.

It will be seen from the above that, on the whole, the present means of testing the vision for admittance into the army is, though a low standard, yet sufficiently high for all practical purposes, if properly carried out; also that a small percentage of men unlikely ever to become efficient escape its test, and that such can subsequently be detected and got rid of by being referred to an ophthalmic surgeon.

Aldershot.

# Clinical Notes:

# MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

## A CASE OF PRIMARY HÆMORRHAGE INTO THE FOURTH VENTRICLE.

By HOWARD W. REYNOLDS, M.B., B.Sc. LOND.,
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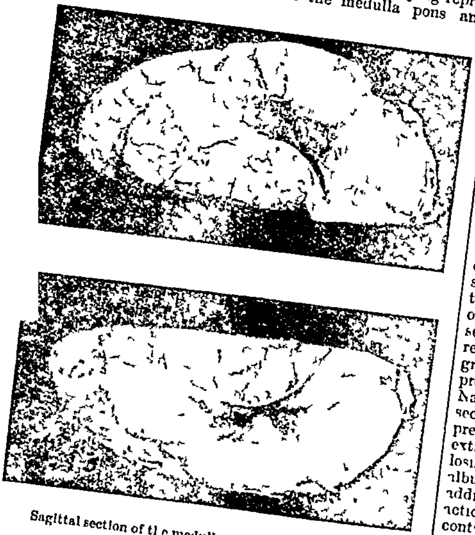
THE case detailed below is chiefly of interest from a pathological point of view and on account of the comparative rarity of the condition.

The patient was a woman 35 years of age, who was admitted to the Ramsgate General Hospital on Jan. 9th, 1901, suffering from Bright's disease, with hydrothorax and œdema of the lungs. On Feb. 4th she was violently sick in the evening, and on the next day, at 3 P.M., she suddenly developed bilateral paralysis of the lips, tongue, and pharynx, so that she could not articulate properly, protrude her tongue, or swallow except with difficulty, while saliva dribbled from the mouth. There was no headache or any other premonitory symptom except perhaps the vomiting and consciousness was perfect throughout. There was no paralysis of the limbs or ocular muscles. The most marked feature was the defect of articulation which really drew attention to the condition, the defect being inability to pronounce the labials; thus, she pronounced "grapes" as "grace," and "sponge" as "sunge." The temperature rose from 97·2° F. in the morning to 102 6° in the afternoon, and the pulse, which had been slow, rose to 120. These symptoms remained the same until Feb. 7th at 11 A.M., 44 hours from the first symptom, when respiration suddenly ceased, the heart beating for some minutes afterwards.

*Necropsy.*—At the post-mortem examination the right kidney was in the "large white" condition, the left being atrophied. The pleural cavities contained fluid and the lungs were œdematous. The left ventricle was hypertrophied, but the heart was otherwise normal. The brain was found to be healthy except for a hæmorrhage into the fourth ventricle which is shown in the accompanying reproduction of a photograph taken of the medulla, pons and



Sagittal section of the medulla, pons and cerebellum.

cerebellum bisected and laid open. It will be seen that the Sylvian iter is free from clot, as were the third and lateral ventricles, showing the hæmorrhage to be primarily of the fourth ventricle. It will also be seen that the blood has ploughed its way into the posterior part of the pons and medulla, where it would involve the nuclei of the cranial nerves but not the pyramidal tracts. Judging from the symptoms, the nuclei affected were those of the seventh, tenth and twelfth, the sixth being unaffected. The sudden death may perhaps have been due to a second hæmorrhage involving the respiratory centre.

My thanks are due to Dr. G. B. Courtney, under whose care the patient was, for permission to record the case.

Ramsgate.

# PRELIMINARY COMMUNICATION ON THE CAUSATION OF THE SO-CALLED "PERIPHERAL REFLEX SECRETION" OF THE PANCREAS.[1]

By W. M. BAYLISS, D.Sc. OXON.,

AND

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(*From the Physiological Laboratory, University College, London.*)

*Introduction.*—It has long been known that the introduction of acid into the duodenum causes a flow of pancreatic juice, and it has been shown recently by Popielski and by Wertheimer and Le Page that this flow still occurs after nervous isolation of the duodenum and the pancreas. Wertheimer also mentions that the flow can be excited by injection of acid into the jejunum but not by introduction of acid into the lower part of the ileum. These authors conclude that the secretion is a local reflex, the centres being situated in the scattered ganglia of the pancreas or in the case of the jejunum in the ganglia of the solar plexus (Wertheimer).

*Results.*—The secretion excited by the introduction of acid into the jejunum cannot be reflex, since it occurs after extirpation of the solar plexus and destruction of all the nervous filaments passing to the isolated loop of jejunum. It also occurs after intravenous injection of 0·01 gramme of atropin sulphate. It must therefore be due to direct excitation of the gland cells by a substance or substances conveyed to the gland from the bowel by the blood stream.

The exciting substance is not acid. Wertheimer has shown that injection of 0·4 per cent. HCl into the blood stream has no excitatory influence on the pancreas. The secretion must therefore be due to some substance produced in the intestinal mucous membrane under the influence of the acid and carried thence by the blood stream to the gland. This conclusion was at once confirmed by experiment.

When the mucous membrane of the jejunum or duodenum is exposed to the action of 0·4 per cent. HCl a body is produced which, when injected in minimal doses into the blood stream, produces a copious secretion of pancreatic juice. This body, which for the present we may term *secretin*, is associated with another body with a pronounced lowering effect on the blood pressure. The two bodies are not identical, since acid extracts of the lower end of the ileum produce the pressure-lowering effect but have no excitatory influence on the pancreas. The action of the acid is to split off the secretin from a precursor, *prosecretin*, which is present in relatively large amounts in the duodenal mucous membrane, gradually diminishing as we descend the intestine. The prosecretin is apparently slightly soluble in 0·9 per cent. NaCl solution. It has no influence on the pancreatic secretion. The secretin may also be split off from its precursor by boiling this with 0·9 per cent. saline. The acid extract may be boiled, neutralised, and filtered without losing its activity. The active filtrate contains some primary albumoses and gelatin, which may be precipitated by addition of large excess of alcohol and ether, and have no action on the pancreas. The alcoholic ethereal filtrate contains only a small amount of organic material, but on evaporating to dryness and taking up the residue with water the solution obtained is as active as the original infusion.

These results indicate that secretin is probably a body of very definite composition and of small molecular weight. Dr. Osborne is at present engaged in an investigation of its chemical characters and identity.

A chemical sympathy between different organs has often been assumed as, e.g., between the uterus and the mammary glands, but we believe that this is the first case in which direct experimental proof has been afforded of such a relationship. It is probable, however, that this acid-duodenum-pancreas mechanism will prove to be but one of a whole class of similar mechanisms, the study of which should considerably increase our control of the various chemical functions of the body.

In the light of the results here noted a revision of Pawlow's experiments is necessary. In none of these latter was a possible expulsion of acid from the stomach into the duodenum excluded. We have so far failed to obtain a secretory effect on the pancreas by stimulation of the vagi, and are therefore rather sceptical of the alleged presence in these nerves of secreto-motor fibres to the pancreas. We are continuing our experiments on this and kindred points.

# A CASE OF IMPERFORATE ANUS.

By B. CROSSFIELD STEVENS, M.D., M.S. DURH., F.R.C.S. EDIN.

I WAS lately sent for by a midwife to see a newly born female child who was not expected to survive. The midwife had given the child a dose of castor oil because of the rattling in the throat, after she had done this she discovered that the bowel had no apparent opening. When I saw the child, who was undersized, she was cyanosed; she had evidently inhaled a quantity of mucus and discharge from the maternal passages during birth. On examination the only indication there was of an anus or proctodeum was a small elastic mound. Knowing that the child had been given castor oil I decided to operate at once, so with the help of a fellow practitioner but in a "slummy" room with a bad light I made an incision into the perineum and hunted for the rectum which I failed to find. I was next thinking of doing

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[1] A paper read before the Royal Society on Jan. 23rd, 1902.

a colostomy when during straining under the anæsthetic I noticed a little meconium exuding from the vulva. This was the first clue to the real state of affairs—i.e., a persistent cloaca between the rectum and the vagina. I then passed a probe into the vagina which went horizontally backwards about one-third of an inch above the perineum and then upwards into the rectum. After this a pair of pressure forceps was passed through the vagina into the bowel and the rectal walls were pushed before it into the opening which I had made in the perineum. This was opened on the point of the forceps and was sewn with continuous catgut sutures to the anal skin. I could now pass a probe from the perineum into the bowel, also from the vagina into the bowel; meconium came at once through the new anus, and the first stage of the operation was completed. On the second day a little packing was put in the vagina and all the meconium then passed per anum. The child was still very cyanosed and a quantity of mucus was expressed from the bronchi. On the third day the wound was perfectly healthy and meconium was passing per anum, but the child had not been given any nourishment and was cold and cyanosed. This was due partly to the inability of the child to swallow, indifference on the part of the mother, and lack of attention on the part of the friends. On the fourth day the child died from, as I thought, septic-aspiration-broncho-pneumonia and inanition.

I think that from a surgical point of view the case is one of interest. The reason of failure to find the rectum at first was because it was drawn abnormally forward and was ill-developed. The lesson which the case teaches is that in a case of imperforate anus the medical attendant should always examine for a fistula between the rectum and the genito-urinary organs.

Swinton, Rotherham.

# A Mirror
OF
# HOSPITAL PRACTICE,
## BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—Morgagni *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

## WESTMINSTER HOSPITAL.

### A CASE OF AMPUTATION THROUGH THE THIGH IN A CHRONIC DIABETIC WHO HAD NECROSIS OF THE FOOT, FOLLOWED BY A DISAPPEARANCE OF THE GLYCOSURIA.

(Under the care of Mr. W. G. Spencer.)

The desirability of operating in cases of diabetes has been doubted. For instance, Erichsen wrote: "Saccharine diabetes is another constitutional condition which absolutely forbids all operations except those required for the immediate preservation of life."[1] This is probably true of the severe acute cases, but in cases of chronic diabetes operations, such as amputation of a gangrenous limb, may be performed with safety, as Mr. R. J. Godlee showed in a paper read before the Royal Medical and Chirurgical Society.[2] As in the case recorded below, the sugar may disappear from the urine when the diseased limb has been removed; this has already been shown by Mr. W. G. Spencer.[3]

A woman, aged 61 years, was admitted into the Westminster Hospital on Nov. 8th, 1901, and left on March 8th, 1902. She weighed about 12 stones; 20 years ago her weight was 19 stones and seven years ago 15 stones. It was some 12 years ago that she first felt a constant thirst, drinking one or two gallons daily; for the last five years the thirst had not been so marked. About Oct. 1st she first noticed a small crack at the side of the nail of the second toe of the right foot whence inflammation spread to the foot and an escape of blood and pus from several openings followed. The foot below the malleoli was much swollen, there were several sinuses, and extensive necrosis was found on probing. Whilst the rest of the patient's circulation did not present any abnormality no pulsation could be detected in the right leg below Scarpa's triangle. For five weeks the patient was treated medically by a special diet and by codeia and the foot was frequently dressed. The necrosis extended but the temperature remained normal. On two days (Nov. 28th and Dec. 13th) no sugar was present in the urine, the patient feeling depressed and being drowsy.

On Dec. 17th amputation of the right limb just below the middle of the thigh was carried out. The superficial femoral artery at this level was completely thrombosed by recent coloured clot and did not show any pulsation after the removal of the tourniquet, but there was free hæmorrhage from all the branches of the profunda artery. A dissection of the limb exposed a general necrosis of the bones of the foot with infiltration of the soft parts by suppuration. The popliteal and the three arteries of the leg were obliterated by sclerosis and thrombi. A microscopical examination showed chronic endarteritis. The thickened intima was much tunnelled by blood channels with calcification of the media. A limited sloughing of the skin-flap occurred along the previous line of the superficial femoral artery and its anastomotic branch, and sugar was present in the urine until Jan. 10th, after which none was found. The patient left the hospital on March 8th. A small granulation patch on the stump still remained to heal, otherwise she felt and appeared in good health.

The accompanying table shows the daily average results of the examination of the urine in the three periods named. The specific gravity and the amount of sugar showed considerable daily variations; the quantity could not often be completely measured. Albumin was never present.

*Table showing the Results of the Examinations of the Urine.*

| — | Before operation—Nov. 8th to Dec. 17th. | Shortly after amputation—Dec. 19th to Jan. 10th. | Convalescence—Jan. 14th to March 7th. |
|---|---|---|---|
| Quantity ... ... ... | 47 ounces. | 43 ounces. | 35 ounces. |
| Specific gravity ... | 1023 | 1027 | 1015 |
| Sugar ... ... ... | 1·6 ounces. | 1·13 ounces. | None. |

*Remarks by* Mr. Spencer.—In the above case arterio-sclerosis and thrombosis were well marked, indicating the necessity of a high amputation, so that the stump might depend for its blood-supply directly upon the branches of the deep femoral artery, the limited sloughing of the flap being connected with the thrombosis of the superficial femoral artery above the level of the amputation. It has been thought that perforating ulcers are the result of a previous neuritis in diabetic cases, but an examination of the nerves of the amputated limb did not support this view. The history that the patient gave was that of septic extension to the foot from a small crack on the toe, rather than of a preliminary perforating ulcer. The arterial changes were as extensive as those met with in cases of gangrene. That this did not happen may be put down to the otherwise good state of the patient's circulation.

As regards the disappearance of the glycosuria (it would be going too far to anticipate the same of the chronic diabetes) a similar result happened in a case in which I amputated the arm as soon as the patient was convalescent. This disappearance of the glycosuria was doubtless aided by the special diet and the codeia, but the medical measures showed their efficacy only after the removal of the incubus caused by the diseased foot.

For the notes and for the many estimations of the sugar I am indebted to Mr. E. C. Johnson, dresser.

## NORTHAMPTON GENERAL INFIRMARY.

### A CASE OF PSORIASIS RUPIOIDES.

(Under the care of Dr. F. Buszard.)

In the more severe forms of psoriasis the treatment often requires to be varied until some medicament is found which is effective. In the case recorded below alkaline baths rapidly removed all signs of disease, though many other forms of treatment had been employed in vain. It is curious that antisyphilitic treatment was useless, for both mercury and iodide of potassium are often of value in psoriasis. Chrysarobin ointment not very rarely requires to be of a greater strength than that used in this case in order to remove the disease. For the notes of the case we are indebted to Dr. W. Bertram Watson, late house physician.

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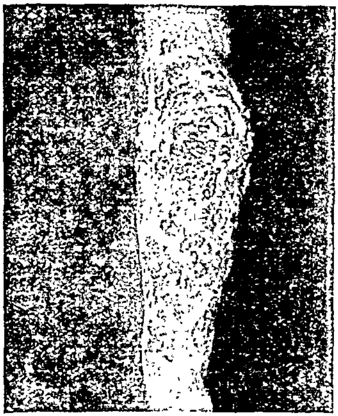
[1] Science and Art of Surgery, ninth edition, p. 7.

[2] The Lancet, Oct. 29th, 1892, p. 994.

[3] The Lancet, June 18th, 1892, p. 1364.

A youth, aged 19 years, was, on Feb. 25th, 1901, admitted to the Northampton General Infirmary suffering from an extensive eruption of the skin. The rash had first appeared on the right arm in June, 1900, and by August had become general. It was irritable for the first two or three weeks and "very scurfy." He had been in good health all the time and had never before suffered from any disease of the skin. No evidence of either congenital or acquired syphilis could be obtained. The accompanying illustrations, reproduced from photographs which were taken on admission, give some idea of the distribution and character of the eruption. It was symmetrical and general, affecting all parts of the body except the hands and feet. It was most marked on the extensor surfaces of the elbows and the flexor surfaces of the knees. (Figs. 1 and 2.) On the trunk, where the eruption was discrete, it consisted of rounded patches from half an inch to one inch in diameter, covered with crust from a quarter to half an inch in depth. The patches were wider at the base than at the apex, thus presenting the typical conical stratified limpet-shell appearance which is so characteristic of rupia. The crusts themselves consisted of epithelial scales and dried purulent matter. The surface beneath the crusts was hyperæmic and moist, and in the case of two or three patches was ulcerated. On the arms the eruption extended on the extensor surface from the wrist to the acromion process, there being no intervening areas of healthy skin. The eruption in this situation consisted of dense horny scales heaped up to a depth of from one-eighth to a quarter of an inch. On removal of these dirty-white scales the base was hyperæmic and moist but not ulcerated The scales were piled up to the same extent on the flexor surfaces of the knees, and on the removal of the scales the same hyperæmic appearance was observed, but no ulceration. The scalp was covered with dry dirty scales, but not to any such extent as in other parts of the body.

FIG. 1

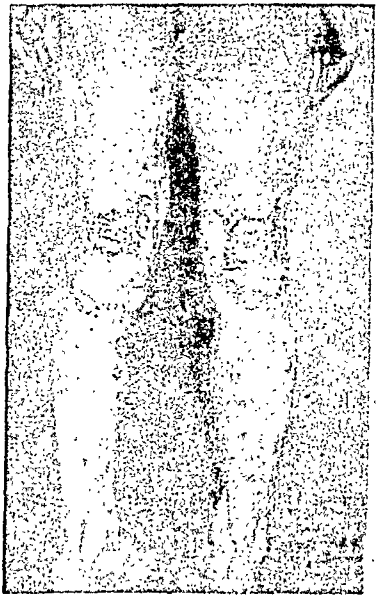


Showing eruption on the extensor surface of the elbow.

One of the most interesting features of the case was the result of treatment. As some of the lesions so closely resembled rupia (although there was nothing in the history to point to the eruption being of a specific nature) antisyphilitic remedies were tried for some weeks internally but without producing any effect. Arsenic was next exhibited, in the form of Fowler's solution, three drops thrice daily after food, but without result; and the same must be said for the internal administration of thyroid extract. Local treatment, which is of such importance in the treatment of psoriasis, was given an extensive trial. The scales were first removed by means of hot water and soft soap, poultices, &c. As the process was not intense at the commencement of treatment, but inclined to be chronic, stimulating remedies were used. Chrysarobin was applied in the form of an ointment (15 grains to one ounce at first and afterwards increased to 30 grains to one ounce) to the arms and legs, and was given a trial of seven weeks, at the end of which time no progress could be reported. Among other ointments tried may be mentioned cream of zinc (one ounce of olive oil, one ounce of oxide of zinc, one ounce of lime water, and two drachms of lanolin), compound sulphur ointment, and compound tar ointment.

On July 12th, after a period of active treatment in the hospital extending over 19 weeks, the condition was practically the same as on admission. If treatment directed to the removal of scabs was discontinued, even for a short time, the arms and legs soon scaled over again. Alkaline baths were then tried. The patient was soaked for half an hour every day in a bath of water at a temperature of from 95° to 100° F. in which four ounces of bicarbonate of soda had been dissolved to about 30 gallons of water. After coming out of the bath he was not dried but glycerine was well rubbed in for a quarter of an hour or 20 minutes, after which he was dusted with zinc oxide powder. Immediately after this treatment he went to bed so as to avoid risk of cold. The result of this treatment was remarkable. In the course of three or four days there was no further tendency to scale, and at the end of a fortnight the whole eruption had completely disappeared, except for a few brown stains on the abdomen, arms, and legs, marking the position of the patches. There are also two or three scars on the abdomen to be seen, due no doubt to the ulcerative process (already referred to) which occurred in the case of a few of the patches.

FIG. 2.



Showing eruption on the flexor surfaces of the knees.

*Remarks by* Dr. WATSON.—The above case is that of an unusual form of psoriasis, similar to those first described by Dr. McCall Anderson under the name of "psoriasis rupioides." I am indebted to the courtesy of Dr. Buszard for permission to publish the case.

# Medical Societies.

## PATHOLOGICAL SOCIETY OF LONDON.

*The Pathology of Diabetes.—Effect of Suprarenal Extract on the Pulmonary Vessels.—Changes in the Nervous System following Removal of the Thyroid.—Rôle of the Liver and Spleen in the Destruction of Blood Corpuscles.*

A MEETING of the Section of Experimental Pathology of this society was held by the courtesy of the managers at the Laboratory of the Royal Colleges of Physicians of London and Surgeons of England on March 18th, Mr. W. WATSON CHEYNE, the President, being in the chair.

Dr. F. W. PAVY, Dr. T. G. BRODIE, and Mr. RAYMOND L. SIAU communicated the results of their further experiments into the Pathology of the Glycosuria which was produced when Phloridzin was injected into the Renal Artery. Their previous experiments consisted in the perfusion of an excised kidney and a repetition of Zunt's experiment—viz., the injection of phloridzin into the renal artery, which resulted in the appearance of sugar in the urine, phloridzin glycosuria Although these experiments supported, as far as they went, the view that the eliminated sugar was produced in the kidney, yet they did not lead to anything absolutely conclusive. The new line of research that they now pursued consisted of the removal in the anæsthetised animal of all the abdominal viscera with the exception of the kidneys. In the operation the liver was removed by ligaturing the bases of the lobes one by one and subsequently excising them. This operation was capable of being performed practically without loss of blood and without any marked immediate influence upon the animal. The effect of the operation upon the state of the blood was to lead to a gradual fall in the amount of sugar from the little over 1 per 1000, approximately the normal amount present at starting, to 0·5 or 0·6 per 1000, a point which was reached in about one hour and below which no essential reduction had been found to occur during a further period of two hours. After the injection of phloridzin in such an animal precisely the same kind of fall in the sugar in the blood was observed and the amount of the sugar eliminated rendered it quite impossible that the sugar contained in the blood could be its source, thus demonstrating the insufficiency of von Mering's theory of the mechanism of the glycosuria. The conclusion arrived at by the authors was that the renal epithelium was the essential factor in the production of phloridzin glycosuria. In both pancreatic diabetes and phloridzin glycosuria there was a parallelism between the sugar and nitrogen eliminations, showing that the sugar was derived from proteid katabolism, but various facts pointed to the sugar formation occurring in the latter case solely in the kidney and in the former in the general system. It seemed probable that under the influence of phloridzin the renal cells acquired the power of katabolising proteid with the liberation of dextrose in a manner that might be compared with the production of lactose in the mammary gland from proteid matter by the action of the cells of that gland.

Dr. BRODIE and Dr. W. E DIXON demonstrated experiments in the Effects of Suprarenal Extract upon the Pulmonary Circulation, showing that the main effect of moderate doses of this substance was to dilate the pulmonary vessels, although it was known to constrict the vessels in other parts of the body. These were of interest as bearing on the question whether suprarenal extract could act as a hæmostatic in cases of pulmonary hæmorrhage.

Mr. WALTER EDMUNDS made a communication on the Pathological Effects produced on the Central Nervous System by Thyroid Excision in Whole or in Part and by Thyroid Feeding. The observations were based on 12 experiments, three on monkeys and nine on dogs. Of the monkeys one was subjected to total excision of the thyroid and parathyroids, from which the animal died in 112 days. The other two monkeys were fed with very large doses of a thyroid preparation; one died in seven days and the other in 12 days. Of the nine dogs three were subjected to primary total excision of the thyroid and parathyroids; they all had severe symptoms and died (or were killed) in three, six, or 12 days. One was subjected to a partial excision of the thyroid which was followed by chronic symptoms, from which it died in 329 days. Two others also underwent partial excision of the thyroid, but in addition steps were taken to paralyse the secretory function of the thyroid left; these two dogs died in 242 and 271 days respectively In three dogs similar operations were performed, but were followed by operations completing the excision of the thyroid and parathyroids. In all cases pathological changes were found, but they varied much in degree; they were most marked in the thyroid poisoning experiments. The changes consisted in alterations in the pyramidal cells, large and small, which showed chromatolysis, swelling of the cell body, swelling of the nucleus, extrusion of the nucleus, and sometimes total destruction of the cell body, leaving practically a free nucleus.

Dr. W. BAIN described experiments which he had performed to ascertain the Rôle of the Liver and Spleen in the Destruction of Blood Corpuscles. He perfused defibrinated blood through these organs for periods varying from one to three hours. He took samples both before and after perfusion and the following points were determined. The hæmoglobin was estimated quantitatively, counts were taken of the red and white blood corpuscles, the hæmoglobin dissolved in the serum was estimated, the volume of corpuscles was ascertained, and the specific gravity of the blood was determined. Dr. Bain found that the liver destroyed certain red cells—viz., those which were poor in hæmoglobin—and consequently the relative value of the corpuscle was increased after perfusion. The spleen also destroyed red cells, but to a less extent than the liver, the worth of the corpuscle being slightly increased after perfusion. The most striking result of the splenic perfusions was the destruction of leucocytes, the larger varieties being especially affected.

## CLINICAL SOCIETY OF LONDON.

*Arthritis of the Knee-joint.—Malignant Endocarditis giving Widal's Reaction.—Acute Paralytic Dilatation of the Stomach.—Lymphadenoma with Growths in the Skin.*

A MEETING of this society was held on March 14th, Mr. HOWARD MARSH, the President, being in the chair.

Mr. H. W. PAGE, Dr. A. PAINE, and Dr. F. J. POYNTON made a communication on two cases of Arthritis of the Knee-joint.—Mr. PAGE briefly recorded the clinical history of two cases of Non-articular Arthritis in which the effusion, which was considerable, did not subside under the influence of rest, warmth, and local remedies. Their etiology was obscure. In both instances they have been attributed to a slight injury, but the severity and stubborn character of the arthritis made it unlikely that such was the complete explanation. When these joints were aspirated a greenish cloudy fluid was obtained, floating in which were flakes of lymph and leucocytes. Aspiration of the joints was followed by a re-accumulation of the fluid and return of pain, and it was observed that when the arthritis was at its height that the patients were slightly delirious. In both cases recovery had rapidly followed aspiration, together with irrigation of the joints with a 1 per cent solution of carbolic acid. In the second case full doses of salicylate of soda, given after the joint had been treated by aspiration and flushing with carbolic, appeared materially to promote recovery. Mr. Page was of opinion that this form of arthritis, which in its clinical course was unusual, must be the result of an infection of the joint by a micro-organism which had a special affinity for the tissues of the joints, and he drew attention to them now because Dr. Poynton and Dr Paine had demonstrated, isolated, and cultivated such a micro-organism, and had produced experimental results which led to the conclusion that this organism was the exciting cause of the arthritis.—Dr. POYNTON and Dr. PAINE then described the investigation which they had made in the second of the two cases described by Mr. Page Upon two occasions they had found in the exudation numerous small diplococci growing in chains. The exudation contained in addition fibrin and leucocytes which were not necrotic. This diplococcus grew well in pure culture, in an acid medium of milk and bouillon, in bouillon to which ascitic fluid had been added, and on blood agar. The cultural and morphological characteristics were indistinguishable from those of the diplococcus of rheumatic fever Intravenous inoculation into rabbits produced a condition more akin to that which resulted from inoculation with the diplococcus of rheumatic fever than that which resulted from the streptococcus pyogenes—that was to say, multiple arthritis, and in one case valvulitis, resulted without visceral suppurations. The spleen after death was small, and in none of the four experiments that were made did death result from septicæmia. On the contrary, two of the animals recovered completely after showing local signs of infection, and two were killed when the arthritis in each case had existed for two months. Quite independently from Mr. Page they had by bacteriological investigation arrived at the conclusion that the infection was an ususual one, and this investigation pointed to the probability that the condition was more closely allied to a rheumatic than to a suppurative arthritis. The scientific interest of the question lay in the light that such an investigation might in the future throw on the etiology of rheumatoid arthritis and the vexed problem of rheumatic and septic processes. A point which was worthy of note was that many diplococci were present in the exudation. Dr. Poynton and Dr. Paine had found that acute and clear effusions of rheumatic fever were usually sterile both in man and in animals, but nevertheless the diplococcus might be found in the synovial membrane. They thought that the endothelial lining of the synovial membrane was an important barrier to their escape, and that in this case of arthritis this barrier had in all probability been much damaged.—The PRESIDENT remarked that the more he saw of diseases of the joints the more he felt that there was a good deal that was uncertain about them and that there was a great deal yet to learn, so that scientific studies of this kind were most welcome.

Dr. W. HALE WHITE and Mr. W. C. C. PAKES communicated a paper on a case of Malignant Endocarditis giving Widal's Reaction. The case was typically one of malignant endocarditis, the patient dying from cerebral embolism. The blood on June 10th failed to agglutinate typhoid bacilli even in a strength of 1 in 2. On the 20th agglutination was produced with a strength of 1 in 2 and 1 in 20, but not with a strength of 1 in 200. Pure cultures of streptococcus longus were obtained from the blood. On the 29th cultures from the urine collected with every precaution showed the presence of a streptococcus identical with that previously obtained from the blood and a bacillus belonging to the paracolon group. Every attempt which was made to isolate the typhoid bacillus failed. The agglutination test was tried with five different strains of bacilli, and with four a complete agglutination was obtained with a dilution of 1 in 20, and with one partial agglutination was obtained with a dilution of 1 in 200. On Sept. 13th the patient died. Blood which was taken from the heart and the spleen showed the streptococcus longus in pure culture, but no typhoid bacilli could be discovered. The patient never had spots or other signs of typhoid fever, nor were any signs of healed ulcers found post mortem. Thus this was an instance of a patient who, suffering from malignant endocarditis of streptococcal origin without any clinical, post-mortem, or bacteriological evidence of typhoid fever, yet nevertheless developed in her blood serum certain substances which had the power of agglutinating the typhoid bacillus. Dr. Hale White and Mr. Pakes pointed out the clinical importance of this result in considering the diagnosis between typhoid fever and malignant endocarditis and also alluded to the fact that many observers had failed to obtain a Widal reaction in malignant endocarditis. In this particular case the presence of the reaction could not be due to the patient having had typhoid fever previously, for no reaction was obtained when she was admitted. She was treated with various strains of anti-streptococcic serum, but without any good result.—Dr. F. S TOOGOOD referred to the case of a man who inoculated his thumb with septic matter on Feb. 10th This was followed by glandular enlargement and constitutional symptoms with a temperature of 104° F. Subsequently, on March 4th, there was bleeding from the nose and his blood gave Widal's reaction, but on the next day the right shoulder-joint and the tissues around were œdematous and other joints became involved On the 10th the blood again gave Widal's reaction, with dilutions 1 in 10, 1 in 25, and 1 in 50. The patient recovered but he had presented the clinical features of septicæmia although the blood gave Widal's reaction.—The PRESIDENT said that he had seen this case and it was clearly one of septicæmia —Dr. J. W. CARR remarked that the paper raised the question of the value of Widal's reaction.. He referred to the case of a child, aged five years, whose symptoms and physical signs were typically those of acute tuberculosis mainly affecting the lungs, yet the blood tested at the Jenner Institute gave a marked Widal's reaction.—Dr. C. R. BOX said that it was most important to indicate what dilution was used. At first with low dilution he had got reactions with diseases other than enteric fever. 1 in 50 was, in his belief, the most suitable dilution for obtaining the true test in cases of actual enteric fever. Turning to the question of nomenclature, he thought that it would be much better to call this test the agglutinative or serum reaction.—Dr. W. LEE DICKINSON referred to a case of gastric ulcer which was erroneously diagnosed during life as enteric fever on the strength of the agglutinative reaction with typhoid cultures.—Dr. POYNTON remarked that his experience at St. Mary's Hospital led him to the conclusion that although the test was not infallible it was a most valuable guide. A great deal must depend upon the technique and the dilution of the culture and on the particular strain used, and this to some extent diminished the value of recorded cases.—Dr. HALE WHITE, in replying, adverted to the importance of knowing whether the patient had had enteric fever previously. He had known cases in which the attack of typhoid fever had occurred 26 years and 23 years previously. Another point was that different strains differed and several strains should be tried. Clinically a negative result should not be accepted after the fourteenth day of the illness nor until several strains had been tried. It would be interesting to follow up Dr. Toogood's case and see for how long the blood gave the reaction.

Mr. A. E. SEARS read a paper on a case of Acute Paralytic Dilatation of the Stomach which occurred in a medical man, aged 30 years. The disease commenced insidiously with an intermittent fever of obscure origin, and was accompanied by constipation, fæcal accumulation, and progressive loss of flesh. Previously to the dilatation of the stomach phlebitis of the veins of the left leg and iliac region occurred, and later the stomach became suddenly distended, and on passing an œsophageal tube three quarts of a dark green sour-smelling fluid were withdrawn. Vomiting was never present and no peristaltic waves were observed. Complete recovery followed daily lavage of the stomach, and up to the present time, just 12 months afterwards, no recurrence of the disease had taken place.—Dr. C. R. BOX congratulated Mr. Sears on the success of his case. Recovery such as this was rare and so was the absence of vomiting. Was there only acute dilatation here or was there superadded obstruction of some kind? he asked. By experiments on dead bodies he had found that the stomach could be folded up on the duodenum; or, again, it was possible for the mesenteric vessels to be dragged down over the duodenum. He had recently met with an instance of the latter kind in the post-mortem room in which the stomach and duodenum were distended by air. When the mesenteric vessels were cut the stomach almost collapsed. Rectal feeding was not always possible in these cases because sometimes they had intractable diarrhœa.

Dr. W. LEE DICKINSON and Dr. W. J. FENTON gave the further clinical history and post-mortem account of a case of Lymphadenoma with Growths in the Skin. The living patient had been shown at a meeting of the Clinical Society last April,[1] mainly on account of the growths in the skin, the true nature of which gave rise to some difference of opinion. Subsequently anti-syphilitic treatment was adopted but without benefit, and the disease made steady progress in the glands and internal organs, proving fatal in August. Post mortem the glands and spleen were found to be affected with the hard form of lymphadenoma, and there were secondary growths of the same nature in the cerebral dura mater and in the cancellous tissue of the tibia, as well as in the skin of the chest. Inoculation experiments were not undertaken, but microscopically no tubercle was found in any part except the liver, where there was at least one small tuberculous focus. The liver was lardaceous. There had been no evidence of syphilis. The case therefore proved to be one of lymphadenoma upon which tubercle had supervened.

## OPHTHALMOLOGICAL SOCIETY.

*Symmetrical Concentric Folds of the Choroid and Retina in Four Cases of Unusually High Myopia.—Membranous Conjunctivitis with Cases.—Diphtheria of the Conjunctiva with Cases*

AN ordinary meeting of this society was held on March 14th, Mr. W. ADAMS FROST being in the chair.

Mr. R. LAWFORD KNAGGS (Leeds) read a paper on Symmetrical Concentric Folds of the Choroid and Retina in

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[1] Transactions of the Clinical Society of London, vol. xxxiv., p 243.

Four Cases of Unusually High Myopia. The appearance presented was that of a crescent having a sharp dark edge It was always situated on the nasal side of the disc and at varying distances from it, and when both eyes were affected the condition was symmetrical. It was vertically placed and its concavity faced the disc. It was two, three, or four times the diameter of the disc in height. The condition producing this appearance was a folding back of the choroid and retina upon themselves towards the disc, involving a detachment of both tunics from the sclerotic The dark edge was due to the increased thickness of pigment at the summit of the fold, where it turned round upon itself. Vessels curved round the fold as round the edge of a glaucomatous cup. The appearance had been met with in four cases. Both eyes were affected in three cases, and in the fourth one the eye had been previously lost from accident. The degree of myopia varied from – 18 D. to – 38 D., neglecting astigmatism. In one eye there was a rent on the anterior surface of the fold through both tunics, showing the sclerotic, and the edges were turned towards the vitreous. In another there was a wrinkle of both coats on the nasal side of the crescent and parallel to it. In the 1901 edition of Haab's Atlas (Fig. 79) a very similar appearance is shown, but is described as true staphyloma in a highly myopic eye. The explanation was probably as follows. The anterior attachments of the choroid and retina stretching unduly in consequence of the elongation of the eyeball permitted the two inner tunics to slide back towards the posterior pole, but as they were both nailed to the sclerotic by the optic nerve this sliding movement was checked by the obstruction and led to a re-duplication of the coats within the area over which the obstruction was felt.

Mr. **WALTER H. H. JESSOP** read a paper on Membranous Conjunctivitis, with 13 cases. Membrane was present in all, being of varying appearance and consistence. The bacteriological cultures varied widely; in one only was there any membrane in the throat. The corresponding lymphatic glands were enlarged; fever occurred in about half. No paralytic symptoms followed in any. Eight were proved to be cases of diphtheria, the diagnosis resting on bacteriological cultures. Mr. Jessop repeated a desire previously stated that the term "diphtheritic" should be discontinued and that all the cases should be grouped as "membranous conjunctivitis," subdivisions being arranged for the separate groups according to their etiology.

Mr. **SYDNEY STEPHENSON** read a paper on Diphtheria of the Conjunctiva, based on 43 cases collected in five years at the Evelina Hospital for Sick Children and at the North-Eastern Hospital for Children. 75 per cent. of the cases occurred in children under three years of age and 88 per cent. under the age of four years. They were noted chiefly in the months of January, February, March, and April, especially in the last month, thus corresponding with the incidence of ordinary diphtheria. It was, in his opinion, the same disease. Many cases were traced to infection from faucial diphtheria in the same family or neighbourhood. In many instances the disease occurred subsequently to various exanthemata. Previous affections of the conjunctiva were traced only in five children. 40 per cent. of the cases presented constitutional disturbance. Albuminuria occurred in some and two displayed loss of the patellar reflex. There were seven instances of diphtheria on the skin, affecting excoriated patches and impetigenous sores, which received bacteriological confirmation. Membrane was present in 42 cases and in the remaining case the bacillus was demonstrated. In all the cases of moderate and great intensity the corresponding lymphatic glands were enlarged. In 75 per cent. the disease was unilateral. The cornea was altered in only 13 cases. One patient died and 42 patients recovered. The Klebs-Löffler bacillus was demonstrated in every case and in six cases as a pure culture. Mr. Stephenson insisted on the practical value of an immediate examination of smears of the discharge, stained in methyl-eosine, and the [illegible] of gelatin cultures. The treatment which he recommended was immediate injection of antitoxin (4000 units) and the local application of antiseptics (1 in 5000 [illegible] solution or a 15 per cent. solution of potassium [illegible]) with the application of silver nitrate or the [illegible] to ulcerations of the cornea. Isolation of [illegible] was necessary.

[illegible] and card specimens were shown :—

[illegible] HARTRIDGE: (1) Ectropion of the Uveæ; [illegible] of the Conjunctiva.

[illegible] and [illegible] A. BRADBURNE (introduced): A case of Gunshot Wound of the Head, with Partial Motor Paralysis and Hemianopsia.

Mr. H. **WORK DODD**: (1) Sarcoma of the Orbit; and (2) Calcareous Tumour of the Orbit.

Mr. J. **HERBERT FISHER**: Retinitis Circinata.

Mr. J. B. **LAWFORD**: Early Changes in the Retina following Injury.

Mr. J. H. **PARSONS**: (1) Pigmentation of the Retina; and (2) Arcus Senilis.

Mr. R. E. **BICKERTON**: Unusual Changes of the Choroid.

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## LARYNGOLOGICAL SOCIETY OF LONDON.

### *Exhibition of Cases and Specimens.*

A MEETING of this society was held on March 7th, Mr. E. **CRESSWELL BABER**, the President, being in the chair.

Dr. H. W. **FITZGERALD POWELL** showed a case of Complete Recurrent Laryngeal Paralysis in a man, aged 24 years. The patient stated that in March, 1901, he suddenly lost his voice which returned after three months' treatment. In December he again suddenly lost his voice and came under Dr. Powell's care. On examination complete paralysis of the left vocal cord was found. There was an entire absence of any of the usual causes which produce such a paralysis. The patient stated that at the time of the first attack his medical attendant considered that he had influenza. At the present time there was some movement in the cord and the voice had suddenly undergone great improvement.—Sir **FELIX SEMON** considered that the paralysis was originally due to influenza and that some extra vocal effort or a cold would be sufficient to produce a recurrence.

Dr. **POWELL** also showed a case of Hæmatoma of the Vocal Cord in a female, aged 29 years, the symptoms of which were hoarseness and loss of voice coming on suddenly, and there was sluggish movement of the left cord.—Dr. F. **DE HAVILLAND HALL** pointed out that such hæmorrhages often coincided with the menstrual period or some catamenial disturbance.

Dr. **POWELL** exhibited a modification of Mackenzie's Laryngeal Forceps for the removal of growths in the anterior commissure and also Drills for draining the maxillary antrum through the tooth socket.

Dr. F. **WILLCOCKS** showed a case of Paralysis of the Left Vocal Cord symptoms of which had been present since last Christmas. There was no history of syphilis nor were there signs of any intra-thoracic pressure.—Dr. **DE HAVILLAND HALL** thought that although there were no physical signs paralysis was probably due to the pressure of an aneurysm.—Mr. P. R. W. **DE SANTI**, Sir **FELIX SEMON**, and Dr. J. **DONELAN** instanced cases in which the paralysis of the left cord had preceded any other signs of an aneurysm.

Mr. H. **BETHAM ROBINSON** showed a case of Laryngeal Stenosis due to cicatricial contraction in the inter-arytenoid region in a young man, aged 20 years, who complained of difficulty of breathing on exertion. He gave a history of diphtheria some years previously which had left him with an impaired voice. The voice had gradually improved, so that now it was only husky. Examination showed a perforation of the nasal septum, loss of the uvula, and a cicatricial web passing between the arytenoids. There was no history of syphilis —Sir **FELIX SEMON** pointed out the importance of carefully distinguishing between true paralysis and loss of abduction due to mechanical causes, as seen in this case.—The opinion of members of the society was divided as to whether the cicatricial web was due to diphtheria or to syphilis.

Dr. A. **BRONNER** showed sections of a Tuberculous Growth of the Mucous Membrane of the Right Middle Turbinal in a man aged 50 years.—Dr. **STCLAIR THOMSON** mentioned that tuberbulosis of the middle turbinate was extremely rare.

Mr. **DE SANTI** showed a case of Tertiary Intra-nasal Syphilis in which the right frontal sinus had been opened twice with negative results in a man aged 48 years. He invited suggestions as to further treatment.—Several members considered that there was probably a sequestrum at the junction of the sphenoid and the vomer and advised that this region should be explored.

Mr. **DE SANTI** also showed a case of Angio-neurotic Œdema of the Right Hand accompanied by attacks of dyspnœa in a woman, aged 26 years. Though examination of the larynx revealed no œdema or abnormal condition he pointed out that cases had been recorded in which death from septicæmia On the contrary, two of the animals recovered completely after showing local signs of infection, and two were killed when the arthritis in each case had existed for two months Quite independently from Mr Page they had by bacteriological investigation arrived at the conclusion that the infection was an unusual one, and this investigation pointed to the probability that the condition was more closely allied to a rheumatic than to a suppurative arthritis The scientific interest of the question lay in the light that such an investigation might in the future throw on the etiology of rheumatoid arthritis and the vexed problem of rheumatic and septic processes A point which was worthy of note was that many diplococci were present in the exudation Dr Poynton and Dr Paine had found that acute and clear effusions of rheumatic fever were usually sterile both in man and in animals, but nevertheless the diplococcus might be found in the synovial membrane They thought that the endothelial lining of the synovial membrane was an important barrier to their escape, and that in this case of arthritis this barrier had in all probability been much damaged.—The PRESIDENT remarked that the more he saw of diseases of the joints the more he felt that there was a good deal that was uncertain about them and that there was a great deal yet to learn, so that scientific studies of this kind were most welcome

Dr W HALE WHITE and Mr W O C PAKES communicated a paper on a case of Malignant Endocarditis giving Widal's Reaction The case was typically one of malignant endocarditis, the patient dying from cerebral embolism The blood on June 10th failed to agglutinate typhoid bacilli even in a strength of 1 in 2. On the 20th agglutination was produced with a strength of 1 in 2 and 1 in 20, but not with a strength of 1 in 200 Pure cultures of streptococcus longus were obtained from the blood On the 29th cultures from the urine collected with every precaution showed the presence of a streptococcus identical with that previously obtained from the blood and a bacillus belonging to the paracolon group Every attempt which was made to isolate the typhoid bacillus failed The agglutination test was tried with five different strains of bacilli, and with four a complete agglutination was obtained with a dilution of 1 in 20, and with one partial agglutination was obtained with a dilution of 1 in 200 On Sept 13th the patient died Blood which was taken from the heart and the spleen showed the streptococcus longus in pure culture, but no typhoid bacilli could be discovered The patient never had spots or other signs of typhoid fever, nor were any signs of healed ulcers found post mortem Thus this was an instance of a patient who, suffering from malignant endocarditis of streptococcal origin without any clinical post-mortem, or bacteriological evidence of typhoid fever, yet nevertheless developed in her blood serum certain substances which had the power of agglutinating the typhoid bacillus Dr Hale White and Mr Pakes pointed out the clinical importance of this result in considering the diagnosis between typhoid fever and malignant endocarditis and also alluded to the fact that many observers had failed to obtain a Widal reaction in malignant endocarditis In this particular case the presence of the reaction could not be due to the patient having had typhoid fever previously, for no reaction was obtained when she was admitted She was treated with various strains of anti-streptococcic serum but without any good result.—Dr F S TOOGOOD referred to the case of a man who inoculated his thumb with septic matter on Feb 10th This was followed by glandular enlargement and constitutional symptoms with a temperature of 104° F Subsequently, on March 4th there was bleeding from the nose and his blood gave Widal's reaction, but on the next day the right shoulder joint and the tissues around were œdematous and other joints became involved On the 10th the blood again gave Widal's reaction, with dilutions 1 in 10, 1 in 25 and 1 in 50 The patient recovered but he had presented the clinical features of septicæmia although the blood gave Widal's reaction —The PRESIDENT said that he had seen this case and it was clearly one of septicæmia —Dr J W CARR remarked that the paper raised the question of the value of Widal's reaction. He referred to the case of a child, aged five years, whose symptoms and physical signs were typically those of acute tuberculosis mainly affecting the lungs yet the blood tested at the Jenner Institute gave a marked Widal's reaction —Dr O R BOX said that it was most important to indicate what dilution was used At first with low dilution he had got reactions with diseases other than enteric fever 1 in 50 was in his belief, the most suitable dilution for obtaining the true test in cases of actual enteric fever Turning to the question of nomenclature, he thought that it would be much better to call this test the agglutinative or serum reaction —Dr W LEE DICKINSON referred to a case of gastric ulcer which was erroneously diagnosed during life as enteric fever on the strength of the agglutinative reaction with typhoid cultures —Dr POYNTON remarked that his experience at St Mary's Hospital led him to the conclusion that although the test was not infallible it was a most valuable guide A great deal must depend upon the technique and the dilution of the culture and on the particular strain used, and this to some extent diminished the value of recorded cases —Dr HALE WHITE in replying, adverted to the importance of knowing whether the patient had had enteric fever previously He had known cases in which the attack of typhoid fever had occurred 26 years and 23 years previously Another point was that different strains differed and several strains should be tried Clinically a negative result should not be accepted after the fourteenth day of the illness nor until several strains had been tried It would be interesting to follow up Dr Toogood's case and see for how long the blood gave the reaction

Mr A E SEARS read a paper on a case of Acute Paralytic Dilatation of the Stomach which occurred in a medical man, aged 30 years The disease commenced insidiously with an intermittent fever of obscure origin, and was accompanied by constipation fæcal accumulation, and progressive loss of flesh Previously to the dilatation of the stomach phlebitis of the veins of the left leg and iliac region occurred, and later the stomach became suddenly distended, and on passing an œsophageal tube three quarts of a dark green sour smelling fluid were withdrawn Vomiting was never present and no peristaltic waves were observed Complete recovery followed daily lavage of the stomach, and up to the present time just 12 months afterwards, no recurrence of the disease had taken place —Dr O R BOX congratulated Mr Sears on the success of his case Recovery such as this was rare and so was the absence of vomiting Was there only acute dilatation here or was there superadded obstruction of some kind? he asked By experiments on dead bodies he had found that the stomach could be folded up on the duodenum, or, again, it was possible for the mesenteric vessels to be dragged down over the duodenum He had recently met with an instance of the latter kind in the post-mortem room in which the stomach and duodenum were distended by air When the mesenteric vessels were cut the stomach almost collapsed Rectal feeding was not always possible in these cases because sometimes they had intractable diarrhœa.

Dr W LEE DICKINSON and Dr W J FENTON gave the further clinical history and post mortem account of a case of Lymphadenoma with Growths in the Skin The living patient had been shown at a meeting of the Clinical Society last April[1] mainly on account of the growths in the skin, the true nature of which gave rise to some difference of opinion Subsequently anti-syphilitic treatment was adopted but without benefit, and the disease made steady progress in the glands and internal organs, proving fatal in August Post mortem the glands and spleen were found to be affected with the hard form of lymphadenoma, and there were secondary growths of the same nature in the cerebral dura mater and in the cancellous tissue of the tibia, as well as in the skin of the chest Inoculation experiments were undertaken but microscopically no tubercle was found in any part except the liver, where there was at least one small tuberculous focus The liver was lardaceous There had been no evidence of syphilis The case therefore proved to be one of lymphadenoma upon which tubercle had supervened

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## OPHTHALMOLOGICAL SOCIETY.

*Symmetrical Concentric Folds of the Choroid and Retina in Four Cases of Unusually High Myopia — Membranous Conjunctivitis with Cases — Diphtheria of the Conjunctiva with Cases*

AN ordinary meeting of this society was held on March 14th Mr W ADAMS FROST being in the chair

Mr R LAWFORD KNAGGS (Leeds) read a paper on Symmetrical Concentric Folds of the Choroid and Retina in eliminate the fallacy arising from erroneous diagnosis, for if a case were found on admission to have been wrongly diagnosed it was excluded from the report, whereas with those treated at home such correction was obviously impossible and they appeared as cases which did not spread. As to the relative advantages of hospital and home treatment, the case mortality among 4251 cases in hospital was 3·93 per cent and among 228 alleged cases treated at home 5·58 per cent.

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[1] Transactions of the Clinical Society of London, vol

After some remarks by Mr. T. ROBINSON (Leicestershire), Dr. H. E. ARMSTRONG (Newcastle-on-Tyne), and Mr. H. BEALE COLLINS (Kingston-on-Thames),

Dr. MILLARD defended his own tables and cast doubts on some of Dr. Kaye's inferences, though he fully admitted the importance of local and social conditions. He denied having wished to compare Preston and Warrington except as members of groups and regretted not having excluded, as he had intended, towns where notification had been partial or for short periods only. He could not admit that neglect of hospital provision was evidence of a lighter incidence of scarlet fever, for Swansea was a proof of the contrary. Dr. Kaye's paper had at any rate shown the urgent necessity for further inquiry. Referring to Dr. Malet's important investigations he observed that "it stood to reason that when the first cases were removed the chances of other children contracting the infection would be less."

Dr. KAYE, replying, justified his minute comparison of Warrington and Preston as involving the essence of the dispute, and criticised the inclusion by Dr. Millard in one group of towns that on his own principle properly belonged to another, for under such circumstances averages were worse than worthless—in fact, deceptive. Dr. Millard had, in his closing sentence, conceded the very point at issue and the benefits to the community of hospital isolation. But he could not refrain from deprecating Dr. Millard's indiscretion in having given the publicity of a congress to views the soundness of which was, to say the least, unproved, but which had made such an impression on some local authorities that but for his intervention several towns in Yorkshire would have seriously considered the expediency of closing their hospitals.

## CHELSEA CLINICAL SOCIETY.

### *Discussion on the Nature, Origin, and General Principles of Treatment of Cancer.*

THE adjourned clinical debate of this society was held at the Jenner Institute of Preventive Medicine, Chelsea-gardens, S.W., on March 18th, Dr. C. A. MORRIS, C.V.O., the President, being in the chair.

Sir WILLIAM MITCHELL BANKS said that he would confine his remarks very definitely to certain points in the discussion on cancer. He spoke not from statistics but from an experience lasting over 35 years. He considered that statistics were very dangerous things to manipulate; they could be worked about in various ways, and he knew of no condition that more required a man to go into his upper chamber and say earnestly to himself that he must act honestly than when he was making a statistical table. There was a good deal of impressionism which imbued a man's mind after he had seen many things and his remarks that night would be more a case of impressionism than statistics. It was two years since he had given in the Lettsomian Lectures a general review of their existing state of their knowledge of cancer. Had anything been learned since then? He was sorry to say that nothing of any moment had occurred to increase their knowledge of the subject, referring especially to cancer of the breast. They were, in fact, pretty much where they were two years ago except possibly in regard to the employment of electricity, and the question was whether that was likely to act in a curative manner or not. In regard to the increase of cancer it was now universally admitted that in all civilised peoples there had been a notable increase in the amount of cancerous disease. The last defence of the opposite view was probably made by Dr. Arthur Newsholme in 1899 who argued that the so-called increase in cancer was more apparent than real and was due to better diagnostic skill producing more accuracy in death certificates and to the greater frequency and accuracy of necropsies in hospitals. However, the great mass of statistics accumulated by almost every civilised nation had been too much for Dr. Newsholme's views, which, in his opinion, were untenable. Sir William Banks said that his experience of 35 years pointed distinctly to the fact that cancer was beginning to attack younger people. He was absolutely certain that cancer now made its appearance at a much earlier period of life than it formerly did. Statistics showed that while there was a notable increase of cancer in both sexes, in the case of the male sex the increase had been greater than in the case of the female. Another point which had to be considered was, could anything be positively put forward as a great, broad, and general reason for the cause of cancer? There was, of course, the relation of cancer to geographical situation—namely, that it was most prevalent in the neighbourhood of rivers that periodically overflowed and low, damp situations, especially those with a clay soil. The parts that showed the least amount of cancer were high situations, especially those with a chalk formation. The difficulty was that no one professed to know how all this came about. He himself had only been able to recognise one cause as standing out prominently from among the many that had been suggested, and that was the great increase in the amount of food, and notably of meat, which was now consumed by civilised people. The increase in cancerous disease probably did not date further back than about 40 years ago. In the medical periodicals of 1850 they would not find anyone writing about the increase in the amount of cancer; it was only during the last generation that that point had come up. They had therefore to inquire what might be the notable changes in the life of civilised men that were likely to produce this increase in cancer. It was not drunkenness, because a most common form of cancer was that which affected the female breast, and he had seen nothing in the many patients who had been under him to indicate that drunkenness was connected with it. Syphilis could not be the cause, because among all the women whom he had seen with cancer of the breast he could hardly remember one whose character was bad. It could not be bad water, bad housing, or bad sanitation, because there was hardly any great city which did not now possess an abundant supply of good water and where sanitary affairs were not properly supervised. They had, therefore, to seek for some great change in the lives of civilised people which could not be a matter of doubt, and which must have some notable effect on their physical well-being. In his opinion that change was the great increase in the amount of animal food consumed at the present time. The wretched half-starved patient was not the most prone to cancer; its most numerous victims were well-nourished persons with plenty of fat and often with the colour of health in their cheeks. It was Mr. Moore of the Middlesex Hospital who had said that cancer was eminently a disease of persons whose previous life had been healthy and whose nutritive vigour gave them otherwise a prospect of long life. During the last 20 years the importation of animal food from foreign countries had been enormous. The class of persons who ate meat once a week 50 years ago no longer existed; vast numbers of persons eat meat daily and the well-to-do classes eat it three times a day. It appeared to him, therefore, that the increase in the eating of meat had something to do with the causation of cancer. Referring to Dr. J. F. W. Tatham's statistics in THE LANCET of March 15th, p. 745, he said that it was the male who was now beginning to suffer more from the disease than the female in proportion to what used to be the case, and it was to be noted that it was the male who ate the heavy food in ever-increasing quantity, while the female remained much as before in regard to her eating. Opinions varied as to whether there was or was not a cancer parasite. The parasite was said to be a degeneration, but in his opinion that was not so. He thought that there was a special body in cancer very easily recognisable when they were able to appreciate it which, at all events, accompanied cancer. Mr. H. G. Plimmer went all the way from London to Liverpool to defend the parasitic theory and Mr. H. J. Stiles arrived from Edinburgh to denounce it as a degeneration of the nuclei of the epithelial cells. He did not consider that Mr. Stiles had proved his case. It had to be remembered that the growing part of a carcinoma was its circumference, and the centre was hard—that is to say, it was the point where fibrous degeneration was going on. In the active part alone the parasites were found, and that seemed to him opposed to the theory of degeneration. Further, in the staining of these cancer parasites the reagents that affected them did not affect the nuclei of epithelial cells. Those were two very strong from suffocation had occurred due to sudden œdema of the larynx.

Dr. H. LAMBERT LACK showed a case of rapidly recurring Papilloma of the Larynx. When first seen the patient had a growth in the right vocal cord which was removed. This was followed by considerable congestion and thickening of both vocal cords which had gradually cleared up. At the present time there was recurrence of the papilloma on the right cord and also two distinct growths on the other cord.

Dr. J. DUNDAS GRANT showed a case of Traumatic Tracheal Stenosis in a girl, aged 22 years, dating from an accident at the age of three years. During the last six months she had been troubled by some dyspnœa.

Dr. G. C. CATHCART showed a case of Rhinorrhœa in a girl, aged nine years, which had existed since the age of two years. Adenoids had been removed and various intracranial operations had been performed and both locally and internally a great variety of drugs had been tried.—Dr. DE HAVILLAND HALL recommended a mustard foot-bath and the administration of atropine and morphia at the commencement of an attack.—The treatment of such cases was further discussed.

Mr. R. LAKE showed a case of Atrophic Rhinitis in which melted paraffin had been injected into the inferior turbinated body with good results. The patient had been under treatment for many years and was so far improved that crust-formation had ceased, but she complained that she could not blow her nose. Mr. Lake had therefore endeavoured to contract the passages by enlarging the inferior turbinate by means of submucous injections of paraffin. These had proved most successful as far as the patient's comfort was concerned.

Dr. H. TILLEY showed a case of Papillomatous Growth on the Posterior Edge of the Vomer. The growth was dead-white in colour, contrasting very strongly with the normal redness of the surrounding structures. He regarded it as a harmless curiosity.

Dr. TILLEY also showed a case of Syphilitic Disease of the Larynx simulating malignant disease. The right vocal cord was motionless on phonation and there was considerable uniform swelling of its posterior half. There was also some ulceration below the cords.

## SOCIETY OF MEDICAL OFFICERS OF HEALTH

### *Scarlet Fever.*

A MEETING of this society was held on March 3rd, Mr. A. WYNTER BLYTH, the President, being in the chair.

Dr. JAMES R. KAYE, medical officer of health of the West Riding, read a paper entitled, "Scarlet Fever: How Far do Statistics Prove or Disprove the Utility of Hospital Isolation?" The paper was for the most part a critical examination of the statistics put forward by Dr. C. K. Millard, medical officer of health of Leicester, last year with the view of showing the failure of hospitals to reduce the prevalence or the mortality of scarlet fever. In one of his tables Dr. Millard had given the attack-rate, case mortality, and death-rate in three large towns isolating 64 per cent. of the cases, and in six smaller isolating 28 per cent. only during the year 1882-99, which showed no appreciable advantage from the better isolation; but Dr. Kaye maintained that though the populations of the groups might be equal the errors arising from disturbing factors, as epidemic cycles, social conditions, &c., would be more marked in the smaller number of communities. If the eighteen-year period were divided into two of nine years each the advantage appeared on the side of the first group in the former, but of the second in the latter period; this division, however, was not fair as regards the period 1891-99 which included two maxima and one minimum of prevalence in the first group of towns, but one maximum and two minima in the second. Each increased its percentage of isolation from 57 and 16 in the former period to 71 and 39 in the latter, and each reaped great advantages, but if the results in the first group were less marked it must be noted that 32 per cent. of the population lived in small tenements of one or two rooms, as against 17 in the second, and in order to equalise the population of each group some towns (as Derby and Halifax) had been included in the latter, though isolating a larger proportion of cases than any of those in the former. Dr. Kaye took 93 towns with an aggregate population of over 10,000,000, which he divided into four groups, A to D, isolating respectively under 20 per cent. from 20 to 50, from 50 to 80, and over 80 per cent. During the years 1891-99 Groups A and D were probably the most uniform in their practice, for otherwise they would have fallen with others that for lack of accommodation or other reasons had carried out isolation to a different extent at different times. The good results obtained by Group D were evident, and if A appeared to have a lower general and case mortality than B and C it was probably due to the milder character of the disease, since municipal activity was generally the result of the severity of the visitations. Dr. Millard in his Table VI. had grouped nine towns isolating over, and nine under, 40 per cent. of their cases, and four with practically no isolation, the second group showing the best results during the period 1890-99. But the table was most fallacious, for he had selected 23 towns only when statistics were available for 93, the population of Group I was double that of Group II., and most of the latter isolated over 40 per cent and should therefore have been included in Group I. One in each of the three groups notified for some time first cases only; Croydon had had isolation since 1895 only, and the social conditions of several were widely different, one only of Group I. in his Table VIII. isolated over 50 per cent, and they therefore could not be fairly described as "good isolators," and there were great irregularities in the practice of different towns. The cases of Warrington among those with, and of Preston of those without, isolation were not comparable, for Warrington was in the centre of a thickly populated district, while Preston stood alone in a healthy open country, while its population having been over-estimated had been increasing slowly and therefore had a smaller proportion of individuals of susceptible ages. The hospital at Warrington was so inadequate that, though overcrowded, many cases had to wait a week or a fortnight for admission and were nevertheless described by Dr. Millard as isolated. Yet Warrington, recognising the advantages of isolation, was about to increase the accommodation while the medical officer of health of Preston complained of being handicapped by the want of a hospital which the authorities had decided on providing, and not without good grounds, for while in 1900 the attack rate, case mortality, and death-rate from scarlet fever had been 4·4 per mille, 6·4 per cent., and 0·284 per mille respectively, they had been 15·4, 4·9, and 0·761 in 1901. In support of his contention as to the better social conditions of the population of Preston he pointed out that while the number of persons to the acre was practically the same, the proportion of dwellings of one or two rooms was but 32 per 1000, as against 88 in Warrington, occupied by 19 and 58 per 100, of the respective populations, while the schools were overcrowded at Warrington, there being but 107 seats for 100 scholars, as against 150 for 100 at Preston, and the proportion of children under 10 years, the susceptible material for scarlet fever, was greater at Warrington—viz., 270 per 1000 of the total population, against 239 at Preston. But though he maintained that the principle of isolation was right the practice and machinery employed were in most places open to great improvement, and the methods of disinfection, &c., should be conscientiously recorded if any sound conclusions were to be drawn as to the degrees of success attained.

Dr. H. MALET (medical officer of health of Wolverhampton) complimented Dr. Kaye on his demonstration of the worthlessness of current statistics of scarlet fever and urged investigation on the methods adopted in the cases of the epidemics of small-pox at Sheffield and Gloucester—i.e., taking account of the conditions of each town and of each house and family involved instead of generalising from the varying prevalence of the disease in the whole country. In Wolverhampton he had for eight years noted the number of susceptible children in every house in which a case was notified. Those from which patients were removed were naturally for the most part the more crowded and therefore unfavourable. Omitting all in which there were no other susceptible individuals he found that in 1753 houses from which first cases were removed 4064 susceptible children were left, while in 228 houses where the patients were treated at home there were 463 such. Of the former only 4·8, but of the latter 28·2 per cent., subsequently contracted the disease, or 95·2 of the former and only 71·8 of the latter escaped infection. Many of both classes were reported simultaneously, but 2·2 per cent. only occurred after the removal of the first cases and 19·2 after non-removal of these first notified. The results of non-removal would be still less favourable could one it had only surprised him how successive governments in this country had not afforded full pecuniary and other facilities for the study of one of Nature's secrets, which would never be given up to mere theorisers or superficial observers. The remarks he was making were to him full of difficulty, because he felt the futility, to use no stronger word, of advancing theories for parasitic bodies, or peculiar fluids, or influences of one cell upon another, which would be easy enough to concoct, but impossible to prove or to sustain. He was confident that pathologists needed a stricter classification of the varieties of carcinoma, and he doubted whether the explanation of the origin of a slowly-growing epithelioma upon the face of an old man was the same as that of a quickly-growing spheroidal cancer in the mamma of a woman. There were reasonable grounds for doubt that the explanation of the causes of that pathological puzzle melanosis were the same as, for instance, a sarcoma growing from the fascia or skin. Regarding the cancerous growths of the skin he was able to assert that their microscopical characters were so peculiar and complex that many years of patient investigation would be needful before even a sensible nomenclature could be arranged. This was especially the case with the varieties of sarcoma. It might be remembered that he published in THE LANCET[1] some years ago a case of a gentleman whose face had been exposed to the rays of a tropical sun and who suffered from multiple ulcerating tumours on his red and freckled skin. Dr. J. Galloway made an elaborate investigation of these and termed them "epithelioma," but he was bound to say that the structure was exceedingly peculiar, and it was most difficult to classify those remarkable growths properly. Then what were they to say of those remarkable instances of spontaneous disappearance of, according to their now limited vision, evident malignant tumours within the abdominal cavities? Some years ago he saw with the late Dr. J. Cavafy a young woman who had ascites and dysphagia—an unusual combination in the young; an exploratory operation was done, and a fine nodulated tumour was found round the œsophageal opening of the stomach. This viscus was bound down and contracted so that it could not be pulled forward to the abdominal wall, and the portal vein was obviously compressed by the growth, which passed across the front of the spine. The ascitic fluid was evacuated and the patient was for some weeks much relieved. She slowly sank and died as expected At the necropsy no sign of ulceration or lesion was found in the stomach and the growth was so bossy and nodulated that it seemed hardly worth examining it. Yet when this was done the growth was not cancer at all. It was well-formed fibrous tissue such as would be seen in a primary scar. He had no doubt had it not been for its mechanical situation that it might easily have disappeared. He had two cases now living of gastro jejunostomy, one over two years, another nearly five years, after the operation. The condition of the stomach at the pylorus was as typical of cancer as it could be, but instead of wasting and dying both those individuals were well and ruddy and no traces of tumours were to be felt. Yet another instance: he had recently operated upon a man for a huge soft "sarcomatous" tumour, apparently springing from the suprarenal or kidney, which filled the abdomen and was so incorporated with intestine as to be hopeless for removal. No one doubted that his end was near He was now walking about in excellent health and no trace of the tumour was to be felt. Those instances, which might be multiplied, showed them, he thought, that a class of growths existed the causation of which must be very distinct from the malignant tumours which they exactly simulated. With regard to cancer of the breast, in which he was particularly interested, one remarkable fact had often struck him, and it was this: why should the mamma have such a monopoly in frequency of spheroidal carcinoma and other glands very similarly constituted escape? Take the parotid and submaxillary salivary glands. Their cellular structure and minute composition were very similar to those of the milk gland. They both had ducts leading to a surface How rare was primary cancer of either of those great glands If cancer were due to a parasite what more inviting situation could be found for its development? The frequency of cancer of the breast at the time when the formative cells ceased their proper function was very suggestive of an error of growth; it was equally suggestive of a parasite seizing upon degenerating tissues and causing their riotous proliferation and ultimate decay. Nothing was of greater importance in their knowledge of morbid growths than the fact that the cells of the secondary growths exactly simulated the cells of the structure in which the primary growth originated. Thus, cancer of the liver secondary to cancer of the intestine showed columnar epithelium, cancer of the axillary glands secondary to "duct cancer" of the mamma showed columnar epithelium, and cancer of the thyroid gland, the deposits, which were distributed secondarily in the bones, so exactly simulated thyroid gland structure that it was difficult to distinguish between them. How strongly did that suggest that the infective element was cellular, not parasitic—or if indeed parasitic, that the parasitic element must be intracellular rather than extraneous. But he thought every impartial mind would allow that there was the closest possible relation between natural formative activity in cells and the growth of a malignant tumour, especially a rapidly-growing sarcoma of bone or fascia. Take the case of a crustacean where a limb had been shed. The formative activity of cells here was far in excess of what they observed in sarcoma, yet they were marshalled in orderly array, and a more or less perfect limb resulted. Let them reflect on the extraordinary cell-development that occurred in the formation of the fœtus. What was the mystery which induced the contact of two microscopical cells and from their contact masses of cells arose and developed into a mass which would exceed any sarcoma? Were not the cells arranged in layers and laminæ and complicated folds, resulting in the elaboration of a complete organism? They were completely ignorant of the laws which governed cell proliferation—for laws undoubtedly there were—and it seemed to him that a more complete knowledge of normal cell development was useful before they could explain abnormal deviations. With regard to their knowledge of the remedial measures for carcinoma, operation free and extensive was doubtless the best at their command—and the best was often bad. He had long ago pointed out in regard to cancer of the breast that everything supported the fact that in certain individuals there was a something inimical to the growth of cancer which prevented or retarded return. It was that fact more than the operation which was responsible for those few but remarkable cases, in the knowledge of every surgeon of experience, where long years had elapsed since operation and still the individual remained well. He could hardly dwell too strongly upon the importance of collection and observation of such cases as those so as to make clinical work and pathological investigation go hand in hand. He feared that the remarks which he had made were rather of a discouraging nature, but really it seemed to him that their energies for many years should be towards investigation rather than discussion. The acknowledgment of ignorance was the first step towards improvement. But he believed and held very strongly that the secret of tumour formation was largely bound up in that mysterious "something" which governed cell development and proliferation, that a study of the origin of the innocent tumours might be of the utmost importance, and that experiments in that direction could only be made by experts working under the best of circumstances, with well-equipped laboratories and proper and adequate financial reward and assistance. The time was happily passing away when their profession was contented to think that subjects of the first material importance could be dealt with by private enterprise, and he only trusted that that discussion might do something towards the furtherance of a *proper investigation* of one of the most mysterious of diseases by proper persons, men who combined scientific observation with accuracy and estimated the value of their own discoveries, and who at all events would not give to the public any flimsy and superficial statements regarding curative measures for this terrible class of diseases until their truth and efficacy had been proved beyond doubt. He repeated his belief that the mysteries of tumour growth were bound up in the mysteries of cell proliferation as illustrated on the contact of the sperm cell with the ovarian cell, and whoever solved a problem like that would throw light on many subjects otherwise doomed to perpetual darkness.

Dr. A BARRY BLACKER, in giving a demonstration of the apparatus used in the present position of x rays and ultra-violet rays in the treatment of cancer, said that the success which had attended the employment of physical arguments against the idea of degeneration but it was a question which was still under consideration. Where the parasites came from, what they were, whether they preceded cancer or followed it were questions that had not yet been answered. Were they blastomycetes, did they belong to the class of yeasts, or to what might be called the animal variety? They were not sure of that. There was a considerable belief that they belonged to the class of the yeasts but he thought that many were now turning round to the idea that the cancer parasite was a form of protozoon. That, however, had not been determined. In regard to the question whether cancer was an infectious disease his view was that if cancer was infectious its infective powers were of the very lowest type. He saw to his great surprise that a great body of German authorities had given it as their opinion that cancer was an infectious disease but he could see no distinct proof of it. If it was such an infective disease some proof should be advanced. It was no argument to say that if you rubbed one cancerous surface against a surface which was uninfected that the growth which would ensue proved the infectivity of cancer, because all that was produced was an epithelioma from constant irritation. If they irritated a mucous membrane for any given length of time an epithelioma could be produced. That sort of argument, in his opinion was extremely ridiculous. It had also been said that there were cases of surgeons becoming infected with cancer but he had never heard of anything of the sort. Surgeons could certainly become infected with syphilis, but he would be interested to hear of a case of a surgeon becoming infected in a similar manner by cancer. He sincerely hoped that more caution would be observed in the pronouncements that pathologists and others might make in the future than had been observed hitherto. Quite recently one gentleman had brought forward some views from which the most important results were expected but the wonderful bodies which he had discovered turned out to be nothing more than cells from the corks of his bottles.

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[1] THE LANCET, Jan. 7th, 1899, p. 22.

Mr. A. PEARCE GOULD said that at the present time there were two great methods of treatment of cancer or so called treatment the operative and the non operative. In surgical interference the wider and more extensive the operation the greater was the chance of success. But he thought they all met with cases which caused them to make that statement with less confidence. They were however, all agreed that in the main the assertion had much truth in it. Amputation, however, was not curing cancer. It might free a man from his malady to excise an area—it might be a very extensive area—of tissue round a cancer and the malignant process might be stayed, but what ground was there for hoping that operations would ever accomplish all that they wished? By the cure of cancer he meant something quite other than the removal of parts which were affected or might become affected followed by no return of the disease. In saying that he was not in any way calling in question the value of their present surgical methods of treatment of cancer although they left very much to be desired. It had been stated he believed by Mr. H. T. Butlin that if every cancer could be properly operated on when it was of the size of a buckshot or a pea that their results would be different. He thought that that was quite correct, but he feared that that time would never arrive. Nothing was more striking than the complete absence of symptoms in the earlier stages of cancerous disease. Of course in the lip it was seen from the first but if they took the more hidden parts of the body such as the rectum or the uterus it was the experience of all surgeons that the disease had often advanced to a considerable extent before the most careful watchful and intelligent patient had been able to take any notice of it. While they rejoiced at practising surgery at the earliest possible moment in the history of a cancer yet they could not but feel that the time would not arrive when they would see their cancer patients in the very early stages of the disease. In regard to the curability of cancer he asked if there was any ground for thinking that cancer would prove to be curable. They saw such a long and almost constant procession of sufferers from malignant disease going more or less rapidly from bad to worse until death came not only as a welcome but also as a belated guest that he was afraid that there was a tendency to feel that cancer was an incurable disease. He was however quite sure that that was not the case. The cure of any disease was only brought about by the action of physiological processes. All their vaunted remedies only produced their beneficial results by influencing in some way or other the ordinary physiological processes of the body. They were quite unable to introduce any new force into the body and they could only work upon the inherent powers of nature and through those powers. The only hope for the cure of any disease was by observation of the methods in which nature herself dealt with that disease. He therefore thought that it was most important to recognise the fact that cancer sometimes did undergo a spontaneous cure and that the physiological forces of the human body were sometimes sufficient to accomplish the perfect cure of cancer. He would give them instances of the spontaneous repair that did take place in cancer. In the case of a woman with very extensive cancerous disease that had destroyed the left breast with large glands in the axilla and above the clavicle, and with that horribly distressing œdema that occurred in these cases, large areas of epithelial tissue were observed to be healing over the cancerous ulcers. In another patient where no operation had been performed, the whole breast had been destroyed by malignant disease and she was admitted to the hospital with an ulcer of the size of the palm of the hand. There were numerous nodules about the breast in both axillæ and there was also cancer in one lung. She eventually died, but a month before that occurred a blue line was seen round the large ulcer on the chest which spread and entirely healed over the ulcer. Before the patient died it was found on examination that the epithelium of that cicatrix was exactly similar to the epithelium of the surrounding skin. The disappearance of malignant nodules was not uncommonly observed, but he would mention particularly two cases in which quite extensive malignant growths had disappeared. In one the patient was a woman with cancer in the right breast and recurrence in the axilla of the same side and on the side of the neck. The growth was also present in the opposite breast and in the opposite axilla and there were signs of extensive malignant disease in the right lung and spontaneous fracture occurred of the neck of her right femur. She received no special treatment because she was expected to die but she began to mend, the deposits all disappeared the disease vanished, and she had remained well since. That could be regarded as a case in which the ordinary physiological forces of the body had dealt satisfactorily with most extensive malignant disease. The second case was that of a man who was operated on for carcinoma of the left maxilla. A fungating growth recurred in the site of operation and the patient was told that nothing more could be done but he got better and seven months after the recurrence had been noted he was absolutely well without the smallest trace of any malignant disease. In those cases the diagnosis had been confirmed by careful microscopic examination. In order not to be misunderstood he wished to make it clear that in cancer there should be early, wide and efficient removal, but they must not think that that was to be the last word in the treatment of cancer. Some day there would be a better word spoken than that and he sincerely hoped that that day would soon arrive.

Mr. A. MARMADUKE SHEILD said that he was not particularly anxious to speak that evening because personally he had long felt that the medical profession with regard to the causation of tumour growth generally, had been guilty of a great deal of talk a vast amount of theorising and very little real knowledge upon which to act. It had long been his belief that the directions of their study should be towards the causation of the simpler forms of tumour as a preliminary towards the understanding of the more complex varieties. There was scarcely one of them in that room who, if he surveyed his skin, would not see one or more warts and moles upon it. They knew no more of the causation of those simple growths than they did of cancer. Who could tell them why one man's body should be covered with fatty tumours and not that of another? Who could explain the cause of a cancellous exostosis or of a nævoid growth on the cheek of an infant? He had often thought that the diseases of plants especially of trees were well worthy of study in the direction of tumour growth. The excessive formation of cellular tissue around the parasite of the oak gall the enormous excrescences around the trunks of birch trees were of the highest suggestive importance for scientists and laboratory experts. He felt confident that they needed a correlation between accurate clinical observation and pathological and microscopical investigations. The subject was of such immense importance to the whole of mankind that although premature.—Dr. R Milne Murray, the President, and others made remarks on the paper and Dr. Ballantyne replied.

Dr. H. Oliphant Nicholson read Further Notes on the Use of Thyroid Extract in Puerperal Eclampsia and the Pre-eclamptic State. In a previous paper he gave reasons to show how the principal symptoms of the eclamptic state would be explained in terms of thyroid inadequacy. Special stress was laid on the fact that the arrest of the secretion of urine, by allowing the absorption of toxins, led up to convulsions A deficiency of iodothyrin towards the end of pregnancy might result in anuria, and the degree of toxæmia would depend, directly or indirectly, upon the quantity and activity of the thyroid secretion. Thyroid extract was therefore indicated in the pre-eclamptic state and also after the onset of convulsions. In the latter case a large dose of morphia hypodermically was a valuable adjunct to the treatment, as by inhibiting metabolism it stopped the formation of poisons and gave the thyroid gland time to recover itself. Morphia in doses of from half to one grain also completely removed arterial spasm. Details of the administration of thyroid extract in four recent cases were then given. The first case was a primipara who in the eighth month of pregnancy suffered from severe headache, insomnia, scanty urine, and uniform swelling of the hands, face, and body. Two fits occurred and were treated with morphia; after the stupor passed off 10 grains of thyroid extract were given and five grains repeated every four hours. The urine was solid on boiling Premature labour set in and a stillborn child was born about 40 hours afterwards. The patient recovered rapidly. The second patient had suffered from eclampsia in three previous pregnancies; the last had been treated with thyroid extract and she had been told to place herself under treatment early in any subsequent pregnancy. In her fourth pregnancy she began taking the thyroid extract on her own initiative at the third month. She had felt altogether different in this pregnancy, had had no sickness, no swelling of the face or body, and no giddiness, blindness, or headache. The urine was secreted in normal quantity and did not contain any albumin. Her labour was not yet due. Thyroid treatment in the third and fourth cases also gave good results. Dr. Nicholson reasoned from the experience noted that it was wise to push the thyroid extract till some symptoms of thyroidism were induced. He did not think that the relaxation of the renal vessels with consequent diuresis could account for the removal of all the other symptoms and believed that the thyroid extract acted somewhat as a specific in favouring metabolism in some unknown way.—Dr. Haultain, Dr. Murray, Dr. S. McVie, and others discussed the paper.

## ROYAL ACADEMY OF MEDICINE IN IRELAND.

### Section of Surgery.

*Swallowing of Metallic Denture.—Hypertrophy of the Prostate.—Suprapubic Prostatectomy.*

A meeting of this section was held on Feb. 28th, Mr. T. Myles, the President, being in the chair.

Mr. G. Jameson Johnston read a paper on a case of Swallowing of a Metallic Denture successfully treated by the internal administration of cotton-wool. The patient, a man, aged 20 years, whilst swimming in the open sea was struck in the face by a wave He immediately felt a choking sensation, was unable to swim on his breast, and made his way to the shore by swimming on his back. Some of those on the shore slapped him on the back to displace the false teeth that he told them were choking him; the first slapping on the back produced dyspnœa. He became black in the face; a further slapping on the back got rid of the dyspnœa, though it caused him much pain. On admission to hospital a probang was passed and the patient experienced so much relief that it was felt that the denture had passed into the stomach. Soon afterwards pains in the pyloric end of the stomach were complained of and they continued for some days. Mr. Johnston then decided on treating him with sandwiches containing a thin layer of cotton-wool in each. A week after admission he was given one and a half drachms of compound liquorice powder which acted as an aperient and got rid of the denture which was found rolled in cotton-wool in his fæces.—Mr. J. Lentaigne confessed that he would not like to take cotton-wool under any circumstances, as he thought that it would not be without risk of producing obstruction. The case illustrated the well-known danger of small dentures. All the accidents resulting from artificial teeth getting into the pharynx were due to small dentures, which he thought should be prohibited, for a large plate could be made for any case calling for artificial teeth.

Mr. R. H. Tobin read a paper on the treatment of Senile Hypertrophy of the Prostate. He traced the interdependence of the prostate gland and the testis and their correlation. In the choice of radical methods he pointed out the value of the presence or absence of sexual desires as an indication. If these were present the case was probably one of true hypertrophy, to be treated by vasectomy or castration; if they were absent tumours causing pressure atrophy of the prostate probably constituted the enlargement and enucleation would effect a cure The failure of vasectomy in certain cases he considered to be due to the non-inclusion in the resection of the filaments of the hypogastric plexus that accompanied the artery of the vas deferens, these being the most direct sympathetic link between the testicle and prostate. Of the radical methods he advocated complete enucleation of the gland as practised by Mr. P. J. Freyer.

Mr. E. H. Taylor read a paper on Suprapubic Prostatectomy. He pointed out that the aim of suprapubic prostatectomy should be: (1) to remove *en masse* and by a process of enucleation those portions of the enlarged lateral lobes which lay beside the urethra and exerted a compressing influence upon it; and (2) to remove the enlarged middle lobe in the same manner, seeing that its action in a large percentage of cases was to obstruct the bladder outlet. He said that suprapubic prostatectomy as practised at the present day remained in its essential details the operation of McGill and of the Leeds school, it aimed at enucleation of encapsuled growths and met all the requirements of the case. He went on to state that a remarkable paper appeared in the *British Medical Journal* some months ago and another quite recently under the authorship of Mr. Freyer of London, in which he related certain cases of *total removal of the prostate and its capsule.* Mr. Taylor, however, had no hesitation in saying that Mr. Freyer was labouring under a misapprehension. Were total extirpation carried out what would it mean? It would of necessity involve the removal of the prostatic urethra, to which there adhered in these cases a varying amount of prostatic tissue and which remained connected with the common ejaculatory ducts. These were displaced downwards and backwards with their surrounding tissue and constituted important supports of the prostatic urethra after the adenomatous masses had been enucleated. Total extirpation would also imply the detachment from its surroundings of the interfibrous investment of the prostate as well as of the thinned cortex. Now this would be not only a totally unwarranted procedure, but in the highest degree dangerous, as it would inevitably mean the laceration of the veins of the prostatic venous plexus which lay in close contact with the interfibrous layer which Mr. Freyer alluded to as the prostatic capsule. This fibrous layer was very tough, whereas the encapsuled masses were of a much softer and more friable consistency. The result was that when the finger was introduced through the incision in the floor of the bladder it found its way, following the direction of least resistance, between the tough investment of the prostate or greatly thinned cortical layer and the encapsuled mass, and this was the true explanation of the ready manner by which the enucleation of enormous tumours might be carried out. Mr. Freyer, however, had, no doubt, extended the scope of McGill's operation and in this respect had succeeded in making a decided advance in this department of surgery.—The President congratulated the section on the interesting papers which had been read — Mr. Henry Gray Croly thought that German anatomists had really added nothing to Alcock's description of the anatomy of the gland.

North London Medical and Chirurgical Society.—A meeting of this society was held on March 13th, Dr. E. Clifford Beale, the President, being in the chair.—Dr. A. Whitfield showed: 1. A case of Figurate Seborrhœic Eczema in a woman. In demonstrating this case Dr. Whitfield said that it was, of course, a common disease, but that the patient before them exhibited a particularly good example of the eruption. The history was that the eruption had spread from the neck downwards during the methods in the treatment of various skin diseases had been followed by the employment of the same or similar methods in the treatment of cancer, more especially of those varieties which were situated in the more superficial positions These methods might be divided into three classes 1 The light treatment associated with the name of Professor Finsen, and introduced by him; (2) the electric brush discharge from any high tension electrical machine, and (3) the x rays The physical data on which Professor Finsen's process was founded were that the light from the sun and from an arc lamp was rich in the most refrangible rays—i e, the blue, violet, and ultra-violet, and that these were destructive to many forms of bacteria, and that the ultra violet rays had but little penetrative power—for most substances the penetrative power increased with the wave lengths, extremely short waves had scarcely any penetrating power at all As far as it was at present possible to determine it would seem as if the electrical brush discharge method of treatment presented much the same features as Finsen's It differed, however, in the source from which the rays were derived An electrical brush discharge was a powerful source of invisible ultra violet and visible violet and blue rays with a small admixture only of heat rays, for the chemical rays given off acted like light on a photographic film, they were concentrated by a lens, and were reflected and concentrated by a concave mirror They converted oxygen into ozone and they set up fluorescence in barium platino cyanide and other salts Moreover, they produced a reaction on the skin resembling that produced by the sun or an arc, which differed from the reaction produced by x rays in being produced quickly and healing quickly instead of appearing slowly and healing slowly The employment of the brush discharge had advantages owing to the absence of heat rays and the presence of violet rays without the admixture of all wave lengths, but it was complicated by the ozone given off and by the products of electrolysis which must be generated to some small extent in the skin from the decomposition of sodium chloride, &c The physical data on which the treatment by means of x rays was founded differed essentially from the foregoing methods With all of them it was possible to destroy bacteria, but under the x rays many of them flourished The same complications of ozone and electrolytic products besides the brush discharge from the tube were present as in the electric treatment but the great penetrative power of the x rays marked a wide distinction between them and the violet At first sight it did not seem probable that those which passed through the body could be capable of producing effect and it would seem more possible that effects might be produced by some of the rays which were absorbed The well known action on the skin produced by the x rays and variously described showed that alterations and destruction of cells might be produced and the difference in the onset and in the result from that obtained from the violet rays demonstrated that a difference existed in their actions It would appear therefore, that there were various rays which might be utilised in the treatment of cancer, violet rays which penetrated the tissues only to a small extent and were bactericidal and produced some tissue change, the x rays which penetrated the whole of the body and produced tissue destruction but were not bactericidal, and mixed rays which could be produced by various methods, it did not seem unreasonable to suppose that rays might be isolated which might be found capable of destroying bacilli or acting upon various cells in different parts of the body

## EDINBURGH OBSTETRICAL SOCIETY

*Exhibition of Specimens —The Premature Infant —Thyroid Extract in Puerperal Eclampsia*

A MEETING of this society was held on March 12th Dr JAMES RITCHIE the President being in the chair

Specimens were shown by Professor A R SIMPSON Dr F W N HAULTAIN, Dr D BERRY HART, and Dr N T BREWIS.

Dr J W BALLANTYNE read a paper on the Problem of the Premature Infant The premature infant was born with the skin, skeleton, and organs of a seven months fœtus He was called upon to play the part of a full time infant with the personalia of a fœtus and was suddenly forced into surroundings of a kind which imposed upon him urgent calls to which he was little able to respond Some cases met these new requirements with wonderful adaptability, but many succumbed, being unable to maintain a physiological equilibrium in their unexpected environment Some survived but progressed into life with a baneful debility The premature infant differed from the immature fœtus in the possession of viability—that was, being capable of an independent existence outside the mother's uterus This period varied, as the state of the maternal health during the pregnancy had great effect upon the vitality of the infant The seven months' fœtus of a healthy mother might survive when the seven months' fœtus of a syphilitic parent might be absolutely non viable The period of viability depended, not only upon the number of months spent in the uterus, but also upon the character of the life of these months The date of probable viability had changed owing to the recent improvements in the management of the premature infant. The introduction of the incubator and the exclusion of sepsis had already pushed back the age of viability to an earlier period, and with further knowledge it might be possible in the future to rescue the lives of infants of earlier prematurity In considering the anatomy of the premature infant they found the weight of a seven months' fœtus varied from three to four and a half pounds and in length was about 16 inches The skin was delicate and transparent, but had lost the bright red colour of earlier fœtal life, there was little subcutaneous tissue so that the face had still a somewhat senile look, lanugo plentifully covered the extensor aspects of the limbs as well as the face and back, and some hair was present on the scalp The nails were thin and did not project beyond the finger tips In the eyes the traces of the pupillary membrane might still be seen In the skeleton nearly all the ossific nuclei which were found in the full time infant were present in the premature one, but they were smaller in size The ossific nucleus in the lower epiphysis of the femur was rarely to be seen, and there was none in the upper end of the tibia, the cuboid, or in the hyoid bone The grey and white matter of the brain could not yet be differentiated The foramen ovale of the heart was still patent and the kidneys were lobulated. The fœtus also had different surroundings, it lived in a hydrosphere instead of an atmosphere and at birth it was separated from the placenta, which was so essential an organ for its existence Dr. Ballantyne then gave an account of the physiology and pathology of the premature infant In the management of the premature infant they must endeavour to create an environment which would, in some points at least, resemble the intra uterine nidus The incubator was accordingly utilised the temperature being kept constantly above that of the infant's body, and in it the patient could be protected from light and injury The infant could not be surrounded by imitation liquor amnii, but a moist atmosphere could be obtained by hanging a wet sponge inside the incubator The incubator should also be kept as nearly aseptic as possible For food the best was mother's milk if obtainable, or if not pre-digested nutriment; and it had sometimes been found of advantage to pass it directly into the stomach through a tube or to drop it into the mouth with a dropper But the intra uterine nutriment of a fœtus contained more iron than there was in the mother's milk it appeared advisable, therefore, to give iron, and the best form seemed to be liquor ferri peptonatus giving it in five-minim doses thrice daily If the mother had no milk asses' milk might be obtainable, if not cow's milk carefully sterilised could be given every one and a half hours in not more than four teaspoonfuls at a time The amount of sugar should be limited As to the exact modification or dilution of the milk opinions varied, some gave the full strength The treatment of the premature condition also involved the awakening or strengthening of dormant or insufficient functions This applied to pulmonary respiration, some artificial assistance in the establishment and strengthening of respiration being very helpful Prevention of prematurity was the ideal management and much could be done in this direction in combating syphilis alcoholism, &c For the infant born prematurely as a result of obstetric interference would always require attention The problem of the premature infant was also enhanced by the steady fall in the birth-rate in the British Isles and colonies as well as in foreign countries In England and Wales in 1871 the birth rate was 34 7 per 1000, it had fallen to 29 3 in 1899, to 28 9 in 1900, and as low as 28 5 in 1901 It was evident therefore that there was a pressing need to conserve the lives of infants even although premature.—Dr. R MILNE MURRAY, the PRESIDENT, and others made remarks on the paper and Dr. BALLANTYNE replied.

Dr. H. OLIPHANT NICHOLSON read Further Notes on the Use of Thyroid Extract in Puerperal Eclampsia and the Pre-eclamptic State. In a previous paper he gave reasons to show how the principal symptoms of the eclamptic state would be explained in terms of thyroid inadequacy. Special stress was laid on the fact that the arrest of the secretion of urine, by allowing the absorption of toxins, led up to convulsions. A deficiency of iodothyrin towards the end of pregnancy might result in anuria, and the degree of toxæmia would depend, directly or indirectly, upon the quantity and activity of the thyroid secretion. Thyroid extract was therefore indicated in the pre-eclamptic state and also after the onset of convulsions. In the latter case a large dose of morphia hypodermically was a valuable adjunct to the treatment, as by inhibiting metabolism it stopped the formation of poisons and gave the thyroid gland time to recover itself. Morphia in doses of from half to one grain also completely removed arterial spasm. Details of the administration of thyroid extract in four recent cases were then given. The first case was a primipara who in the eighth month of pregnancy suffered from severe headache, insomnia, scanty urine, and uniform swelling of the hands, face, and body. Two fits occurred and were treated with morphia; after the stupor passed off 10 grains of thyroid extract were given and five grains repeated every four hours. The urine was solid on boiling. Premature labour set in and a stillborn child was born about 40 hours afterwards. The patient recovered rapidly. The second patient had suffered from eclampsia in three previous pregnancies; the last had been treated with thyroid extract and she had been told to place herself under treatment early in any subsequent pregnancy. In her fourth pregnancy she began taking the thyroid extract on her own initiative at the third month. She had felt altogether different in this pregnancy, had had no sickness, no swelling of the face or body, and no giddiness, blindness, or headache. The urine was secreted in normal quantity and did not contain any albumin Her labour was not yet due. Thyroid treatment in the third and fourth cases also gave good results. Dr. Nicholson reasoned from the experience noted that it was wise to push the thyroid extract till some symptoms of thyroidism were induced. He did not think that the relaxation of the renal vessels with consequent diuresis could account for the removal of all the other symptoms and believed that the thyroid extract acted somewhat as a specific in favouring metabolism in some unknown way.—Dr. HAULTAIN, Dr. MURRAY, Dr. S. MCVIE, and others discussed the paper.

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# ROYAL ACADEMY OF MEDICINE IN IRELAND.

## SECTION OF SURGERY.

### *Swallowing of Metallic Denture.—Hypertrophy of the Prostate.—Suprapubic Prostatectomy.*

A MEETING of this section was held on Feb. 28th, Mr. T. MYLES, the President, being in the chair.

Mr. G. JAMESON JOHNSTON read a paper on a case of Swallowing of a Metallic Denture successfully treated by the internal administration of cotton-wool. The patient, a man, aged 20 years, whilst swimming in the open sea was struck in the face by a wave He immediately felt a choking sensation, was unable to swim on his breast, and made his way to the shore by swimming on his back. Some of those on the shore slapped him on the back to displace the false teeth that he told them were choking him; the first slapping on the back produced dyspnœa. He became black in the face; a further slapping on the back got rid of the dyspnœa, though it caused him much pain. On admission to hospital a probang was passed and the patient experienced so much relief that it was felt that the denture had passed into the stomach. Soon afterwards pains in the pyloric end of the stomach were complained of and they continued for some days. Mr. Johnston then decided on treating him with sandwiches containing a thin layer of cotton-wool in each. A week after admission he was given one and a half drachms of compound liquorice powder which acted as an aperient and got rid of the denture which was found rolled in cotton-wool in his fæces —Mr. J. LENTAIGNE confessed that he would not like to take cotton-wool under any circumstances, as he thought that it would not be without risk of producing obstruction. The case illustrated the well-known danger of small dentures. All the accidents resulting from artificial teeth getting into the pharynx were due to small dentures, which he thought should be prohibited, for a large plate could be made for any case calling for artificial teeth.

Mr. R. H. TOBIN read a paper on the treatment of Senile Hypertrophy of the Prostate. He traced the interdependence of the prostate gland and the testis and their correlation. In the choice of radical methods he pointed out the value of the presence or absence of sexual desires as an indication. If these were present the case was probably one of true hypertrophy, to be treated by vasectomy or castration; if they were absent tumours causing pressure atrophy of the prostate probably constituted the enlargement and enucleation would effect a cure The failure of vasectomy in certain cases he considered to be due to the non-inclusion in the resection of the filaments of the hypogastric plexus that accompanied the artery of the vas deferens, these being th most direct sympathetic link between the testicle an prostate Of the radical methods he advocated complet enucleation of the gland as practised by Mr. P. J. Freyer.

Mr. E. H. TAYLOR read a paper on Suprapubic Prostatectomy. He pointed out that the aim of suprapubic prostatectomy should be: (1) to remove *en masse* and by a process of enucleation those portions of the enlarged lateral lobes which lay beside the urethra and exerted a compressing influence upon it; and (2) to remove the enlarged middle lobe in the same manner, seeing that its action in a large percentage of cases was to obstruct the bladder outlet. He said that suprapubic prostatectomy as practised at the present day remained in its essential details the operation of McGill and of the Leeds school, it aimed at enucleation of encapsuled growths and met all the requirements of the case. He went on to state that a remarkable paper appeared in the *British Medical Journal* some months ago and another quite recently under the authorship of Mr. Freyer of London, in which he related certain cases of *total removal of the prostate and its capsule*. Mr. Taylor, however, had no hesitation in saying that Mr. Freyer was labouring under a misapprehension. Were total extirpation carried out what would it mean? It would of necessity involve the removal of the prostatic urethra, to which there adhered in these cases a varying amount of prostatic tissue and which remained connected with the common ejaculatory ducts These were displaced downwards and backwards with thei surrounding tissue and constituted important supports of th prostatic urethra after the adenomatous masses had be enucleated. Total extirpation would also imply the detac ment from its surroundings of the interfibrous investment of the prostate as well as of the thinned cortex. Now this would be not only a totally unwarranted procedure, but in the highest degree dangerous, as it would inevitably mean the laceration of the veins of the prostatic venous plexus which lay in close contact with the interfibrous layer which Mr. Freyer alluded to as the prostatic capsule. This fibrous layer was very tough, whereas the encapsuled masses were of a much softer and more friable consistency. The result was that when the finger was introduced through the incision in the floor of the bladder it found its way, following the direction of least resistance, between the tough investment of the prostate or greatly thinned cortical layer and the encapsuled mass, and this was the true explanation of the ready manner by which the enucleation of enormous tumours might be carried out. Mr. Freyer, however, had, no doubt, extended the scope of McGill's operation and in this respect had succeeded in making a decided advance in this department of surgery.—The PRESIDENT congratulated the section on the interesting papers which had been read.—Mr. HENRY GRAY CROLY thought that German anatomists had really added nothing to Alcock's description of the anatomy of the gland.

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NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY.—A meeting of this society was held on March 13th, Dr. E. Clifford Beale, the President, being in the chair.—Dr. A. Whitfield showed: 1. A case of Figurate Seborrhœic Eczema in a woman. In demonstrating this case Dr. Whitfield said that it was, of course, a common disease, but that the patient before them exhibited a particularly good example of the eruption. The history was that the eruption had spread from the neck downwards during the last seven months. The scalp was extremely scurfy, but this had not been noticed and therefore the duration of the disease in this region was unknown. When shown the whole of the chest, the upper part of the back, the upper arms and the forearms, especially on their extensor surfaces, as well as the upper parts of the thighs, were covered with a red, scaly, and slightly scabbed eruption made up on close examination of congested and œdematous follicles. The shape of the patches varied, but all were either round, oval, or poly-cyclical, with very defined edges. Itching was extremely severe but otherwise the health was good. In the axillæ were some small boils probably from secondary infection. 2. A case of very papular Rosacea where the diffuse congestion was almost entirely absent and pustulation was quite unnoticeable. The patient was a woman, aged 36 years, and she had had it on and off for years. There was a fair amount of evidence of dyspepsia, though not of sufficiently painful a type for the patient to volunteer any information about it.—Dr. Whitfield also demonstrated (for Dr. W. A. Milligan) a case of Paget's Disease of the Nipple in a woman, aged 51 years. There had been a discharge from the left nipple on and off since the menopause, which occurred at 45 years of age. 12 months previous to exhibition this discharge became offensive and induced her to consult a medical man. By careful dressing the scabs were removed and the discharge ceased to be offensive, though the nipple became ulcerated and the place never healed, but continued to increase in size. When shown there was an area of about the size of a five-shilling-piece over which the skin was dusky-red and infiltrated but not ulcerated. In this area there were white patches of almost normal-looking skin and this apparent improvement had taken place while the patient had been taking iodide of potassium. The nipple was not destroyed but was considerably smaller and harder than was that on the other side, while at its base there was a small hard mass to be felt which suggested a tumour rather than mastitis. There were also two large and very hard glands in the axilla. Dr. Milligan had sent the patient into the hospital for operation under the care of Mr. G. B. Mower White. Mr. White said that he proposed, in view of the presence of the glands, to remove the breast and to clear the axilla.—Mr. H. S Elworthy showed a woman, aged 24 years, who had suffered from rumbling noises in the stomach since she was 17 years old. Her previous history showed nothing remarkable, with the exception of an attack of typhoid fever. If the patient stood up slight pressure of the left lower ribs caused a loud rumbling and gurgling noise apparently in the stomach. This was often accompanied by the regurgitation of gas up the œsophagus, and occasionally came on without any pressure. The stomach apparently hung much lower than normal, but did not reach up high under the costal margin, suggesting that a slight degree of gastroptosis was present. Mr Elworthy considered that it was probably a gastric neurosis, but discussed the possibility of diaphragmatic hernia and dilated large intestine.—The cases were discussed by the President, Dr. J. G. Glover, Dr. A. W. Wilson, and others.—Mr. White showed a short series of Foreign Bodies found in inflamed appendices, including (1) an Appendix from an acute perforative case in which eight oxyurides were found in the organ; (2) an Appendix from a non-suppurative case in which removal had been practised as a precautionary measure to prevent a second attack and the organ was found to contain five shots and another piece of lead; and (3) a Metal Cap from the end of a pencil which was taken from a fæcal abscess in a boy, and might therefore have been either in the cæcum or in the appendix.

**West Kent Medico-Chirurgical Society.**—A meeting of this society was held on March 7th, Dr. T C Meggison, the President, being in the chair.—The President showed a case of Marked Facial Paralysis.—Dr F S Toogood showed (1) a typical case of Myxœdema on which he was about to commence treatment by thyroid extract; and (2) a young man who after having been knocked down by a cab was supposed to be drunk and was arrested, but was sent to the Lewisham Infirmary. Paralysis of the left side soon supervened. Dr. Toogood trephined over the posterior and anterior meningeal arteries and removed a large clot from the region of the latter. The patient made a good recovery.—Dr. James Donelan read notes of cases in which the postponement of the removal of adenoid masses in the naso-pharynx led to severe aural complications. He pointed out that the recurrence of slight earache and the evidence of Eustachian obstruction furnished by hearing tests afforded a sufficiently distinct warning to enable the practitioner to advise the immediate removal of the growth.—Dr. Morgan Dockrell and the President discussed the paper.—Dr. G. Herschell showed a new Rectal Electrode which could be distended with water while in the rectum and so afforded a larger surface for the passage of the current. He also exhibited and described a High-tension Kidder Induction-coil Apparatus which he considered to be most useful for electro-therapeutics.—Mr. R. V. Donnellan read notes of the case of a woman who had brought about abortion by thrusting a knitting-needle through the walls of the vagina and bladder into the uterus. Septicæmic symptoms ensued and her temperature was 105° F. before the birth of the child. The use of anti-streptococcic serum was followed by immediate improvement and final recovery.—Dr. Peacock (for Dr. P. Scott) read notes of an obscure case in the Miller Hospital, characterised by dulness of one lung, brawny swelling and enlargement of veins over the chest and neck, enlargement of the glands, pyrexia, and coma. The patient recovered with permanent enlargement of the episternal and epigastric veins. Various diagnoses had been suggested, including a gumma, an aneurysm, a malignant growth in the mediastinum, an embolus of the pulmonary artery, and some obscure inflammatory action. There were points against all of these.—Dr. Peacock (for Mr. J. Poland) also showed a specimen of Renal Calculi with Malignant Disease.—Mr. Augustus K. A. Cæsar showed Nine Vesical Calculi of a total weight of 4 ounces 140 grains (the largest individually weighing 7 drachms 50 grains) which had been passed by a woman, aged 70 years, who had suffered for years from complete procidentia.—Dr. J. P. Henry submitted some notes on Dionine as an Analgesic in Eye Diseases. He had tried it both in private practice and at the Italian Hospital in a number of cases of glaucoma, iritis, irido-cyclitis, keratitis, and corneal ulcers, and found that while the superficial anæsthetic action was much inferior to that of cocaine it had a much more prompt and durable analgesic action on deep-seated pain in the eye which was quickly and often permanently relieved. It also favourably influenced the course of those diseases. It could be prescribed together with atropin, eserin, and pilocarpin.

**British Gynæcological Society.**—A meeting of this society was held on March 13th, Dr. J. Halliday Croom, the President, being in the chair.—Various members showed specimens, chiefly Myomata of the Uterus.—Mr. P. J. Freyer (as guest) showed a Myoma which he believed to be the largest intravesical tumour on record removed by a suprapubic incision; it weighed nine ounces and in labour had impeded delivery till successfully pushed out of the way.—The President, in a communication on Suppuration of the Ovary, said that such was almost invariably due to infective salpingitis and was favoured by the presence of a corpus luteum or cyst; an exceptional case upon which h had lately operated showed no intimate connexion betwee the tube and ovary, but a small amount of pus outside th crenated edges of a corpus luteum had led to such persistent pyrexia as was remarkable in view of the absence of fever in connexion with much larger foci in other parts of the body, notably in many cases of pyo-salpinx and pyometra. The patient did well, though for 24 hours she had hæmatemesis with a quickened pulse but no pyrexia. He looked upon hæmatemesis as one of the most serious complications of abdominal work, and in his experience it had been almost always the precursor of death and so closely associated with infection that though its cause was in no way revealed by post mortem lesions he was disposed to attribute it to sepsis rather than to vomiting due to the anæsthetic, handling of the stomach and intestines, thrombosis of the omental vessels after injury or ligature and consequent embolism in the walls of the stomach, or any other cause than had been suggested. It was not confined to abdominal operations and in connexion with general surgery had been very ably discussed by Robert Purves who found it associated with a mortality of 72 per cent. Age was no factor in its occurrence.—Mr. Freyer, in a paper on Stone in the Female Bladder, drew attention to the ease and success with which litholapaxy could be performed in the female, even in very young children, or in the later months of pregnancy; the only special difficulty, escape along the side of the instrument of the indispensable fluid from the bladder, was easily prevented by the pressure of the fore and middle fingers of an assistant's hand on the posterior lip of the urethra. Women recovered from the operation in a day or two and no incontinence was left. He had had most satisfactory results in seven children and 15 adults; one uric acid calculus, weighing two ounces, in a woman 70 years of age he could not crush and it was removed by vaginal lithotomy, but he would now prefer the suprapubic incision; before adopting litholapaxy he had removed stones from three children through the urethra, but incontinence was left in one.—Mr. Spanton showed stones weighing 70 and 180 grains which had been removed through the urethra of very young children and a slate-pencil 2 5 inches long from the bladder of a girl 11 years of age. There was no incontinence in any of these cases, but he concurred with Mr. Freyer that litholapaxy (or, in the case of very large stones, suprapubic lithotomy) was the treatment to be adopted.—The President, Mr. Furneaux Jordan, Dr. Snow, Dr. Travers, and Dr. Macnaughton-Jones also joined in the discussion.

**WEST LONDON MEDICO-CHIRURGICAL SOCIETY.**—A clinical evening of this society was held on March 7th, Mr. Alfred Cooper, the President, being in the chair.—Dr. J. B. Ball showed a case of Hysterical Mutism occurring in a man, aged 37 years, who had been completely aphonic since he accidentally fell over a dog in the dark some six months previously. He was unable either to speak or to whisper. Applications of the faradic battery had been used without avail.—Dr. O. F. Grünbaum suggested that the patient should be brought under the influence of hypnotism or of alcohol.—Mr. R W. Lloyd suggested the use of an anæsthetic.—Mr. C. R. B Keetley showed his Extension Splint for the Lower Limbs by means of which active extension could be applied. —Mr. F. Swinford Edwards showed a man, aged 45 years, from whose bladder he had removed a large amount of Villous Growth by suprapubic cystotomy some four months previously. The patient was now in good health and was able to walk four miles a day without discomfort.—Mr. Edwards also showed a case after Transverse Fracture of the Patella. The patient, a man, aged 24 years, broke his patella on Jan. 18th, 1902. 40 hours later Mr. Edwards exposed the joint by an external semilunar flap and united the fragments with silver wire. Gentle passive movement was commenced on the eleventh day and in three weeks the patient was allowed to walk.—Mr. Patmore, Mr. L. A. Bidwell, and Mr. G. E. Twynam discussed the case.—Mr. Bidwell showed two cases of Rodent Ulcer treated by the x rays. In the one the ulcer had completely healed, while the other was still under treatment. He regarded scraping followed by treatment with the x rays as the best method to employ.—Mr. McAdam Eccles showed a man, aged 32 years, whose Right Testis lay in Scarpa's triangle.—Dr. Seymour Taylor showed a case of Obesity. The patient, an omnibus driver, aged 40 years, was abnormally stout and often fell asleep while driving. The organs were healthy with the exception of a feeble heart's action and a little chronic bronchitis. He was much cyanosed, a condition which was increased when he fell asleep and his head hung forward. He had much improved under treatment by venesection and a modified Tufnell diet.—Dr. Arthur Saunders showed a case of Cretinism occurring in a boy, aged 12 years. No trace of the thyroid gland could be made out and the rings of the trachea were distinctly felt. He had been placed on dried thyroid gland for a month in December and again for the last month. In this time he had grown one inch and had lost seven pounds in weight.—Dr. Saunders also showed a case of Organic Nervous Disease which he considered to be tabes dorsalis resulting from congenital syphilis coupled with some intracranial affection of like origin.—Mr. H. W. Chambers exhibited a case of Anencephalus This was accompanied, as was so often the case, by a condition of hydramnios and birth was delayed until the end of the tenth month.

**MIDLAND MEDICAL SOCIETY.**—A meeting of this society was held on March 5th, Mr. Arthur Oakes, the President, being in the chair.—Mr. H. G. Barling showed a woman, 42 years of age, upon whom he had operated three weeks previously for Strangulated Hernia through a slit in the great omentum. The symptoms were moderate vomiting, almost but not absolute obstruction, and a gradually increasing distension of what appeared to be a huge coil of intestine running transversely across the lower part of the abdomen, leading to a diagnosis of volvulus. At the operation it was found that about four inches of the ileum, the cæcum, the ascending colon, and a portion of the transverse colon had become herniated through a slit in the great omentum. A good recovery followed.—Mr. Barling also showed a man, aged 55 years, who came under his care with Chronic Intestinal Obstruction from a broad band of adhesion following herniotomy. The herniotomy had been performed five months previously for a right femoral hernia. The obstruction now existing was overcome by making a lateral anastomosis between the ileum, eight inches from the ileo cæcal valve, and the cæcum by means of a Murphy button one and a quarter inches in diameter. A good recovery followed.—Mr. Christopher Martin showed an Apparatus for obtaining the raised pelvic position in abdominal operations (Trendelenburg position). It consisted of an enamelled iron frame (eight inches high, three feet long, and 20 inches broad) which was placed on the ordinary operating table. The upper end sloped obliquely downwards at an angle of 45°. The patient was placed with the buttocks and legs resting horizontally on the frame, and the lumbar and lower dorsal region of the body on the sloping end of the same. The chest, shoulders, and head of the patient lay horizontally on the operating table. The result was that the pelvis was raised about eight inches above the level of the chest, the spine was in a position of acute lordosis, and the abdomen was inclined at an angle of about 45°. Mr. Martin had used this position for several months in performing abdominal sections and had found it most useful. It was, in his opinion, an improvement on the ordinary Trendelenburg position. The frame was made for him by Mr. Ash, Edmund-street, Birmingham.—Mr. J. Furneaux Jordan showed a specimen of Dermoid Cyst of the Ovary. The patient from whom it was removed made an excellent recovery.—Dr. C. E. Purslow showed a Soft Fibro-Myoma of the Uterus which he had removed by abdominal hysterectomy. The patient made a good recovery.—Mr. George Heaton read a paper on the Treatment of Appendicitis.

**GLASGOW SOUTHERN MEDICAL SOCIETY.**—A meeting of this society was held on March 6th, Dr. John Stewart, the President, being in the chair.—Following upon the reading of the minutes the President announced the gift to the society by Messrs. Fletcher, Fletcher, and Co., Limited, of a framed pair of portraits from their Vibrona Art Series, reproduced in photogravure from the original paintings. These were unanimously accepted. An exhibit was also made of pharmaceutical products by the same firm.—Dr. Robert Pollok then gave an address on General and Medical Experience with the Troops in South Africa. In the course of his lecture Dr. Pollok gave a very interesting and instructive description of his work as a surgeon with His Majesty's forces in the present war. Leaving Bloemfontein, where he saw a great deal of enteric fever, he accompanied the 18th Brigade and was in the midst of the exciting events that befell the march on Pretoria and Komati Port. A detailed account was given of the component parts of the field hospital and the method of attendance on the wounded. The address was abundantly illustrated by a fine series of lantern slides and was greatly appreciated by a large meeting of the society.

**NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.**—A meeting of this society was held on March 5th, Dr. E. C. Kingdon, the President, being in the chair.—Mr. R. G. Hogarth showed the following cases: (1) Extensive Nævus of the Face involving the Palate and the Inside of the Cheek; (2) Tuberculous Peritonitis cured by operation on a congenital hydrocele which existed coincidently—the sac of the tunica vaginalis was studded with miliary tubercles; (3) Spina Bifida cured by excision; (4) a case of Coxa Vara (with skiagrams); (5) an adult one year after Excision of the Knee; and (6) a case of Friedreich's Disease.—The cases were discussed by the President and Mr. Willis, Mr. Jacob, Mr. Hunter, Mr. J Mackie, Mr. Woods. Mr. Mackenzie, and Miss S. Gray.—Mr. Hogarth replied.—Dr. Mackenzie read a paper entitled, "Observations on Post Mortems," and gave an account of four cases observed during life and examined after death. They were as follows: (1) perforated gastric ulcer; (2) aneurysm of the cœliac axis; (3) aneurysm of the transverse aorta; and (4) ruptured kidney.—The paper was discussed by the President, Mr. Hunter, Mr. Woods, Dr. J. F. Blurton, Mr. Hogarth, Dr. A. Fulton, Mr. Mackie, and Mr. Willis.—Dr. Mackenzie replied.

**BRISTOL MEDICO-CHIRURGICAL SOCIETY.**—The sixth meeting of the session of this society was held on March 12th, Dr. Barclay J. Baron being in the chair.—Dr.

last seven months. The scalp was extremely scurfy, but this had not been noticed and therefore the duration of the disease in this region was unknown. When shown the whole of the chest, the upper part of the back, the upper arms and the forearms, especially on their extensor surfaces, as well as the upper parts of the thighs, were covered with a red, scaly, and slightly scabbed eruption made up on close examination of congested and œdematous follicles. The shape of the patches varied, but all were either round, oval, or polycyclical, with very defined edges. Itching was extremely severe but otherwise the health was good. In the axillæ were some small boils probably from secondary infection. 2. A case of very papular Rosacea where the diffuse congestion was almost entirely absent and pustulation was quite unnoticeable. The patient was a woman, aged 36 years, and she had had it on and off for years. There was a fair amount of evidence of dyspepsia, though not of sufficiently painful a type for the patient to volunteer any information about it.—Dr. Whitfield also demonstrated (for Dr. W. A. Milligan) a case of Paget's Disease of the Nipple in a woman, aged 51 years. There had been a discharge from the left nipple on and off since the menopause, which occurred at 45 years of age. 12 months previous to exhibition this discharge became offensive and induced her to consult a medical man. By careful dressing the scabs were removed and the discharge ceased to be offensive, though the nipple became ulcerated and the place never healed, but continued to increase in size. When shown there was an area of about the size of a five-shilling-piece over which the skin was dusky-red and infiltrated but not ulcerated. In this area there were white patches of almost normal-looking skin and this apparent improvement had taken place while the patient had been taking iodide of potassium. The nipple was not destroyed but was considerably smaller and harder than was that on the other side, while at its base there was a small hard mass to be felt which suggested a tumour rather than mastitis. There were also two large and very hard glands in the axilla. Dr. Milligan had sent the patient into the hospital for operation under the care of Mr. G. B. Mower White. Mr. White said that he proposed, in view of the presence of the glands, to remove the breast and to clear the axilla.—Mr. H. S. Elworthy showed a woman, aged 24 years, who had suffered from rumbling noises in the stomach since she was 17 years old. Her previous history showed nothing remarkable, with the exception of an attack of typhoid fever. If the patient stood up slight pressure of the left lower ribs caused a loud rumbling and gurgling noise apparently in the stomach. This was often accompanied by the regurgitation of gas up the œsophagus, and occasionally came on without any pressure. The stomach apparently hung much lower than normal, but did not reach up high under the costal margin, suggesting that a slight degree of gastroptosis was present. Mr. Elworthy considered that it was probably a gastric neurosis, but discussed the possibility of diaphragmatic hernia and dilated large intestine.—The cases were discussed by the President, Dr. J. G. Glover, Dr. A. W. Wilson, and others.—Mr. White showed a short series of Foreign Bodies found in inflamed appendices, including (1) an Appendix from an acute perforative case in which eight oxyurides were found in the organ; (2) an Appendix from a non-suppurative case in which removal had been practised as a precautionary measure to prevent a second attack and the organ was found to contain five shots and another piece of lead; and (3) a Metal Cap from the end of a pencil which was taken from a fæcal abscess in a boy, and might therefore have been either in the cæcum or in the appendix.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on March 7th, Dr. T. C. Meggison, the President, being in the chair.—The President showed a case of Marked Facial Paralysis.—Dr. F. S. Toogood showed (1) a typical case of Myxœdema on which he was about to commence treatment by thyroid extract; and (2) a young man who after having been knocked down by a cab was supposed to be drunk and was arrested, but was sent to the Lewisham Infirmary. Paralysis of the left side soon supervened. Dr. Toogood trephined over the posterior and anterior meningeal arteries and removed a large clot from the region of the latter. The patient made a good recovery.—Dr. James Donelan read notes of cases in which the postponement of the removal of adenoid masses in the naso-pharynx led to severe aural complications. He pointed out that the recurrence of slight earache and the evidence of Eustachian obstruction furnished by hearing tests afforded a sufficiently distinct warning to enable the practitioner to advise the immediate removal of the growth.—Dr. Morgan Dockrell and the President discussed the paper.—Dr. G. Herschell showed a new Rectal Electrode which could be distended with water while in the rectum and so afforded a larger surface for the passage of the current. He also exhibited and described a High-tension Kidder Induction-coil Apparatus which he considered to be most useful for electro-therapeutics.—Mr. R. V. Donnellan read notes of the case of a woman who had brought about abortion by thrusting a knitting-needle through the walls of the vagina and bladder into the uterus. Septicæmic symptoms ensued and her temperature was 105° F. before the birth of the child. The use of anti-streptococcic serum was followed by immediate improvement and final recovery.—Dr. Peacock (for Dr. P. Scott) read notes of an obscure case in the Miller Hospital, characterised by dulness of one lung, brawny swelling and enlargement of veins over the chest and neck, enlargement of the glands, pyrexia, and coma. The patient recovered with permanent enlargement of the episternal and epigastric veins. Various diagnoses had been suggested, including a gumma, an aneurysm, a malignant growth in the mediastinum, an embolus of the pulmonary artery, and some obscure inflammatory action. There were points against all of these.—Dr. Peacock (for Mr. J. Poland) also showed a specimen of Renal Calculi with Malignant Disease.—Mr. Augustus K. A. Cæsar showed Nine Vesical Calculi of a total weight of 4 ounces 140 grains (the largest individually weighing 7 drachms 50 grains) which had been passed by a woman, aged 70 years, who had suffered for years from complete procidentia.—Dr. J. P. Henry submitted some notes on Dionine as an Analgesic in Eye Diseases. He had tried it both in private practice and at the Italian Hospital in a number of cases of glaucoma, iritis, irido cyclitis, keratitis, and corneal ulcers, and found that while the superficial anæsthetic action was much inferior to that of cocaine it had a much more prompt and durable analgesic action on deep-seated pain in the eye which was quickly and often permanently relieved. It also favourably influenced the course of those diseases. It could be prescribed together with atropin, eserin, and pilocarpin.

BRITISH GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held on March 13th, Dr. J. Halliday Croom, the President, being in the chair.—Various members showed specimens, chiefly Myomata of the Uterus.—Mr. P. J. Freyer (as guest) showed a Myoma which he believed to be the largest intravesical tumour on record removed by a suprapubic incision; it weighed nine ounces and in labour had impeded delivery till successfully pushed out of the way.—The President, in a communication on Suppuration of the Ovary, said that such was almost invariably due to infective salpingitis and was favoured by the presence of a corpus luteum or cyst; an exceptional case upon which he had lately operated showed no intimate connexion between the tube and ovary, but a small amount of pus outside the crenated edges of a corpus luteum had led to such persistent pyrexia as was remarkable in view of the absence of fever in connexion with much larger foci in other parts of the body, notably in many cases of pyosalpinx and pyometra. The patient did well, though for 24 hours she had hæmatemesis with a quickened pulse but no pyrexia. He looked upon hæmatemesis as one of the most serious complications of abdominal work, and in his experience it had been almost always the precursor of death and so closely associated with infection that though its cause was in no way revealed by post mortem lesions he was disposed to attribute it to sepsis rather than to vomiting due to the anæsthetic, handling of the stomach and intestines, thrombosis of the omental vessels after injury or ligature and consequent embolism in the walls of the stomach, or any other cause than had been suggested. It was not confined to abdominal operations and in connexion with general surgery had been very ably discussed by Robert Purves who found it associated with a mortality of 72 per cent. Age was no factor in its occurrence.—Mr. Freyer, in a paper on Stone in the Female Bladder, drew attention to the ease and success with which litholapaxy could be performed in the female, even in very young children, or in the later months of pregnancy; the only special difficulty, escape along the side of the instrument of the indispensable fluid from the bladder, was easily prevented by the pressure of the fore and middle fingers of an assistant's hand on the posterior lip of the

France. The authors express regret that no formal course of teaching is given on the subject of deontology. They point out truly enough that the duties of the medical practitioner towards society have been shown by numerous judgments given in the law courts; that part of deontology has therefore assumed a well-recognised form and is treated of in formal lectures under the designation of "medical jurisprudence." Deontology is not, however, by any means limited to this important and well-recognised subject. It includes the duties of the medical man towards his patients, towards other members of the profession, and towards those associated with his medical work—druggists, for example, and midwives. Finally, deontology deals with "*l'ensemble des usages et des convenances professionnelles.*" The subject, it is evident, naturally covers a great deal of ground and the authors are on occasion a little inclined to be discursive; for example, the young practitioner is warned against the designing mother. The cautions given as to certain medical men who frequent health resorts may be justifiable in some cases.

At the present moment the chapter which deals with the relations between medical men and midwives is perhaps of topical interest. The authors of the book speak of these ladies as auxiliaries to the medical profession and place them a little lower than the druggists, but the positions occupied by the medical man and the midwife differ in different localities and according to the relative amount of knowledge possessed by each. Fortunately disagreements are uncommon, but they are not unknown, and examples bearing on this point are given. At the present time in France midwives have to obtain a diploma of proficiency after having studied for a period of not less than two years. The authors regard this regulation as a truly progressive one; it may diminish the number, but it will increase the efficiency, of the midwives. Ultimately, however, this will lead to a diminution in the fees received by medical men. It is therefore necessary, the authors think, that from the point of view of expediency medical students who hope ultimately to practise in the country should devote an increased amount of time and care to the study of obstetrics and ensure that their knowledge of midwifery is well in advance of that of the midwives. Medical men alone are allowed to use instruments in labours, but midwives are allowed to practise vaccination. The law runs much as follows: "Midwives are forbidden to employ instruments. In the case of difficult labours they must send for a medical practitioner. They are also forbidden to prescribe drugs," with certain exceptions. "Midwives are allowed to vaccinate and revaccinate for protection against small-pox." The authors say that, especially in the large towns, many midwives illegally practise medicine, they perform small operations, make gynæcological examinations, and treat some of the diseases of children Fines may be imposed under the Act for the illegal practice of medicine, from 100 francs to 500 francs for the first offence, from 500 francs to 1000 francs, or imprisonment for from six days to six months, or fine and imprisonment at the option of the court. The sentences actually passed, however, have been light. The experience gained in France of the effects of licensing midwives may at the present time possibly be of interest not only to medical men but also to English politicians.

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*A Text-book of Zoology.* By G. P. MUDGE, A.R C.Sc. Lond., F.Z S London: Edwin Arnold. 1901. Pp 416. Price 7*s.* 6*d*

THIS book is designed to meet the biological requirements of the preliminary scientific examination for the M.B. Lond. and also the intermediate examination for the B Sc. Lond. The author has been most successful in writing a genuine book, but he has at the same time arranged his material [illegible]venient form for examination purposes

In the first chapter the general principles of biology are ably and clearly defined, such, for instance, as the relation of the organism to its environment, principles which it is essential that the student should thoroughly grasp at the very beginning of his studies. The second chapter gives a clear and concise account of the great classes of the animal kingdom and the differences in structure which distinguish them from one another. The following chapters deal with the animal types required by the University schedule—viz., the Rabbit, Frog, Dog-fish, Cray-fish, Earth-worm, Cockroach, Freshwater Mussel, Hydra, Amœba, and Paramœcium. The last four chapters are devoted to Embryology, Heredity, Variation, Oogenesis, and Parthenogenesis.

In the chapters devoted to the animal types the author has, in our opinion, very wisely and very successfully preferred to compare and to contrast the differences and similarities of the various organs rather than to describe each animal in detail as an entity by itself. This method not only throws into relief what is important, but it also has the immense value of preparing the student for the form in which questions are usually set at the examinations. The more important sections of the book are concisely summarised in a tabular form at the end. These tables will not only prove invaluable for purposes of revision, but they will also serve as admirable examples to the student of how to extract the essence of a matter and to cast it into a useful and accessible note. The illustrations, although they are not too numerous, are good. They are apparently for the most part sketches of actual dissections and not more or less imaginary diagrams. They will therefore serve as a faithful guide to the student in dissections and will not discourage or make him sceptical of the very existence of the parts they claim to demonstrate, as is so often the case with diagrammatic and ideal illustrations. The six coloured figures which illustrate in a general scheme the vascular organs and the course of the circulation in the principal animals considered will be especially useful to the student. It is a pity that the life-history of the cockroach is not figured, as this would have made the illustrations of the types more nearly complete, but we suppose that it is utopian to expect in English books that profusion of beautiful figures which is seen in American ones. The treatment of the important principles of heredity and variation is sound and lucid though of necessity somewhat elementary; it will, however, prove a most valuable introduction of these great doctrines to the medical student.

We can strongly recommend this book not only as the best we have seen for the purposes of the examinations for which it is intended, but as a sound and readable introduction to the study of zoology for the general reader.

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*Nothnagel's Encyclopædia of Practical Medicine (Variola, Vaccination, Varicella, &c.).* By H. IMMERMANN, TH. VON JURGENSEN, C LIEBERMEISTER, H. LENHARTZ, and G. STICKER English edition Edited with additions by Sir JOHN W. MOORE, M.D. Dub. Authorised translation from the German under the supervision of ALFRED STENGEL, M.D. Philadelphia and London: W. B. Saunders and Co. 1902 Pp. 682. Price 21*s.*

THIS volume of Nothnagel's Encyclopædia of Practical Medicine contains articles on Variola, Vaccination, Varicella, Cholera, Erysipelas, Whooping-cough, and Hay Fever. These fevers have been described by their respective authors on a basis of the very widest pathology and in complete harmony with the spirit of scientific tolerance which, owing to the genius of Nothnagel, is noticeable in all volumes of the original German Encyclopædia. Broadly speaking, the general principle has been accepted with regard to each disease which is dealt with in this book that the determination of specific infections is dependent on three factors—X, Y, and Z, of which X is the specific organism, Y the external conditions necessary for the life or culture of this organism,

E. Klein, F.R.S., communicated a most exhaustive paper on Plague, illustrated by a large number of beautifully executed lantern slides.—The address was followed by a general discussion of the subject, in which Dr. R. Farrar, Dr. D. S. Davies, Mr. J. Hanclocke Wathen, and Dr. O. Symes took part.

## Reviews and Notices of Books.

*Selected Essays and Addresses by Sir James Paget.* Edited by STEPHEN PAGET, F.R.C.S. Eng. London: Longmans, Green, and Co. 1902. 8vo, pp. 445. Price 12*s.* 6*d.* net.

THE lectures, essays, and addresses contained in this volume have been selected, Mr. Stephen Paget tells us in his brief preface, as likely to prove of interest to the members of the medical profession rather than to the general reader. In saying this, however, we think that he does some injustice to the memory of his father. Several of the essays might well occupy a leisure hour of any man of letters since they treat of subjects in which all have a common interest. Amongst these may be mentioned the essay on the *Contrast of Temperance with Abstinence*, which supplies excellent arguments for the *via media* and which first appeared in the pages of the *Contemporary Review*; the essay on National Health and National Work, showing the serious diminution in the amount of work done by those who ought to be healthy and strong and free from disease as a result of preventable illness; the carefully expressed essay on the Relations between Theology and Science, in which the difficulties of the scientific and the theological mind in regard to religion are clearly put; the interesting essay on the Chronometry of Life—these and several others are characterised by such well-arranged and copious information and abundance of illustration expressed in such admirable literary form that they may be read by all with pleasure and profit. Unfortunately, the written page cannot reproduce the agreeable manner, the easy and unhesitating delivery in which the *ars celare artem* had become by long and assiduous practice perfect. At the same time, we must admit that many of the addresses possess a special value for the members of the medical profession—such, for example, as the article on Osteitis Deformans, to which Sir James Paget first called the special attention of pathologists, and those on Senile Scrofula and on Sexual Hypochondriasis. Besides the intrinsic merits of these and some other of the essays Mr. Stephen Paget has done well in selecting from his father's works those which, like the lectures on Nervous Mimicry and Dissection Wounds, can only be read by those who keep files of our own or of contemporary journals or who have access to libraries containing such periodicals as St. Bartholomew's Hospital Reports.

Sir James Paget was exceedingly happy in his choice of subjects for casual addresses, introductory lectures, and the like, though this was no doubt due to the wide views which he entertained of the relations of the medical profession to other branches of knowledge and in part to his own large information. As examples may be taken the essay entitled Errors in the Chronometry of Life, that on Stammering with other Organs than those of Speech, and that on Cases that Bone-setters Cure. The perusal of these essays impresses the reader with the high standard of literary excellence invariably maintained by Sir James Paget in his writings. Every page bears witness to the pains which he has taken to collect and to marshal his facts. He is very accurate. There is no slipslop writing nor is there any attempt at fine writing. The lectures on Nervous Mimicry are not inferior in style to the Hunterian Oration which was, perhaps, his greatest effort. That oration was delivered with great *éclat* before a crowded and distinguished audience, of whom our present King (then Prince of Wales) was one; and it is interesting, not only as one of the best amongst the many brilliant orations that have been given on that subject in the theatre of the Royal College of Surgeons of England, but because it contains the results of the reflections on Hunter's work of the man who was, after Cline, the most familiar with the contents of the museum, and who was best qualified to judge of the value of the labours of the Father of English scientific surgery.

The essay on Elemental Pathology, which constituted the presidential address to the Pathological Section at the Cambridge meeting of the British Medical Association in 1880, is an admirable example of the interest that Sir James Paget could excite upon a subject which must have long attracted his attention, though without leading him to discuss it, in his ordinary physiological and pathological lectures. In this essay he insists on the value of observations made upon the diseases of plants as illustrating the maladies of animals. He points out that hypertrophy and atrophy and senile decay are of constant occurrence in both kingdoms, and that a slow and incomplete healing of wounds takes place in plants comparable with that observed under similar conditions in animals; that parasitic growths and their consequences may be seen in both realms of nature; and that canker or cancer presents many points of analogy in plants and in animals. That he should have selected so novel a subject and have made his lecture so entertaining was a surprise to many who heard him speak on that occasion. But botany, though he modestly disclaims any more than a superficial knowledge of that subject, was by no means a strange department of knowledge to him. That address was delivered in 1880, but if we open the beautifully illustrated work of Curtis on British Entomology we shall find that in 1831 and 1832, nearly 50 years previously, he had forwarded to Mr. Curtis such excellent specimens of the plants on which the insects depicted fed, that they were selected to represent typical specimens of those plants, and it cannot be supposed that so careful and accurate an observer had overlooked even at that early period of his life many of those facts with which he illustrates his lecture.

The article on Experiments on Animals appears opportunely at the present time when the subject has been ventilated afresh in the *Times*. Whilst we have ourselves always been the consistent advocates of the prevention of all unnecessary forms of cruelty to animals we would recommend the temperate and judicial expression of opinion by Sir James Paget to the vivisection abolitionist who, led away by sentiment, exaggerates his statements till they cease to be truths and defeat their own end. We believe that Sir James Paget expresses the views of the large majority of thoughtful members of the profession in pointing out that the amount of pain inflicted by the physiologist or surgeon is trifling as compared with the huge aggregate of pain that is occasioned by the pursuit of sport or for the acquisition of adornments which has not even the plea of usefulness in mitigation. This article might well be reprinted and distributed as a circular since it is itself a sufficient answer and would serve to refute the absurd statements that, after having been categorically denied, still continue to be maintained. We have said enough, we hope, to induce many, both of those belonging to our own as well as to other professions, to purchase these—which we trust will not prove ephemeral—literary remains of Sir James Paget's work.

*Le Médecin dans la Société Contemporaine: Conférences de Déontologie.* Par MM. les Docteurs P. LE GENDRE et G. LEPAGE. Paris: Masson et Cie. 1902. Pp. 218. Price 2 francs.

To the general reader this book will prove of interest chiefly because it relates incidents in the ordinary every-day life of medical men in France, and especially in provincial

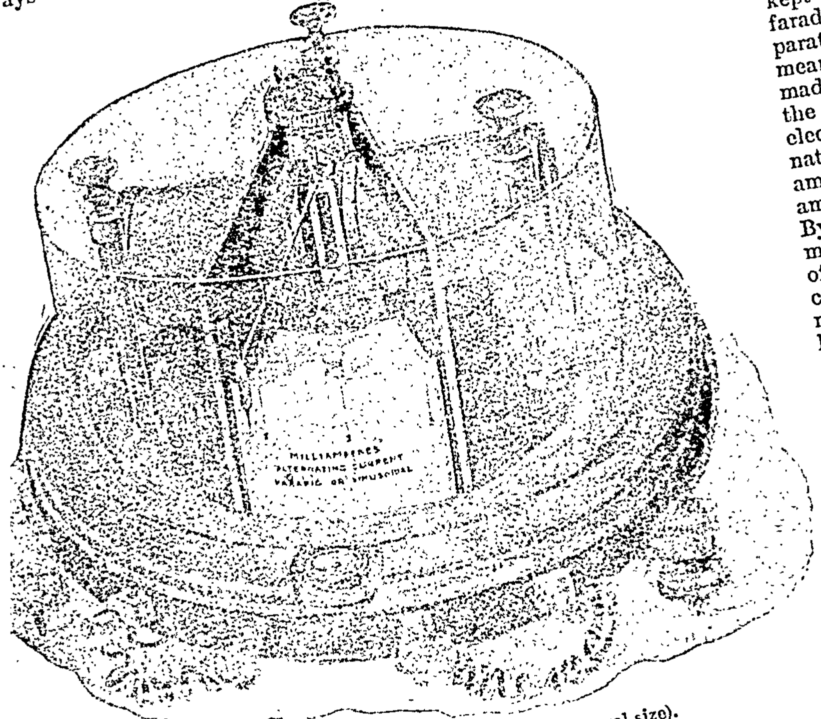
# New Inventions.

## THE FARADIMETER, AN INSTRUMENT FOR MEASURING CURRENTS FROM INDUCTION COILS FOR THERAPEUTIC USE.[1]

HAVING discovered early in my electro-therapeutic practice that no reliance—so far as continuity of action goes—could be placed on the results of treatment by means of the faradic or induced current, it occurred to me that this might be due to the impossibility of measuring the amount given, or even of knowing for certain that there was any current at all in operation. There being no instrument in the market capable of supplying this want I set myself some years go to design one. The objects aimed at in the instrument were the following. 1. That it be able to show the presence and to measure the amount of the current when this was less than a sensitive part of the body, such as the brow, could detect the presence of. 2. That it be reliable, the same current always causing the same deflection of the needle without tapping to coax the needle one way or the other. 3. That the needle always and absolutely return to the zero point. 4. That variations of temperature or draughts of air have no influence in displacing the needle from the zero point. 5. That parallax be provided against, especially in very small deflections. 6. That the instrument be dead-beat. 7. That it be independent of iron cores and of permanent magnets. 8. That the instrument be portable and not require to be placed in the magnetic meridian. 9. That the resistance be moderate to allow of a fair amount of current being possible when the intensity is low. 10. That the shunts be true for alternating and not simply for continuous currents.

Some of these objects have been more difficult to attain than others, but all the difficulties have now been overcome.

The faradimeter here described is on the principle of the electro-dynamometer but it gives direct readings. It indicates instantly any variation in the current. It is composed of two fixed coils, with a rotating coil between them, to which is attached the pointer. All the coils are as close as possible to each other. When the instrument has been leveled the suspended coil is turned so as to bring the needle to the zero point by means of the revolving stage from which it is suspended by about one inch of finest bronze ribbon. If the needle is not absolutely at zero a slight turn of one of the levelling screws will suffice to do this without putting the instrument off the level. Once set there is no need to repeat this, even when it is moved from place to place, unless some accident happen to it. In this case the revolving stage can be called into requisition again. It is fitted with the means of easily replacing the bronze ribbon and of lowering or raising the suspended coil so as to put it exactly into position. The current is carried off the suspended coil by means of a long spiral of finest bronze ribbon, the halves of this being in reverse directions to prevent displacement of the needle from zero under the influence of changes of temperature on the spiral. The instrument is made dead-beat by means of vanes of mica attached to a pointer fixed to the under part of the coil, and to prevent the action of internal currents of air through slight changes of temperature in the surrounding atmosphere these vanes are inclosed in a cell. So also is the indicating needle, since, though it is extremely fine, some slight deviation from the zero point would otherwise result from its exposure to internal currents as when placed near an open window. The rotating coil can be easily fixed an kept in this position so as to make th faradimeter portable which its comparatively small size renders easy. By means of two shunts the scale can be made to read up to 15 milliampères, the highest reading I find required for electro-therapeutic treatment by alternating currents; whilst as low an amount of current as one-fifth milliampère can be read off on the scale. By one milliampère faradic current I mean the electro-magnetic equivalent of an amount of sinusoidal alternating current, the galvanometric measurement of the sinusoidal galvanic equivalent of which is one milliampère. During calibration the earth's magnetism is controlled by a permanent magnet placed at the necessary distance above th coils. Three-milliampères sinusoida galvanic current causes, I find, th amount of deflection brought about b five milliampères from a battery. If a current of definite amount from a battery is passed through a galvanometer and then through the faradimeter and the deflection noted in each it will be found, if the current is changed into an alternating one before passing through the latter instrument, that the current in the galvanometer will fall to the medium amount, whilst the deflection in the faradimeter will remain as before, thus showing that it registers the maximum current only, the galvanometer registering the medium current only.



Faradimeter, with cover removed (half natural size).

Parallax is avoided by means of two fine strips of metal rising vertically from the pointer and about one inch apart. The total resistance of the instrument is slightly ove 800 ohms. The fixed bobbins have each 250 turns of No. 3 S.W.G. copper wire, whilst the moving coil has abou 1000 turns of No. 47 wire. The wire for the shunts is woun inductively and horizontally immediately below the bron spiral, so that the currents passing through them may affect the magnetic field around the revolving coil; and not only are the resistances proportional to the total resistance of the instrument, but the windings in the shunt coils are also proportionate in number to the total number of windings of the three coils. I have found this faradimeter of immense service and deem such an instrument absolutely essential to the proper therapeutic use of the faradic and the alternate sinusoidal currents. It has been made from my instructions by Messrs. Baird and Tatlock, Glasgow.

SAMUEL SLOAN, M.D., F.F.P.S. Glasg.,

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[1] A paper read and an instrument shown at a meeting of the British Electro-Therapeutic Society on Feb. 14th, 1902.

and Z the susceptible subject. The mathematical conception that if any one of these three factors is wanting, or in other words equals 0, the whole product becomes zero, reconciles many of the apparently conflicting views which exponents of rival theories hold on the subject of infection. Taking, for instance, a concrete example of a miasmatic infection such as cholera, the formula X Y Z supports the views of those who, like Pettenkofer, insist on the predisposition of locality, as well as of those who, like Koch, believe in the specific character of the parasite. And by admitting the factor of susceptibility in the host the importance of diathesis is not excluded.

In the article on Variola, which is from the pen of Dr. H. Immermann of Basel, the parasitology of the small-pox virus is chiefly concerned with the investigations of Van der Loeff, Pfeiffer, and Guarnieri on the nature of a sporozoön, which is described by all these observers as possessing almost similar characteristics. The interest which attaches to the investigations of these observers centres in the fact that there is almost complete correspondence in their results. The account of the parasitology is undoubtedly of very great interest, but it is to be regretted that the editor of the English edition has not exercised his prerogative and brought the pathological history completely up to date. Dr. Immermann's vindication of vaccination in the prophylaxis of small-pox will be read with peculiar interest at the present time, since it is probably the most complete and unassailable indictment of the propaganda of anti-vaccination fanatics which has ever been published.

The articles on Cholera Asiatica and Nostras are by Dr. C. Liebermeister of Tubingen. Although in the account of the etiology of this disease controversial matter which was of more interest 40 years ago than at the present time bulks somewhat largely, nevertheless the matured experience of this veteran clinician imparts a very practical ring to everything that he has to say on the subject of symptoms, diagnosis, and treatment. As regards the latter, the value of warm and hot baths and the intravenous injection of water is fully emphasised.

The subject of Erysipelas and Erysipeloid is ably treated by Dr. Hermann Lenhartz of Hamburg. Erysipeloid, or Rosenbach's zoönotic finger erysipeloid, is a peculiar disease not generally described in English text-books, which appears to be a progressive infection which is very liable to attack the fingers of those who handle carcasses of animals, dead game, or fish.

Dr. G. Sticker supplies the chapter on Whooping-cough which is a very masterly clinical account of this spasmodic affection. The spirit of scientific tolerance which we alluded to at the commencement of this review as pervading all sections of the Encyclopædia is well exemplified in Dr. Sticker's felicitous combination of the rival hypotheses on which various authors found their definition of the disease. To quote Dr. Sticker's own words: "The majority of physicians still believe that it is necessary to decide in favour of, and to defend, one or other of these hypotheses, but few endeavour to combine them, yet nothing seems more natural than to say whooping-cough is an infectious disease as regards its external cause; it is a catarrh as regards anatomic localisation of its most marked disturbances; it is a neurosis in relation to its most prominent symptoms." The treatment of this disorder, as described by the author, amounts to little more than a destructive criticism of the methods usually employed. Quinine and camphor are practically the only two drugs which escape Dr. Sticker's sweeping condemnation.

The same author supplies a lengthy chapter on Hay Fever, under the name of "Bostock's Summer Catarrh"—a departure in nomenclature which is likely to lead to confusion, though flattering to our national vanity. In his usual brilliant and slashing style Dr. Sticker disposes of the narrow conception which many authorities entertain with regard to the etiology of this disease, and sums up the situation by declaring that "the unity of the picture described by Bostock requires a unique etiology which only the combination of a living specific excitant with a particular predisposition can satisfactorily explain."

The manner in which Sir J. W. Moore has conducted the task of translation and revision is entirely admirable, and with very few exceptions all important matter has been brought well up to date, and the discretion vested in his hands of modifying the original text where thought necessary has been most wisely exercised.

## LIBRARY TABLE.

*Reports of the Society for the Study of Disease in Children.* Vol. I. Session 1900-1901. London: J. & A. Churchill. 8vo Illustrated Pp. 238 Price 12*s.* 6*d.*—The Society for the Study of Disease in Children was founded in July, 1900. All duly qualified medical men are eligible for membership and there are already no fewer than 240 members. This first volume of reports does credit to the taste of the publishing committee and the society is to be congratulated on its satisfactory inauguration. The volume is bound in red cloth, is printed on fine glazed paper, and is supplied with excellent illustrations, among which are six beautiful chromo-lithographs of tubercle of the choroid and infantile nephritis. Every report is printed in full and is followed by a detailed record of the discussion which followed the reading of the paper. At the end of the volume there is a thoroughly serviceable index of the subjects discussed. Among the more interesting and curious reports are the following:—A case of Polyuria in a child, aged three years, by Dr. J. H. Sequeira; on Multiple Subcutaneous Fibrous Nodules in an infant apparently free from rheumatism, by Dr. G. Carpenter; on Congenital Cicatrices, by Mr. H. Betham Robinson; on a case of Myxœdema in a boy, aged six years, by Dr. Leonard Guthrie; on cases of Lupus treated by Dr. Finsen's Method; and on two cases of Cirrhosis of the Liver in Children, by Dr. C J. Macalister. The first of the two cases of cirrhosis was in a boy, aged four years, and was definitely caused by the administration of frequent doses of alcohol. This case was accompanied by much ascites and no jaundice. There were no syphilitic stigmata to be found. The parents did not deny having given to the boy frequent "nips" of spirits and beer. It seems to be generally agreed that the causes of cirrhosis of the liver in childhood are alcohol, syphilis, and the poisons of the infectious fevers. But in the second case reported there was absolutely no reason for suspecting that the child, a girl, aged 13 years, had been given alcohol at any time. "Her only previous illnesses had been chicken-pox at four and measles at six years of age. Both of these were recovered from satisfactorily and there was no indication that any of the ordinary infective fevers had started the process." There was no suspicion of syphilis in the case and the question is, What toxin could have caused the cirrhosis? This child died after an illness of rather more than a year. Post mortem there were found cell degeneration throughout the liver and intercellular as well as perilobular production of new fibrous tissue. It was a mixed type of cirrhosis Whatever the poison might have been Dr Macalister thinks that in the first place it was probably introduced with some article of food, and he quotes one or two other cases in support of his theory.

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A PATIENT'S AVERSION TO MEDICAL MEN.—At an inquest held at Bridlington on March 10th on the body of a woman, aged 45 years, who had died suddenly, it was stated that she had persistently refused to allow a medical man to be called, stating that if a medical man attended her she would jump out of the window.

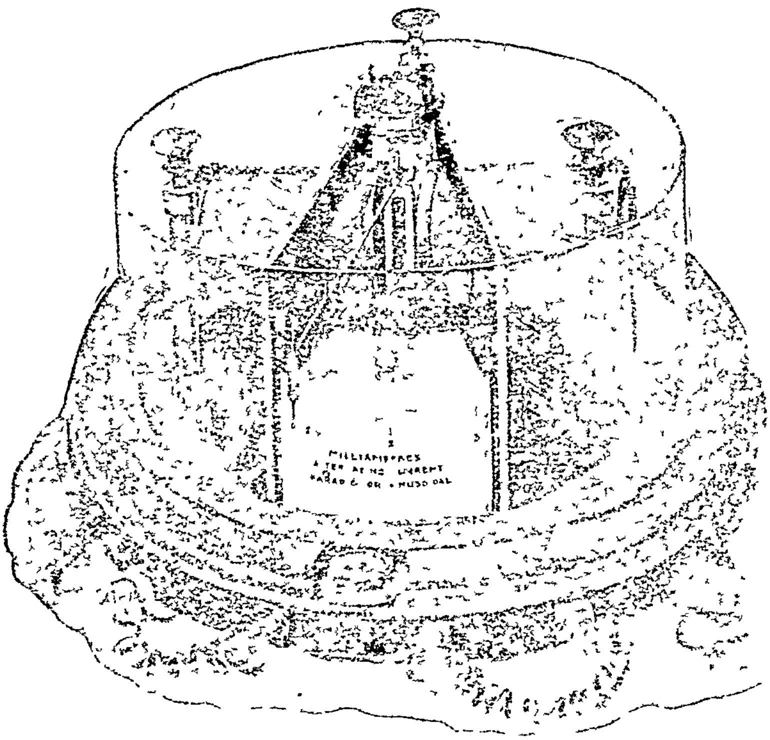
# New Inventions.

## THE FARADIMETER, AN INSTRUMENT FOR MEASURING CURRENTS FROM INDUCTION COILS FOR THERAPEUTIC USE[1]

HAVING discovered early in my electro-therapeutic practice that no reliance—so far as continuity of action goes—could be placed on the results of treatment by means of the faradic or induced current, it occurred to me that this might be due to the impossibility of measuring the amount given, or even of knowing for certain that there was any current at all in operation. There being no instrument in the market capable of supplying this want I set myself some years ago to design one. The objects aimed at in the instrument were the following. 1. That it be able to show the presence and to measure the amount of the current when this was less than a sensitive part of the body, such as the brow, could detect the presence of. 2 That it be reliable, the same current always causing the same deflection of the needle without tapping to coax the needle one way or the other 3. That the needle always and absolutely return to the zero point. 4 That variations of temperature or draughts of air have no influence in displacing the needle from the zero point 5 That parallax be provided against, especially in very small deflections. 6 That the instrument be dead-beat 7. That it be independent of iron cores and of permanent magnets. 8 That the instrument be portable and not require to be placed in the magnetic meridian 9 That the resistance be moderate to allow of a fair amount of current being possible when the intensity is low 10 That the shunts be true for alternating and not simply for continuous currents.

Some of these objects have been more difficult to attain than others, but all the difficulties have now been overcome.

The faradimeter here described is on the principle of the electro-dynamometer but it gives direct readings. It indicates instantly any variation in the current. It is composed of two fixed coils, with a rotating coil between them, to which is attached the pointer. All the coils are as close as possible to each other. When the instrument has been leveled the suspended coil is turned so as to bring the needle to the zero point by means of the revolving stage from which it is suspended by about one inch of finest bronze ribbon. If the needle is not absolutely at zero a slight turn of one of the levelling screws will suffice to do this without putting the instrument off the level. Once set there is no need to repeat this, even when it is moved from place to place, unless some accident happen to it. In this case the revolving stage can be called into requisition again. It is fitted with the means of easily replacing the bronze ribbon and of lowering or raising the suspended coil so as to put it exactly into position. The current is carried off the suspended coil by means of a long spiral of finest bronze ribbon, the halves of this being in reverse directions to prevent displacement of the needle from zero under the influence of changes of temperature on the spiral. The instrument is made dead-beat by means of vanes of mica attached to a pointer fixed to the under part of the coil, and to prevent the action of internal currents of air through slight changes of temperature in the surrounding atmosphere these vanes are inclosed in a cell. So also is the indicating needle, since, though it is extremely fine, some slight deviation from the zero point would otherwise result from its exposure to internal currents as when placed near an open window. The rotating coil can be easily fixed and kept in this position so as to make the faradimeter portable which its comparatively small size renders easy. By means of two shunts the scale can be made to read up to 15 milliampères, the highest reading I find required for electro-therapeutic treatment by alternating currents; whilst as low an amount of current as one-fifth milliampère can be read off on the scale. By one milliampère faradic current I mean the electro-magnetic equivalent of an amount of sinusoidal alternating current, the galvanometric measurement of the sinusoidal galvanic equivalent of which is one milliampère During calibration the earth's magnetism is controlled by a permanent magnet placed at the necessary distance above the coils. Three-milliampères sinusoidal galvanic current causes, I find, the amount of deflection brought about by five milliampères from a battery. If a current of definite amount from a battery is passed through a galvanometer and then through the faradimeter and the deflection noted in each it will be found, if the current is changed into an alternating one before passing through the latter instrument, that the current in the galvanometer will fall to the medium amount, whilst the deflection in the faradimeter will remain as before, thus showing that it registers the maximum current, the galvanometer registering the medium current only.



Faradimeter, with cover removed (half natural size).

Parallax is avoided by means of two fine strips of metal rising vertically from the pointer and about one inch apart. The total resistance of the instrument is slightly over 800 ohms The fixed bobbins have each 250 turns of No. 36 S W G copper wire, whilst the moving coil has about 1000 turns of No 47 wire The wire for the shunts is wound inductively and horizontally immediately below the bronze spiral, so that the currents passing through them may not affect the magnetic field around the revolving coil; and, not only are the resistances proportional to the total resistance of the instrument, but the windings in the shunt coils are also proportionate in number to the total number of windings of the three coils I have found this faradimeter of immense service and deem such an instrument absolutely essential to the proper therapeutic use of the faradic and the alternate sinusoidal currents It has been made from my instructions by Messrs. Baird and Tatlock, Glasgow

SAMUEL SLOAN, M.D., F.F.P.S. Glasg.,
Consulting Physician to the Glasgow Maternity Hospital and to the Samaritan Hospital for Diseases of Women, Glasgow.

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[1] A paper read and an instrument shown at a meeting of the British Electro-Therapeutic Society on Feb. 14th, 1902

THE LANCET.

LONDON SATURDAY, MARCH 22, 1902

## The Midwives Bill

We published in The Lancet last week a full account of the proceedings in reference to the Midwives Bill before the Grand Committee on Tuesday, March 11th which terminated with an adjournment of further discussion until Friday last March 14th On that day the Grand Committee met again and completed the consideration of the measure Accordingly the Bill will be reported to the House of Commons and will probably become law as amended without further delay Accidental circumstances have combined to insure the passage of the Bill through its various stages with great rapidity, while no organised opposition was ever offered to it as a whole or even to its manifestly objectionable clauses All the combined working and all the enthusiasm have been on the side of the promoters, they have won and with them remain the spoils For there is no mincing the matter, the Bill is a distinct blow to the position of medical men Their privileges under the Medical Acts such as they are have to an appreciable extent been secured for a body of semi educated women, who will be able to embark upon obstetric practice as far as we can see without restraint enjoying much of the position of qualified medical practitioners

The amendments made in the Bill during its consideration by the Grand Committee are unimportant and affect seriously none of the drawbacks to the projected legislation An amendment proposed by Mr Parker Smith which emphasised the protection of the Bill to "midwives" by preventing uncertified persons from designating themselves "obstetric nurses" or assuming any other name properly accruing to an expert in midwifery, proved successful The amendment received no serious opposition from the promoters of the Bill and went far to show that the real purpose of the Bill has been as much to protect the title of midwife as to protect the parturient woman Mr Griffith Boscawen, Sir Walter Foster, and Mr T P O Connor tried to obtain the insertion of a clause whereby the practice of midwifery by others than women certified under the Act as midwives should be made penal, but Mr Heywood Johnstone who has served his side in the matter of this Bill with great industry and astuteness proved too many for them He objected *in toto* to the amendment which was urged on the grounds recently set out in our columns and from his point of view he was wise in doing so for we understand that the Home Office had such an objection to the proposed addition that its introduction might have imperilled the Bill By way of compromise on the question of an annual issue of certificates the promoters of the Bill have agreed to the insertion of a provision under which every certified midwife must give notice annually to the local supervising authority of intention to continue in practice within the area of the authority This is an improvement as marking some little difference in position between the medical man and the certified midwife. Sir John Batty Tuke secured an alteration in the Bill that will be of some service to the public for owing to a successful amendment proposed by him it will be impossible after Jan 1st 1905 for any woman to recover fees as a midwife in a court of law unless she is certified under the Midwives Act, but a curious position obtains under this amendment for it practically leaves persons unable to obtain remuneration legally for work which, in the absence of a penal clause has been legally executed Mr Heywood Johnstone and Mr Schwann effectively resisted a proposal to omit the invidious references in the Bill to the Royal College of Physicians of Ireland and the Obstetrical Society of London, the latter gentleman pointing out that the Obstetrical Society of London deserved recognition for its work in the matter, as its tests of candidates in the art of midwifery were more stringent than were those applied by the qualifying medical bodies to medical students Mr Schwann here took one of the numerous opportunities offered by the measure for suggesting that the certified midwife with her few months of training will be the scientific equal possibly the scientific superior, of the medical man who is compelled by the Medical Acts to submit to a curriculum of five years' duration An attempt on the part of Sir Francis Powell to substitute the General Medical Council for the Privy Council as the body responsible for the formation of the Central Midwives Board failed, Mr Heywood Johnstone thinking that the Lord President of the Council would be able to discharge the duty put upon him which consisted only of having a few letters written We are not so confident Words have been inserted to secure that before the Privy Council approves of any rules framed by the Central Midwives Board the General Medical Council shall be consulted but precedent does not lead us to believe that much consideration will be extended to the medical view

Presumably the end of a long struggle has been reached, for we do not see now what remains to prevent the latest edition of the Midwives Bill from becoming law We do not think that the members of the medical profession as a whole can congratulate themselves much in the matter A large proportion of the profession were in ignorance of the pros and cons of the question until it became acute That many of them when they awoke to a sense of the importance of the issues of a Midwives Bill were opposed to the measure is true but opposition that would have been effective in the earlier stages proved abortive when offered in belated and fitful manner Again those members of the medical profession who were from the first interested in the certification or registration of midwives were sharply ranged into opposing camps One party saw in the legislation for the regulation of the practice of midwives the creation of an inferior body of general practitioners to the defiance of the Medical Acts and the obvious danger of the parturient poor, the other party saw in the same legislative proposals a guarantee that the parturient poor would in all circumstances be able to obtain trustworthy and cleanly ministrations Of course each side was somewhat wrong but neither would attempt to find a middle way. Neither would abate a jot from the position that it had taken up, with the result that the public and the Government have shown themselves unable to attach importance to medical opinion. The General Medical Council has suffered in prestige, for, although it was generally considered to be more or less of an undertaking that no Midwives Bill would receive the support of the Privy Council unless it was framed upon lines approved by the General Medical Council, the measure that now approaches the statute-book does not contain the desiderata of the General Medical Council, and, so far as we know, has the general approval of the Privy Council. The Direct Representatives of the profession on the General Medical Council will have to explain the position to their constituents as best they can. If they cannot redeem their election pledges it is unlikely that their disability will remain concealed.

# Our Medical Duty towards our Neighbour.

From time to time the immediate presence of epidemic disease arouses in the general public the fear of infection and to some extent teaches the desirability of sanitary precautions The same occasions of temporary alarm, however, reveal the apparently ineradicable recklessness of a large section of the public where others only are concerned and the inadequacy of any laws to safeguard the public health as long as men and women have no desire to do their duty towards their neighbours apart from legal compulsion. The difficulty of successfully isolating suspected cases of small-pox is no doubt in many instances due to the fact that the suspected person is a worker whose presence among his fellow workers is necessary if he is to earn his wage. In such circumstances it is not surprising that the maxim of "every man for himself" is often observed with disastrous consequences ; but the qualified kind of necessity that prevails in these cases is not to be found by any means in all the instances where persons have deliberately exposed others to the infection of small-pox during the present epidemic. We have narrated examples where criminal carelessness has led to the chances of spreading small-pox during the recent epidemic, and our readers know that small-pox is not the only or the most frequent pathological condition so disseminated. The publicity recently given to the result of scientific inquiry with regard to the spreading of the infection of tuberculous disease has called some attention to the filthy habit of expectorating in public conveyances, in the streets, and in other places of public resort Newspapers and other popular publications have devoted a good deal of space to discussing the matter, and every opportunity has been given, even to persons of the class that spits, of knowing that the sputa of tuberculous persons may become a source of infection to others, but we doubt if the dissemination of such information has to any substantial extent diminished what is a disgusting act and a public nuisance, quite apart from the risk of spreading disease The agitation may have produced notices requesting persons not to expectorate in places where such notices can to some extent be enforced, but the fact that such notices are needed at all shows how absolutely selfish certain members of the community are and how neglectful they are of the simple rule of doing as they would be done by. We will pay the persons who spit on the floors of omnibuses and other public vehicles the compliment of believing that they do not do so on the floors of their own homes, but we will ask them what their feelings would be if other persons came and squirted saliva over their boards or carpets as they do over the boards and carpets of the railway companies ; and here we may point out that the persons who spit in railway-carriages are not confined to the class whose homes are destitute of carpets.

In preventing the spread of infectious disease the community is to some extent aided by the law that compels the notification of certain disorders and imposes penalties upon persons suffering from them who expose others to the risk of infection in certain obvious ways. A large number of persons, however, regard the precautions imposed by law as embodying the maximum of care that they need show for others ; and the attitude of many parents in the humbler classes of society whose children have suffered from such diseases as scarlet fever and measles is one of indifference as to whether their neighbours suffer in a similar way or not. They reason that as they have had the trouble and inconvenience of having their own children laid up, it will only be an equal distribution of the ills of life if those around them undergo the same affliction. Any obligation on themselves to go out of their way to prevent, if possible, such a thing from happening, because it is their duty to think of, and to protect, others, they ignore or openly deny. The kind of duty of which we are speaking—which we may call our medical duty towards our neighbours—is still more often disregarded by members of all classes when there is no question of existing disease that may be disseminated. The persons who in the disposal of house refuse only consider how they may in the easiest way get rid of it without detection and interference on the part of some sanitary authority possibly regard the law, but they very often neglect their duty. Every piece of waste land in or near a town testifies to this neglect, just as every reach of the Thames above London bears similar evidence in spite of the vigilance of the river commissioners, and in spite of the obvious wickedness of fouling a noble river. In the preparation of food-stuffs a similar course of conduct shows itself and is from time to time demonstrated in our police-courts, whether the question is one of adulteration merely or of the sale of food positively dangerous to health. Very often it is shown that there has been no deliberate intention of making money out of a commodity known to be unfit for human food. The most frequent plea for a mitigated penalty is the one that rests *on the allegation that* the defendant *never saw the* stuff that he offered for sale and knew nothing about it Carelessness and selfishness lead to an obvious neglect of medical duty.

It would not be difficult to give many more examples al bearing upon the same point and showing how often men and women place others in danger without compunction, whereas they themselves, if they suffered from similar conduct, would be loud in their complaints of their neighbours So far as the law goes it protects us from our neighbours and its sphere of authority is constantly being extended ; but those whose duty it is to enforce the law cannot be present everywhere or omniscient These are days of extended and extensive education, and it is much to be wished that the teachers of the young should at all convenient seasons, whether in the course of religious or of lay instruction, instil into their minds the duty of protecting others even to their own inconvenience. With the inculcation of a sense of such duty increased knowledge of the sources of disease and the possibilities of sanitary science would be of more avail. At the present time, through the ignorance of some and the callousness of others, disease is spread in all populous centres in a terrible, because in an entirely unnecessary, manner. We cannot help thinking that the board schools might well come to the rescue of the community with a little plain talk to their charges.

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## Varicose Veins.

THE Lettsomian Lectures of the Medical Society of London were established in 1850 They are always intrusted to some distinguished Fellow, and this year the lecturer was Mr. A. PEARCE GOULD. It is generally understood that the subjects of these lectures are intended to be as practical as possible, and Mr. PEARCE GOULD'S choice of the subject of varicose veins for his first lecture (which was published in THE LANCET of March 1st, p. 576) was very happy. It is a disease which is exceedingly common, obscure in its origin, and but little amenable to the many methods of treatment adopted. Many who suffer from varix are in good, even in robust, health. This fact is against the condition being a degeneration Much importance in the production of varix is usually attributed to obstruction to the return of venous blood as by pressure on the larger veins. Mr. PEARCE GOULD does not assert that pressure has no effect, but he believes that it is unworthy of being considered in comparison with other factors. He showed that in the vast majority of cases varicose veins first appear before growth is complete; thus out of 50 consecutive cases of varicose veins coming under his observation the condition was manifest before the age of 25 years in 41, that is to say, in at least 80 per cent of cases the varix appeared before development was complete. Now, as it is certain that venous obstruction does not predominate during adolescence, hindrance to the venous circulation cannot, he argues, be an important factor in the production of varicose veins Another argument on which the lecturer rightly laid stress is the conspicuous absence in this disease of all the usual signs, symptoms, and consequences of venous obstruction Œdema, lividity, and impairment of function are rarely seen in varix, while in cases in which undoubted venous obstruction is present—as, for instance, when a bandage has been applied too tightly—discomfort immediately follows, the whole limb becomes obviously congested, and œdema rapidly supervenes. Further, the operative treatment that is usually adopted for varicose veins—namely, ligature or excision—is itself a potent argument against the obstruction theory, for, if obstruction is the cause, to excise the varix or to ligature the main cutaneous vein above must be an utterly irrational procedure, yet all surgeons will acknowledge the value of both of these measures.

Of all the suggested causes of venous obstruction leading to varix pregnancy holds the most conspicuous place, but Mr. PEARCE GOULD pointed out that in most cases careful inquiry will elicit the fact that the enlarged veins had been noticed in early life before marriage, but that the patients had never been troubled by them until pregnancy occurred. The important vaso-motor disturbances which are produced in some women by pregnancy show how greatly the vascular system can be affected by this condition. Therefore we need feel no surprise that the veins should suffer also, quite apart from any pressure on them. Large tumours of the ovary and uterus probably cause quite as much pressure on the iliac veins as does a pregnant uterus, yet they are much less frequently attended with troublesome varix of the lower limbs There is, however, a still more forcible argument against the pressure theory, and this is to be found in the relative proportions in which the sexes are affected with varicose veins We find that, according to Mr. PEARCE GOULD'S figures, of 245 cases, made up of cases seen in private and cases seen during the last six years in hospital practice (cases of varicocele being excluded), 153 were men and only 92 were women. Of course, if the cases of varicocele had been added the excess of male patients over female would have been greatly increased. The rôle, therefore, of pregnancy in the production of varix must be unimportant. If, however, we are compelled by facts to throw over the obstruction theory of the etiology of varix, what can be put in its place? Mr PEARCE GOULD answers that varicose veins are venous overgrowths—that is to say, venous angeiomata. He brings forward cases which demonstrate that even in the latter half of life veins may form, constituting what may be called a "venous angeioma," while in evidence that varix is really a variety of angeioma he quotes many proofs. In the first place we occasionally meet with combinations of undoubted venous nævus and varix; and there are other cases in which we might hesitate as to which term should be employed, or in which, indeed, either might be used with perfect propriety Secondly, the irregular distribution of varicose veins is much in favour of the view that we are dealing with an over-development of the venous tissue. A further proof is to be found in the distinctly hereditary character of varix, which may, indeed, in some cases be traced through three generations Moreover, in the majority of cases an extreme degree of varix persisting for many years is quite compatible with unimpaired function and structure of the parts from which the varicose veins receive their blood. Mr PEARCE GOULD considers that the minute structure of a varicose vein, containing as it does an increase of muscular tissue, is in favour of the developmental theory—the theory, that is, that varices are essentially the result of an over-development of venous tissue We must acknowledge that these arguments are of great weight and go far towards establishing the lecturer's contention.

The latter half of the lecture dealt with the question of treatment In 1891 TRENDELENBURG of Bonn introduced a novel method of treating varicose veins by ligature of the great saphena vein in the upper part of the thigh He showed that the enlarged veins filled from the proximate end and that pressure over the great saphena prevented the blood from entering them The operation has been widely practised, but opinions are divided as to its value. Mr. PEARCE GOULD published in 1899 the results of his first 50 cases after

**TRENDELENBURG'S** operation, and at the lecture he presented a table showing the present condition of the patients in all the cases operated on since, so far as they had been seen or reported on. These were 50 in number, and they showed clearly the beneficial effect of the operation in most cases. Except in two instances all the patients expressed themselves as being in less pain than before the operation; in no case had any increase of the varix occurred, and the tendency to thrombosis was greatly lessened. The lecturer summed up his remarks on treatment by saying that in **TRENDELENBURG'S** operation we have a simple and safe proceeding and one very useful in nearly all cases of varix. In conclusion we may add that the lecture was an excellent illustration of the light which may be thrown on a subject generally supposed to be fully understood by a careful consideration of facts and logical deductions from them.

# Annotations.

"Ne quid nimis."

## THE NATIONAL PHYSICAL LABORATORY.

RATHER more than 30 years ago the suggestion was made by Lord Kelvin that the nation should possess a physical laboratory in which standards could be preserved and the work of standardisation carried on. The opening of the National Physical Laboratory at Teddington by the Prince of Wales on Wednesday, March 19th, marks the consummation of this valuable suggestion, although the equipment of some departments is not yet complete for want of funds. The work which this institution will undertake is of the most important kind. It will relate chiefly to the standardisation and verification of instruments and the determination of physical constants. Ample scope for the investigation of certain industrial problems in which the application of scientific study and research is indicated will be afforded as the income of the institution will allow. The Government has granted £14,000 for fitting up Bushy House (an old Royal residence) for the purpose and a maintenance of £4000 a year. It is believed that the house is remote from external physical disturbances, special attention having been given to isolating the building for the purpose of conducting electrical and magnetic measurements. It is to be hoped that the lack of funds owing to which the equipments in some respects are deficient will soon be made up and that the nation will by its practical help realise the importance of such an institution being maintained in an efficient state

## THE METROPOLITAN WATER-SUPPLY.

THE report of the Water Examiner on the condition of the metropolitan water-supply during the month of January last has at length been published The Thames water at Hampton, Molesey, and Sunbury was "more or less coloured" from the first to the seventh day of the month and was described as of "indifferent" quality during that period by the engineer to the Chelsea Company. The height of the river varied between a point one foot above and one seven inches below the average summer level The daily average amount of water distributed by the eight companies was 198,233,165 gallons for a population estimated at 6,314,223, which represents a daily consumption per head of 31 39 gallons. The companies which deliver less than this amount daily per individual are the Kent, the New River, and the East London; the others deliver more. During the month of January, 1902, the New River and the Lambeth companies distributed a larger quantity of water per head to their customers than they did in the corresponding month of the year 1901; each of the other companies delivered less per head than during the earlier period. The Lambeth Company's water on Jan. 1st, 3rd, 6th, and 8th was slightly opalescent. The water of the Lambeth Company also exhibited "the deepest average tint of brown." Dr. T. E Thorpe, F.R S., the analyst to the Local Government Board, reports that he made a full analysis of one specimen each of water derived from the mains of each company. The samples were taken on Jan. 20th—a date on which the Thames water was not in a "bad" or "indifferent" condition. The proportional amount of organic impurity found in the samples examined is numerically represented as follows:—Kent Company 1·1, New River 1·4, Lambeth 3 4, Southwark 3 6, Grand Junction 4·3, West Middlesex 4·5, East London 5 0, and Chelsea 5·3. There is one paragraph of the Water Examiner's report which as it stands is incomprehensible or incomplete. It is as follows (p. 5): "The river intake of the filters of the Southwark and Vauxhall Company at Hampton was closed from the 1st to the 8th of the month inclusive"—that is readily understood: the engineer to the Southwark Company preferred not to introduce flood water directly to the filter-beds The paragraph continues, "And the intake of the Lambeth Company was also closed from the 6th to the 18th inclusive." If this be so the intake was closed for 13 days. The reservoir storage capacity possessed by the Lambeth Company is stated on the next page (p. 4) to be sufficient only to contain a supply for 4·6 days—indeed, not sufficient for that time, because (p. 4) "for several reasons the reservoirs cannot be drawn down to the limit of their capacity, and the available storage may be taken at about 15 per cent. less than that above stated." For over a year this little explanation has appeared monthly—perhaps it is not too much to hope that some day the Water Examiner may give as accurately as possible the available capacity of the reservoirs of each of the metropolitan water companies. The question which more immediately excites our curiosity is, Where and by what means did the Lambeth Company obtain water from the 6th to the 18th of January last (both days inclusive)?

## UNAVOIDABLE ERROR.

THE following story, which we quote from the *Times* of March 10th, was told at the Thames Police-court. It is quite probable that upon investigation it may have been found inaccurate in its details, but it suggests some of the hardships that arise almost unavoidably when dangerous infectious disorders break out among the poor. A man had been living at some model dwellings at Bow and some time ago was suffering from a cold, but by some means it got about that he was suffering from small-pox. By order of the local authorities he was removed to the small-pox hospital and after being detained there for some days he was allowed to go as there was nothing the matter with him. On returning to his rooms he found that all his things had been removed and destroyed and he now wanted to know who was responsible for the loss which he had sustained. The magistrate is reported as saying that he was unable to answer the question, but that he advised the applicant to see the local authorities. Probably Mr. Dickinson felt that, as we have suggested, the facts of the case were not fully before him. The Public Health and Infectious Diseases (Notification) Acts contain provisions designed with a view to protect the public at large when individuals are found to be suffering from dangerous infectious disorders, but certainly without any desire to inflict unnecessary hardship on the sick and extensive education, and it is much to be wished that the teachers of the young should at all convenient seasons, whether in the course of religious or of lay instruction, instil into their minds the duty of protecting others even to their own inconvenience. With the inculcation of a sense of such duty increased knowledge of the sources of disease and the possibilities of sanitary science would be of more avail. At the present time, through the ignorance of some and the callousness of others, disease is spread in all populous centres in a terrible, because in an entirely unnecessary, manner. We cannot help thinking that the board schools might well come to the rescue of the community with a little plain talk to their charges.

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## Varicose Veins.

THE Lettsomian Lectures of the Medical Society of London were established in 1850. They are always intrusted to some distinguished Fellow, and this year the lecturer was Mr. A. PEARCE GOULD. It is generally understood that the subjects of these lectures are intended to be as practical as possible, and Mr. PEARCE GOULD'S choice of the subject of varicose veins for his first lecture (which was published in THE LANCET of March 1st, p. 576) was very happy. It is a disease which is exceedingly common, obscure in its origin, and but little amenable to the many methods of treatment adopted. Many who suffer from varix are in good, even in robust, health. This fact is against the condition being a degeneration. Much importance in the production of varix is usually attributed to obstruction to the return of venous blood as by pressure on the larger veins. Mr. PEARCE GOULD does not assert that pressure has no effect, but he believes that it is unworthy of being considered in comparison with other factors. He showed that in the vast majority of cases varicose veins first appear before growth is complete; thus out of 50 consecutive cases of varicose veins coming under his observation the condition was manifest before the age of 25 years in 41, that is to say, in at least 80 per cent. of cases the varix appeared before development was complete. Now, as it is certain that venous obstruction does not predominate during adolescence, hindrance to the venous circulation cannot, he argues, be an important factor in the production of varicose veins. Another argument on which the lecturer rightly laid stress is the conspicuous absence in this disease of all the usual signs, symptoms, and consequences of venous obstruction. Œdema, lividity, and impairment of function are rarely seen in varix, while in cases in which undoubted venous obstruction is present—as, for instance, when a bandage has been applied too tightly—discomfort immediately follows, the whole limb becomes obviously congested, and œdema rapidly supervenes. Further, the operative treatment that is usually adopted for varicose veins—namely, ligature or excision—is itself a potent argument against the obstruction theory, for, if obstruction is the cause, to excise the varix or to ligature the main cutaneous vein above must be an utterly irrational procedure, yet all surgeons will acknowledge the value of both of these measures.

Of all the suggested causes of venous obstruction leading to varix pregnancy holds the most conspicuous place, but Mr. PEARCE GOULD pointed out that in most cases careful inquiry will elicit the fact that the enlarged veins had been noticed in early life before marriage, but that the patients had never been troubled by them until pregnancy occurred. The important vaso motor disturbances which are produced in some women by pregnancy show how greatly the vascular system can be affected by this condition. Therefore we need feel no surprise that the veins should suffer also, quite apart from any pressure on them. Large tumours of the ovary and uterus probably cause quite as much pressure on the iliac veins as does a pregnant uterus, yet they are much less frequently attended with troublesome varix of the lower limbs. There is, however, a still more forcible argument against the pressure theory, and this is to be found in the relative proportions in which the sexes are affected with varicose veins. We find that, according to Mr. PEARCE GOULD'S figures, of 245 cases, made up of cases seen in private and cases seen during the last six years in hospital practice (cases of varicocele being excluded), 153 were men and only 92 were women. Of course, if the cases of varicocele had been added the excess of male patients over female would have been greatly increased. The rôle, therefore, of pregnancy in the production of varix must be unimportant. If, however, we are compelled by facts to throw over the obstruction theory of the etiology of varix, what can be put in its place? Mr PEARCE GOULD answers that varicose veins are venous overgrowths—that is to say, venous angeiomata. He brings forward cases which demonstrate that even in the latter half of life veins may form, constituting what may be called a "venous angeioma," while in evidence that varix is really a variety of angeioma he quotes many proofs. In the first place we occasionally meet with combinations of undoubted venous nævus and varix; and there are other cases in which we might hesitate as to which term should be employed, or in which, indeed, either might be used with perfect propriety. Secondly, the irregular distribution of varicose veins is much in favour of the view that we are dealing with an over-development of the venous tissue. A further proof is to be found in the distinctly hereditary character of varix, which may, indeed, in some cases be traced through three generations. Moreover, in the majority of cases an extreme degree of varix persisting for many years is quite compatible with unimpaired function and structure of the parts from which the varicose veins receive their blood. Mr PEARCE GOULD considers that the minute structure of a varicose vein, containing as it does an increase of muscular tissue, is in favour of the developmental theory—the theory, that is, that varices are essentially the result of an over-development of venous tissue. We must acknowledge that these arguments are of great weight and go far towards establishing the lecturer's contention.

The latter half of the lecture dealt with the question of treatment. In 1891 TRENDELENBURG of Bonn introduced a novel method of treating varicose veins by ligature of the great saphena vein in the upper part of the thigh. He showed that the enlarged veins filled from the proximate end and that pressure over the great saphena prevented the blood from entering them. The operation has been widely practised, but opinions are divided as to its value. Mr. PEARCE GOULD published in 1899 the results of his first 50 cases after of Physicians and a Doctor of Medicine of Cambridge University, that "no man brought more mind to his profession," and it is a question whether the man thus appraised really lost caste, as his biographers aver, by first patenting and then advertising a drug. Certain it is that he was struck off no books, and Dr. Johnson, that model of scrupulous honour, was his friend to the last. Was he even censured for making a false specification in his patent? And what was the state of professional feeling which permitted a Doctor of Medicine to publish a "Vindication" of his powders? In the seventeenth century advertisements setting forth the merits of medical graduates and other apparently reputable persons were common in the journals. In the *True Domestick Intelligence* for March, 1680, we find Thomas Kyrle issuing an extraordinary manifesto which begins, "The old and true way of practising Physick revived and published for the publick good." The puff, which is very long, describes his system of charging fees only in case of cure, his readiness to treat the poor for "thanks" only, and so on. The price of his doses is given and his address, "the first balcony" in a certain city lane. And this man, Thomas Kyrle, or Kirleus, was no quack, but Charles II.'s "sworn phisitian in ordinary," and he issued his statement, as he avers, under the seal of the College of Physicians and with their approval. In the "twenties" and "thirties" of the century just passed these medical declarations to the public seem to have been still quite in vogue. An old newspaper cutting now lying before us "respectfully informs the public" that a Member of the Royal College of Surgeons in London "has had more than 30 years' practice in midwifery, and has paid particular attention to the operative department of surgery," including the successful treatment of hare-lip and ulcers in the legs. On the other hand, it is noticeable that several satirists in the eighteenth century and earlier make no mention of printed advertisements. In his brilliant "Dose for the Doctors" (1789) "Gregory Glyster, an Old Practitioner," most maliciously and wittily suggests a dozen ways in which a medical man may puff himself without seeming to do so, but print is not one of them, though ornamental door-plates and exaggerated medical degrees are duly recommended. Again, writing in 1651, Robert Record reprints in a slightly modernised form "A Detection of Unskilfull Physitians," which is reported to be the work of a Salisbury doctor in Queen Elizabeth's reign. And here again printed puffery is not hinted at, although the country is said to be infested by a "sort of fellows, which nowadays almost in all places so rashly, so fondly, and so wickedly do abuse the noble Art and Science of Physick."

## WOOLWICH AND THE HOUSING OF THE WORKING-CLASSES.

DR. SIDNEY DAVIES, the medical officer of health of the borough of Woolwich, has issued a "Further Report to Housing of Working-Classes Committee on Overcrowding and the Population requiring Re-housing in the Borough of Woolwich." The facts disclosed by this report are by no means creditable to the civilisation of the twentieth century. Houses are difficult to obtain in the district under Dr. Davies's charge for two reasons. First, there is a definite lack of houses, and, secondly, people with large families are very often refused as tenants, even though they can pay the high rents demanded. This lack of houses reacts unfavourably on sanitation because, says Dr. Davies, "Landlords who only look to their rents are careless as to the complaints of tenants as to defects in a house, knowing that however bad its condition it is sure to be reoccupied as soon as it is empty. The health authority and its officers hesitate to take steps for closing a house which is sanitarily unfit for occupation, knowing that the displaced tenants may be unable to find adequate accommodation elsewhere. 'A bad house,' it is sometimes said, 'is better than no house at all.'" It may be said that there is a certain class of tenants who are most destructive and who think nothing of tearing down sanitary fittings for the purpose of selling them as old metal. The damage done by such is, however, in no way comparable to that done by the bad landlord. He it is to whom are due the horrible overcrowding, the one-roomed tenements and the immorality and vice which are the inevitable accompaniments of such overcrowding. For a four-roomed house he will draw over £30 per annum in rent and a court or street of such houses will be a veritable focus of disease affecting the neighbourhood far and wide. When matters get to such a pitch that after great difficulties his property is ordered to be destroyed he is bought out at a high rate and goes away to buy or to build further fever dens.

## VACCINATION DIFFICULTIES.

IN THE LANCET of March 15th, p. 761, we commented upon sundry matters concerning vaccination and public vaccinators at Helston. The town council had issued bills pointing out the advantages of vaccination and revaccination and intimating that anybody who wanted to be vaccinated could be vaccinated by the public vaccinator, whose name was given. It is obvious, as we noted, that in a case such as this every care would have to be taken that the public vaccinator did not attract other practitioner's patients. In this instance, however, the public vaccinator had nothing to do with the issue of the circular. A correspondent has forwarded for our inspection a circular signed by a practitioner who is medical officer of health of a certain urban district council. The circular points out the advantages of vaccination and revaccination. Our correspondent, though, writes to us that he considers the issue of the circular very unfair to himself and to other men in the district, for the medical officer of health in question is in private practice. We think it would have been better if it had been made plain that the circular in question had been issued by the urban district council, for though it apparently only emanates from the medical man, yet we can hardly suppose that he, not being a medical officer of health who is not allowed private practice, would send out such a circular on his own initiative. Possibly the difficulty might be got over by making every medical man a public vaccinator, and this course has been recently urged by the adoption of the following resolution by a meeting of the council of the Lancashire and Cheshire branch of the British Medical Association:—

> That in the opinion of this council, seeing that vaccination is made compulsory, in the interests of the public health, the parent or guardian of a child should have the right to select any registered medical practitioner, who is willing to do so, to perform the vaccination, and that the cost of the same should be defrayed by the State at a fixed rate, provided always that the work so done shall reach the standard aimed at by the Local Government Board in the case of public vaccinators, and that no work falling short of this standard should be accepted for the purpose of public remuneration.

The matter is one which presents many difficulties. Vaccination and revaccination should be indefatigably preached. It is the duty of all health authorities, of individual medical men, and of the clergy to impress people with the value of the practice; but individual medical men must be careful to avoid any appearance of wishing to draw away the patients of their brother practitioners. With regard to the position at Helston, at the meeting of the Helston Board of Guardians held on March 15th it was decided to ask all the public vaccinators to continue to act on their old contracts. The guardians at first wished the public vaccinators to provide all extra calf-lymph at their own expense, but these gentlemen declined to accept these terms and consequently the guardians decided to pay for all such extra lymph. The clerk was instructed to write to all the public vaccinators rescinding the notice to determine persons. The local authority may direct the destruction of bedding, clothing, or other articles which have been exposed to infection from any dangerous infectious disorder, but it is also empowered to give compensation for the destruction so wrought. We do not believe that such compensation would or could be refused because it was discovered that the destruction was not required owing to there having been in point of fact no exposure to infection. With regard to any distress or inconvenience entailed upon the individual wrongly suspected and removed, but not in fact suffering from a dangerous infectious disorder, some distress and inconvenience must necessarily, we fear, be borne at times by individuals if the public is to be protected. Those locally responsible for the public health have certain powers given to them which enable them to take charge of persons suffering from specified disorders who are without proper lodging and accommodation. In such cases action is only taken on the certificate of a legally qualified medical practitioner, and, apart from any negligence, it is not easy to see any legal grounds upon which compensation might be claimed from the sanitary authority as such. On the other hand, members and officials of local authorities and persons acting under the directions of local authorities are protected from personal liability for acts done by them *bonâ fide* for the purpose of executing their duties under the law, and, apart from negligence, we do not understand how the person in whose case a mistake has been made can have any claim against individuals. Still, such cases as that to which we have referred are hard cases when they occur, and it is dispensing cold comfort to hint to the man who has been taken from his home unnecessarily that he owes it to vaccination that he has been in a small-pox hospital without contracting small-pox. That mistakes in the diagnosis of small-pox must inevitably occur needs no demonstration, but we may call attention to an answer given by Mr. Long to a question in the House of Commons on March 10th. The right honourable gentleman stated that in Bethnal Green in January and February 136 cases were reported, which presumably means certified, as small-pox, and that in 13 *cases it was found that mistakes had been made.* This, however, does not imply that the cases so reported were dealt with as small-pox cases before the error was discovered, nor does it mean that there was any negligence or default of any kind on the part of those by whom, or through whom, the reports were made. Such mistakes, moreover, however much they are to be regretted, are, to use a popular expression, "mistakes on the right side," and are not so dangerous *to the community at large as* are *those* which leave persons who are suffering from small-pox to be sources of infection to all around them.

## LIGHT AND MALARIA.

THE demonstration of the plasmodium as the *vera causa* of malarial fevers and the successive sporulations of the parasite as the exciting causes of the paroxysms have exploded many popular and traditional beliefs and have explained those that experience has established as to the conditions under which these diseases prevail and the means by which they may be prevented, as being simply such as are most favourable to the multiplication of the anopheles and such as tend to its extermination. But there are still some facts hitherto unexplained pointing to conditions connected with solar phenomena, *and not unnaturally ascribed to the sun's* heat as the most obvious and palpable of these. But it is not easy to imagine how the parasite can be influenced by external temperatures, since it is itself in a medium, the blood, which is not affected thereby, the pyrexia of the paroxysm being the effect, not the cause, of its intermittent activity. In the *American Journal of the Medical Sciences* for February Dr. A. F. A. King of New York puts forward an ingenious suggestion that the actual factor in question is the light, not the heat, of the sun, and that the relative immunity of the very dark and black races of man is due to the lesser translucency of their skins. Celli and Tacchini had noticed that the years in which the fevers were most severe in Italy were by no means the hottest, though the number of cloudless days was above the *average. Jackson remarked* that in Jamaica a camp over which a fog hung all day suffered less than did those apparently better situated, and the beneficial effects of several days of heavy rain have often been noticed. Flint states that paroxysms very rarely occur at night and that, recurring some hours later each successive day, when they fall after dark they are usually deferred to the following morning, when they may sometimes be avoided by the patient lying in bed through the day. The experiments of Harrington and Leaming on the common amœba lend considerable support to this hypothesis, for they found that the amœbæ "streamed" under the influence of bright sunshine, but still more actively when exposed to red light, whereas the process was arrested in the darkness and was completely inhibited by the violet and ultra-violet rays. Since the skin of all but the blackest races, and especially that of white men, is more or less translucent, it is evident that blood parasites may be susceptible to the influence of the light of the sun, though protected by the constant heat of the body from that of external temperature, and that it is chiefly the red rays that can reach them through the medium of the blood. Until it shall have been proved that the blood of the negro is darker than is that of the white man, and that the colour of the latter can be perceptibly altered by practicable dosage with methyl blue or can be made fluorescent by the administration of quinine, we must forbear following Dr. King in his speculations on these points, but we think that he has made out a fair case for his light theory and for the trial of what may be called "scoto-therapy" in the treatment of malarial fevers—that is, of keeping the patient in a dark room and *in the intervals between the attacks* of clothing him in garments with linings impenetrable by *light*

## OLD MEDICAL PUFFS.

THE recent controversy on the impropriety of advertising the name of a medical man without his knowledge raises again the whole question of medical advertisements. In certain of its aspects, at least, medical etiquette is undoubtedly in process of growth even now, and in the absence of definite evidence wonder may be expressed whether, as a whole, it has arisen, like the Common Law, from humble Anglo-Saxon beginnings, or whether, like a creed, its essentials come to us stereotyped out of Latin and Hellenic antiquity. Supposing the medical code of honour to be, so to speak, progressive, then it follows that there was a time when medical ethics permitted puffery. Certain it is that old newspapers abound in medical puffs which in many cases emanate from seemingly respectable sources. The question is, How were these puffs viewed by the medical men of the day? *Were they considered venial or disgraceful?* Dr. James's "Fever Powders" were regularly vaunted in print, as poor Dr. Goldsmith found to his cost when he insisted on taking them contrary to his apothecary's advice. Oliver Goldsmith died from fever, and James's powders were especially recommended as "a most effectual Remedy for all internal Inflammations, Pleurisies, Quincies, acute Rheumatisms, and the *Lowness of Spirits, and Uneasinesses* proceeding from slow and latent Fevers, which are generally mistaken for Vapours and Hysterics." Thus ran Dr. James's advertisement as set forth by the firm of Newbery. Dr. Johnson said of James, who was a Fellow of the Royal College secured everywhere in the country. Dr. Reynolds urged the necessity of very close observation of cases of peripheral neuritis for the detection of two symptoms which may be considered specially to point to arsenic—pigmentation and keratosis. He also drew attention to the large quantity of arsenic sometimes present in reduced iron—B.P. ferrum redactum in some cases having been found to contain as much as 1 per cent. of arsenic. Many practitioners have found special advantage from administering iron in this form in cases of anæmia, and it is possible that this beneficial result arises from the fact that with every grain of reduced iron a dose equivalent to a minim of liquor arsenicalis is administered. The possibility, at any rate, deserves to be noted.

## THE INTERNATIONAL CONGRESS OF GYNÆCOLOGY AND OBSTETRICS.

The Fourth International Congress of Gynæcology and Obstetrics will be held in Rome under the patronage of the King of Italy from Sept. 15th to the 21st, 1902. The subjects on which papers are to be read are—(1) Medical Indications for Interrupting Pregnancy; (2) Hysterectomy for Puerperal Infection; (3) Genital Tuberculosis; and (4) Surgical Treatment of Cancer of the Uterus. The general president is Professor Ercole Pasquali of Rome; the presidents of the obstetrical and gynæcological sections are respectively Professor Morisani and Professor Mangiagalli; the general secretary is Professor Ernesto Pestalozza, 60 Via Alfani, Florence; the treasurer is Dr. C. Micheli, 127 Via Rasella, Rome; and the honorary secretary for Great Britain and Ireland is Dr. William J. Gow, 27, Weymouth-street, London, W. The membership subscription, including the right to receive the printed transactions of the congress, is 25 lire (£1). Relatives of members will be admitted to the official entertainments on the payment of 10 lire (8*s.*). These sums may be sent either to Dr. Micheli or to the secretaries for the countries to which members belong. The time assigned to each paper is not to exceed 15 minutes. Intending readers of papers are requested to send the titles, and if possible short summaries, to the general secretary before the end of May.

## THE COAL SMOKE ABATEMENT SOCIETY.

The third annual report of this excellent society shows an increase in good work of which the society may well be proud. We are pleased to see that the borough councils are more alive to the nuisance of foul, dirty smoke than were the old vestries. Still, they might accomplish even more than they do. For instance, 225 nuisances were reported to the Public Health Committee of Chiswick, but only eight summonses were issued. The Coal Smoke Abatement Society at present has two inspectors working under it and the council of the City of Westminster has appointed two of its own. We advise everyone to join this society and to read the report of Sir William Richmond's speech at the annual meeting of the society which was held on Nov. 20th, 1900, at Grosvenor House. There the reader will find facts and figures, some of which we have quoted above, which will make him grateful to the society and profoundly disgusted with magistrates and local authorities. The latter, though less apathetic than the vestries are still not as active as they might be and the former inflict most inadequate fines. As we have pointed out over and over again the excuse about not being able to get Welsh coal is nonsense. If manufacturers like they can easily make their furnaces smokeless. When they find that it is better for their pockets that the furnace should be so they take steps to make it smokeless, as in the case of the Nottingham lace makers. If, then, magistrates will only fine all offenders as heavily as possible the said offenders will manage to get smokeless furnaces, and we shall be spared such days as March 6th and 11th, when London resembled portions of the Underground Railway in its worst days.

## SMALL-POX IN LONDON.

The returns for the past week show the following figures: on Saturday, March 15th, there were 43 fresh cases notified and removed; on Sunday, the 16th, there were 45 fresh cases; on Monday, the 17th, there were 82 fresh cases; on Tuesday, the 18th, there were 52 fresh cases; and on Wednesday, the 19th, there were 71 fresh cases.

## POST-MORTEM EXAMINATIONS IN UNION HOSPITALS.

At the weekly meeting of the Lurgan Board of Guardians held on March 6th one of the members of the board complained that the medical officers of the workhouse had been in the habit of making post-mortem examinations. The medical officer of the workhouse hospital, Dr. J S. Darling, having been sent for, said that post-mortem examinations were occasionally held on patients who had died there. He had no explanation to offer; if the cause of death was a doubtful one and where the patient had no friends he made a post-mortem examination. He had made six during the past six months and three during the past month. There might be months without such an examination being made, but it was never done with annoyance to any friends On being asked if he would refrain from making necropsies, Dr. Darling said that he would if the guardians made an order and the Local Government Board sanctioned it. If the board of guardians left the matter in his hands it would only be in exceptional cases where there was a genuine need that he would make a post-mortem examination. Notwithstanding this extremely fair promise the guardians decided by a large majority that no more post-mortem examinations should be held unless with the consent of the board. It is a great pity that the medical officer of the Lurgan workhouse hospital should be hampered in his efforts (in which, we are informed, he has always considered the feelings of the friends of patients) to verify the diagnosis of disease by post-mortem examination. Without such a method the science of medicine would soon come to a complete standstill.

## ACHONDROPLASIA.

In the March number of the *Polyclinic* an interesting account of a case of achondroplasia is contributed by Mr. James Cantlie. The patient, a girl, aged 13 years, presented the usual symptoms of conspicuously short upper and lower limbs. When she sat by the side of a healthy well-grown girl of normal development the two girls appeared to be of about the same height, but when they assumed the erect posture there was a great disparity on account of the shortness of the patient's lower limbs. Similarly her upper limbs were greatly wanting in length, the tips of the fingers, as the arms hung by the sides, hardly reaching below the iliac crests. Her head appeared to be relatively large, but it was to the defective elongation of the limbs associated with a trunk of approximately normal size that she owed her peculiar aspect. Mr. Cantlie points out that achondroplasia, though sometimes described as fœtal rickets or fœtal cretinism, is essentially distinct from either of these conditions. His patient, though helpless in many particulars because of the maldevelopment of her limbs, was a very intelligent girl whose facial aspect and general bearing were far removed from the mental dulness of cretinism. Achondroplasia is an arrested development in certain portions of the bony skeleton, the parts affected being those which are normally ossified in cartilage during the earlier months of fœtal life. Bones their existing contracts A letter was received, signed by all the public vaccinators, drawing attention to some remarks which the chairman was stated to have made at the last meeting and requesting an apology The chairman stated he had no intention of hurting the feelings of these gentlemen and he was very sorry if he had done so

## THE CHELTENHAM EAR, EYE, AND THROAT HOSPITAL

AT the annual general meeting of subscribers to the above institution held on March 5th two very important motions were carried The first was as follows "That the hospital in future shall be a free hospital" The motion for this purpose was introduced by Mr G A Cardew in an admirable speech "*If,' he said, "subscribers asked*, 'What shall we get for our subscriptions?' we can reply, 'Exactly the same as before, except that you will be able to send in patients regardless of time and not have to tell them to wait until your next stock of tickets arrives'" We like Mr Cardew's cheery optimism, for there is a class of subscriber who will think "What good do I get by subscribing when anyone else who does not subscribe can recommend patients as well as myself?' However, this class of subscriber is rare We congratulate the authorities of the hospital on their decision The other important resolution at which the meeting arrived was to appoint a resident medical officer The brunt of the work, exclusive of dental matters, has hitherto been borne by Dr J A Bower, the honorary surgeon, although he has had the assistance of Mr C E Abbott as anæsthetist and in a measure as assistant surgeon Every hospital should, however, in our opinion, possess a resident medical officer, and we earnestly hope that the additional £200 per annum, which the appointment of such an officer will involve, will not be sought for in vain

## THE HEREDITARY SEQUELÆ OF ALCOHOLISM

DR. T D CROTHERS of Connecticut contributes to the January number of the *Quarterly Journal of Inebriety* a valuable preliminary report on Heredity and Alcoholism, containing some of the main conclusions reached by a committee of physicians which was appointed at a Medical Temperance Congress held in the United States in 1888 and of which he was chairman The collection of material for the report, says Dr Crothers, has gone on during 13 years and up to the date of publication of the article fairly accurate histories had been collected of 1744 cases of inebriety The majority of these cases (about 1300) had come under Dr Crother's personal care and observation The facts were carefully ascertained and collected, and the inquiry was not limited to heredity alone but included "every condition and circumstance which could have an etiological bearing in the development of inebriety In a few cases the existence of inebriety or of mental disorder in the parents was carefully concealed *and had to be ascertained indirectly*, or was at first denied and subsequently disclosed "The central conclusion which cannot be stated too strongly,' says Dr Crothers "is that the injury from alcohol to the cells and nerve tissues is transmitted to the next generation with absolute certainty in some form or other'—i e as a drink craving a neurosis or a mental defect. Of the 1744 inebriates with trustworthy histories 1080 had a direct history of alcoholic heredity, 390 cases were traceable to bodily diseases injuries or shocks, 180 were attributable to starvation and poisoning, while 85 cases were due to ignorance, bad surroundings and imitation (mental contagion) In only the remaining nine cases were the causes so complex or so obscure that no classification could be made of them Regarding the 1080 patients with a direct alcoholic heredity Dr Crothers writes "In most [of these] there seemed to be largely transmitted a special predisposition to find relief in spirits, or a mental diathesis (instability) with want of self control, and often a species of psychical pain and unrest which found greatest relief from the use of spirits" In 430 of these patients there was hereditary transmission of the drink craving from the parents and in 224 from the grandparents (atavic heredity), while in 290 cases some degree of psychopathic heredity or mental abnormality could also be traced in the parentage While a study of the family records of these cases show that some members of these families were endowed with ability and even brilliancy in the fields of theology, politics, music, law, and art, many others showed criminal or vagrant tendencies or were otherwise mentally and morally defective and sank rapidly into the lower strata of social life In 49 instances the inebriates belonged to the "epileptoid' class both as regards personal symptoms and hereditary antecedents Such persons were characterised by "alcoholic outbreaks of stormy or cyclonic development," not necessarily or strictly periodic, developing suddenly and disappearing with little or no trace behind The ancestors of these persons were always noted for their sudden explosive nerve energy persons whose whole conduct throughout life was an alternation of wild extremes continually changing in politics in religion, and in business, always leading forlorn hopes and always defeated, physically suffering from disease and making remarkable recoveries, at one time using spirit then changing to other remedies and always under an obsession' Among the female members of these families were many neurotic individuals addicted to drugs, Christian scientists and faith curers, and mental or moral invalids given to secret drinking Finally, various groups of inebriates were met with who either took to drinking as though driven by fate, at the same ages when their parents took to drink, or who manifested precocious sexual instincts or an abnormal craze for food as well as drink, or who readily became addicted to the morphia habit. The far reaching morbid effects of alcoholism were thus clearly proved

## ARSENIC IN BEER AND IN REDUCED IRON.

ON March 10th Dr E S Reynolds of Manchester gave some interesting evidence, which we reported last week (p 786) before the Royal Commission on Arsenical Poisoning Manchester and its neighbourhood contain large numbers of important breweries which used arsenical glucose and invert sugar supplied during 1900 by Messrs Bostock and Co, and as is well known Manchester suffered most severely during the epidemic of arsenical beer poisoning which then occurred It was to be expected that during the interval which has since elapsed no precaution would be omitted which Manchester brewers could take to eliminate arsenic not merely from brewing sugars but from malt which in certain neighbourhoods owing to the fuel used appears to be capable of taking up arsenic This seems to have *been the case and Dr Reynolds testified that in some Man*chester beers no arsenic can now be found by the most delicate test, while the highest quantity has been under $\frac{1}{100}$th of a grain per gallon Dr Reynolds to whom belongs the credit of first discovering the cause of the Manchester outbreak in 1900 informed the Commission that alcoholic neuritis as understood for years in Manchester, has almost disappeared and that skin pigmentation and herpes formerly common in cases where neither arsenic nor alcohol was suspected as a cause have largely diminished, and he added the interesting observation that cases of "alcoholic heart to which a great deal of attention has been paid in Manchester and which has formed the subject of several monographs can now no longer be found at all It is evident however, from the facts reported by Dr J F Hodgson regarding cases at Halifax that similar freedom of beer from arsenic has not been contemporary described as "a fraud on the poor as it leads them to believe from its description that the addition of milk enriches it [butter], instead of impoverishing it." And where is this sort of thing, this mixing, to be stopped? For as matters stand at present disclosure would permit the addition of 40 or even more per cent. of water if it could be successfully incorporated. Mr. Justice Wills has given his opinion that this incorporation of milk with butter is done with the object of making "a spurious profit." If that is so, surely the law needs to be amended in order to stop this practice Average milk contains 88 per cent. of water, so that adding milk to butter is tantamount to adding water to it. The unjust difference is that the man who adds water to his butter cannot get off by declaring that such is the case, while the man who adds milk can, although by so doing he may raise the water to nearly 30 per cent. Anything more anomalous than that we cannot imagine. If something is not done soon the butter trade will be completely demoralised by this regrettable concession.

## SMALL-POX AT CHARTERHOUSE SCHOOL.

THE alarming rumours of small-pox at Charterhouse chool, Godalming, and the startling statements that have ppeared in the press do not appear to have been fully justified by the facts. Upon inquiry into the circumstances we find the following to be the true history of the case. On Dec. 24th one of the boys while at home developed spots which had all the characteristics of variola. An experienced physician pronounced the case to be one of small-pox and it was so treated and registered as such by the medical officer of health. The boy had been vaccinated some three weeks before the appearance of the rash. On Feb. 22nd the boy returned to Godalming and on March 5th on account of some inflammation of the eye he was sent into the school sanatorium, where on March 7th a rash was observed of exactly the same character as that seen in December. In the opinion of three skilled medical men these spots were due to small-pox and, though the case was anomalous, there was nothing else to do but to treat the boy as a patient suffering from variola. As a matter of course the most rigorous precautions have been taken and in all cases revaccination, where required, has been enforced The occurrence has, naturally enough, excited some criticisms on the medical and nursing conditions at Charterhouse School that may be more or less disregarded, but we think that it would be advisable for the authorities carefully to consider whether the matrons of the different houses are afforded sufficient skilled help in nursing boys under their care

## THE PSYCHOLOGY OF ANARCHISM.

IN the *Scottish Medical and Surgical Journal* for March Dr. George R. Wilson of Perth Asylum has published a brief and interesting paper on "Anarchism, the Insanity of Delusive Expedient," in which, after referring to the medico-psychological aspects of the case of Czolgosz (the assassin of the late President McKinley), the question is raised as to the "psychological significance of this social disease, anarchy, and whether we are quite justified in regarding it as consistent with sanity" The intelligence of the anarchist was, it is argued, probably above the average of those of his class in society, but such intelligence was marred by characteristic defects Of these, the fundamental defect was a morbid sense of injustice and oppression, a tendency to regard civilised institutions as wrong, unjust, and tyrannical. It was the creed of the weakling mind which found the conditions of life too hard and which lacked courage and perseverance to face the situation and to redeem itself from it. The anarchist regardec
institutions and the accepted opinion and customs
as "systematised engines of partiality and cruelty,"
tude of mind which closely bordered on that of the
and which readily developed delusions of
Another "stigma" was characteristic of the
mind—viz., an excessive tenacity of belief which w
unto an insane delusion in that the mind was
seeing and examining the grounds for its creed or l
it found the doctrines of anarchy satisfactory to its
inclinations and accepted them without thinking
anarchist was a reformer whose ideas ran counter to
tendencies of social evolution and who, finding his
ings and expedients futile to gain converts, did
hesitate to kill His criminality was found in his
instincts and his insanity was obvious in its
"the ineptitude of the act in relation to the end
Moreover, the mind of the anarchist was unduly
"suggestion" and depended for its existence upon inte
course with like minds. When social inequality was
the ruling powers were corrupt and despotic anarchy might
tend to flourish as a social disease; but with the progress
social evolution, which, while it rendered the struggle for
life keener, tended also to make it more fair and just to the
competitors and helped to shelter and to guard the we
minded from the special vices and dangers to which they
might otherwise succumb, anarchy might be
expected to diminish.

THE debate on the Nature and Origin of Cancer
was inaugurated by the Chelsea Clinical Society with
success on March 11th is continued in our column
week, the debate having been resumed on Tuesday
March 18th Owing to the amount of material at
society's disposal it has now been decided to hold a t
meeting on Tuesday next, March 25th, at which comm
cations will be received from Professor Adami of Mo
University, Montreal, and Mr. W. R. Gaylord of New Yo
while Professor R. T. Hewlett and Mr. D'Arcy Power
speak. The debate will then be closed by Dr. J. F. Payı
All members of the medical profession will be welcomed
the third meeting as at the others.

MR HENRY N. CUSTANCE, who has been secretary to the Metropolitan Hospital Sunday Fund since 1873, has resigned that post owing to ill-health. Sir Edmund Hay Currie, who was an originator of the fund and who has been one of its honorary secretaries since its formation, has consented to act as secretary, and Mr. R. A. Owthwaite, who has been associated with Mr. Custance throughout his period of service, will continue his connexion with the fund under Sir Edmund Hay Currie.

THE Second International Congress for Electricity
Medicine and Radiography will be held at Berne
Sept. 1st to the 6th, 1902, and the Second
Congress for the Prophylaxis of Syphilis and of V
Diseases will be held at Brussels between the same
We shall give further details of both meetings in a
issue.

HIS MAJESTY THE KING has announced that
Coronation he will entertain at dinner 500,000 of his
subjects at an expense of £30,000 from his privy purse.

HIS MAJESTY THE KING has appointed Dr. James
to be an Esquire of the Order of the Hospital of St. John
Jerusalem in England.

resulting from ossification in membrane are formed as usual, and the same is true of those which, formed in cartilage, remain mainly or entirely cartilaginous until after the sixth month or so of fœtal life But the parts which are ossified in cartilage in early fœtal life are stunted in their development, as if from premature arrest of the ossifying process This defect applies to the long bones of the limbs, the ribs, the pelvis, and the greater part of the base of the skull.

## THE DISTRIBUTION OF PLAGUE.

DURING the week ending March 2nd 15 cases and 8 deaths from plague have been reported throughout all Egypt. 7 cases and 3 deaths occurred at Tantah, 1 case was admitted to hospital at Abusir, 1 at Kom-el-Nur, and one at Mit-Ghamr. 4 cases and 4 deaths occurred in villages near Zifteh and 1 death out of hospital at Mehallet Abu Aly near Mehalla Kebir in the Gharbieh province. The disease shows a tendency to spread in some of the outlying villages of the province of Garbieh, but has assumed no serious proportions. Great difficulty is experienced, however, in obtaining early and trustworthy information about suspicious cases of illness in the villages in which the sanitary authorities are obliged to rely on the information afforded by the sanitary barbers These are recognised Government officials, but are unpaid, and it is to their interest to be on good terms with the omdehs, scheiks, and inhabitants of their villages. As they depend for their livelihood on the latter, who are generally more inclined to conceal any cases of infectious disease than to announce them, the barbers' information, as may be imagined, is not of a very trustworthy nature During the week ending March 9th 12 cases of plague and 4 deaths from the disease have occurred throughout all Egypt. 1 case and 1 death occurred at Tantah, 1 case at Abusir, 2 cases and 1 death at Nahtai, and 8 cases and 2 deaths at Kom-el-Nur. As regards The Mauritius telegrams from the Governor received at the Colonial Office on March 7th and 14th state that for the week ending March 6th there were 19 cases of plague, of which five proved fatal, and for the week ending March 13th there were 10 cases of plague, of which seven were fatal.

## ACETYLENE AS AN ILLUMINANT IN WARFARE.

A GOOD and easily managed illuminant, portable and yet capable of maintaining a clear and steady light for lengthened periods in spite of wind and rain, is a desideratum which medical officers have long sought for, though so far without any very conspicuous success On active service the surgeon's duties are often heaviest during the hours of darkness, and it would indeed be a priceless boon if a lamp could be devised which would in the first place enable him to search rapidly and effectually for the wounded after an engagement, and next would afford the indispensable light without which it is utterly impossible for him to do justice ither to his patients or to modern science. The subject of acetylene as an active service illuminator was taken up a year or two since by Dr Nikolaï who extolled an apparatus consisting of a generator of the size of a haversack which was connected with a burner and reflector by means of a long rubber tube This apparatus was described at length in the *Deutsche Militärarztliche Zeitschrift* for October, 1899, but in the number of that journal for January last there is an article by Dr. Reh pointing out what he regards as fundamental defects in the highly-praised invention. To begin with it is far too large and too heavy, requiring the exclusive services of a bearer, and next, besides being very fragile it is awkward to manipulate and by no means unlikely to explode. According to Dr. Reh an acetylene campaign lamp ought to be very light and yet strong and be capable of being carried either in the hand or attached to the waist-belt so that the bearer can at the same time fulfil his normal duty. After experimenting for over two years Dr. Reh has succeeded in constructing an acetylene lantern which, in his opinion, has answered all requirements under the most severe tests with regard to rain, wind, storm, and intense cold. Every stretcher-bearer, he considers, should be provided with one of these lamps, which are constructed so simply that any person of average intelligence can learn the management in a few minutes When extra light is needed for an operation or any other cause three or five of the lamps can be attached to portable stanchions, or if desired, larger lamps can be provided on the same principle, though Dr. Reh does not think that this is necessary.

## WHAT IS WATERED BUTTER?

IT seems to us that further legislation in regard to the control of the sale of butter is being attempted upon most unsatisfactory lines It has been recommended by a Departmental Committee of the Board of Trade that 16 per cent. of water shall be the limit of genuine butter. To this recommendation the obviously weak-kneed rider is added that in the event of a disclosure being clearly made to the purchaser that the butter contains more water than this no offence shall be deemed to have been committed. In that case obviously there would practically be no limit to the extent to which butter may be watered. We do not believe in this principle of "disclosure" at all. At any rate the principle is not calculated to save the pocket of the purchaser. Take the case of the so-called milk-blended butter which contains at least 25 per cent of water derived, it is said, from the milk worked into it. At first this was sold simply as "butter," but the High Court of Justice decided that it could no longer be sold as "butter" and thereupon the term "milk-blended butter" was ingeniously introduced. The fact, however, that it contains 25 per cent. of water is disclosed on the wrapper and the price is 1*s.* per pound, and the average purchaser thinks that he is getting genuine butter so much cheaper than before As a matter of fact he is the loser, for out of 16 ounces of the milk blend at least four ounces are water, and he who pays 1*s.* a pound for water is hardly wise in his generation. Of course, the "disclosure" does not help him out of the delusion; the average member of the public is not educated sufficiently to understand it The Food and Drugs Act was intended to protect the consumer not only against injurious elements in his food but against fraud also, a fact which even the Lord Chief Justice of England seems to have lost sight of, for he ruled on one occasion that glucose might be permitted in marmalade as it was quite a harmless addition So is water to milk. The only chance of affording the consumer effectual protection seems to us to be by the adoption of standards by the legislature Genuine butter must be defined in the same way as genuine milk has been defined, but we think that a mistake is made in the case of the former by placing the limit upon the amount of water. Why not, instead, demand a standard amount of butter-fat in genuine butter? In other words, butter containing less than a prescribed amount of butter-fat should be deemed not to be genuine In the case of milk the standard is not based upon the amount of water permissible in it, but upon the amount of fat and the solids not fat respectively, and in the same way the proportion of fat should determine the genuineness or not of butter. Provided that this standard was reasonably high "milk-blended butter" would obviously come outside the definition of genuine butter As it is our authorities seem chary to initiate any definite action which shall put a stop to what Sir Edward Strachey has in a vigorous and timely letter to a

# THE METROPOLITAN WATER-SUPPLY.

## IV.[1]

### THE SOUTHWARK AND VAUXHALL WATERWORKS COMPANY: SOME QUESTIONS FOR THE PRESIDENT OF THE LOCAL GOVERNMENT BOARD.

EPIDEMIOLOGISTS ought possibly to be grateful to the former directors of the Southwark and Vauxhall Waterworks Company, for it was in consequence of the arrangements which they made that Dr. J. Snow was able to prove beyond the possibility of doubt that cholera was spread by means of water. The customers through whose sufferings this fact was established had no reason to be satisfied with the company, which "was purveying perhaps the filthiest stuff ever drunk by a civilised community." So the water was described by Mr. John Simon (now Sir John Simon, K.C.B.) in his report to the Right Hon. William Cowper, President of the Board of Health.[2] At that time the directors of the company declared the water to be "unexceptionably good" and the chairman contended that the works were capable of distributing from the Thames at Battersea a supply "inferior in no appreciable degree to the stream in any part of its course," and he protested against a change in the intake as "a wholly uncalled-for expenditure of capital." The Battersea station of the company still exists, but the intake has (in consequence of the powers of control exercised under the provisions of the Act of 1852) been long removed (to Hampton) and it was expected that before this time the old station would have been abandoned. It may be fair to state here that the directors of the Southwark and Vauxhall Waterworks Company, who said that the water which they supplied was of "unexceptionably good" quality, found support for their contention that they were not purveying the filthiest stuff possible, or at any rate that it was not unwholesome. "Gentlemen of deserved eminence as chemists (though, perhaps, not entitled to speak with equal authority on the causation of disease) were found willing to express opinions both that this water, nourishing a population of animalcules, would 'not be noxious' to health, and that we cannot in any part of the world connect the ravages of cholera 'with the quality of the water' consumed."[3] The water companies employed experts in those days. A description of the Battersea station of the Southwark and Vauxhall Company has been given in THE LANCET, of March 27th, 1897, p. 901, and it was then stated that the place would not be used after the completion of the alterations which were at the time in progress at Hampton. In these circumstances it was not deemed necessary to enter so fully into a description of all the details, as it might otherwise have been. "The sanitary arrangements," it was said, "are not strictly in accord with modern ideas." At that time a jakes or privy of the kind preferred by the late Colonel Sibthorpe was situated in the grounds.[4] The outlet of the other sanitary appliances discharged into the river Thames.

It happened that the new Hampton works were completed at the time at which repeated water famines in the East End of London had for a moment awakened the inhabitants from the state of good-tempered apathy in which they usually live, and even the President of the Local Government Board was moved to think that something ought to be done. He therefore requested Lord Llandaff's Commission which happened to be sitting at the time to consider a scheme of intercommunication between the companies mains—a scheme which had then recently been propounded by the representatives of the metropolitan water companies. The general principle of the scheme was recommended in Lord Llandaff's First Report, and an Act was passed to enable the work to be carried out under the supervision of the Local Government Board. The nature of the original scheme was explained in THE LANCET of Nov. 12th, 1898, p. 1287, when it was initiated, and a modification of it was afterwards recommended with the distinct proviso that the use of the Battersea station was to be a temporary measure, and it was clearly pointed out that this undesirable course was advocated as the lesser of two evils—the greater evil being the certainty that if it were not adopted the unfortunate customers of the East London Company would again suffer from the discomforts and the dangers of another water famine. The premises of the Southwark and Vauxhall Company ought never to have been allowed to fall so far short of modern requirements, but for years the directorate of the company carried on its business with the least possible outlay. The managers of the company of whom Sir John Simon wrote years ago have had their modern counterparts. A good specimen of the type appeared before the Llandaff Commission in the person of Sir Henry Knight, chairman of the company.[5] The ideas of this gentleman in regard to the necessity for large storage reservoirs were not in accord with the teaching of modern sanitarians. Mr. J. Parry, the engineer to the city of Liverpool, recently insisted on the fact that "there are some years in which the consumption [of water] becomes abnormally high through the influence of severe frosts in the winter and long droughts in the summer. I need scarcely point out," he adds, "that in any comparison between the quantity per day to be provided and the resources available to meet those demands these abnormal rates of consumption must not be overlooked." Sir Henry Knight said in the evidence which he gave before the Landaff Commission that such provision against abnormal demands was inadvisable. We do not profess to attach any value to the scientific opinion of Sir Henry Knight, but as unfortunately the London water companies have in too many cases been managed by men holding his views it may be worth while once for all to show how the matter of water-supply has been looked upon by such people. The following report from the shorthand notes will make this clear.

The CHAIRMAN (Lord Llandaff): I should like to hear from you what is within the control of the company. Supposing the company has been wanting in forethought, has not provided reservoirs enough, has not provided pumping power enough, has not provided duplicate mains and pumps when they ought prudently to be provided, is it to go on getting its water-rate although it supplies no water?

Sir HENRY KNIGHT: That would all depend as to whether the deficiency in any one of the circumstances which your lordship has mentioned is caused by any ordinary natural causes or came about from extraordinary natural causes. ...... I maintain that it is not in the interests of anybody that it [a company] should put itself in a position to meet causes which *may never arise at* all; that it would be a useless expenditure of capital and a waste of money.

The CHAIRMAN: Then you would have said that any company was acting foolishly which in 1897 provided itself with storage for such a year as 1898?—The WITNESS 1898 was an exceptional year.

The CHAIRMAN; Exactly; do not repeat it all over again, Is what I have just put to you a fair inference from what you have just said—1898 was an exceptional and extraordinary year not to be foreseen, therefore it would be absurd to require a company to provide itself for such a year as that?—The WITNESS · I do not say it would be absurd. I think it would be inadvisable.

The CHAIRMAN: Very well I will take the milder word inadvisable if you like.—The WITNESS · Because it would be a great expenditure of capital.

If the interests of the people of London had been as keenly looked after by the Local Government Board as the financial interests of the shareholders of the water companies have been studied by the directors of those undertakings the present state of the water-supply would have been vastly different from that which exists to-day. For many years the Southwark and Vauxhall Company did as little as possible in regard to improvements, but at last a time arrived at which circumstances forced them to give up their state of masterful inactivity. The following tabular statement shows the nature and amount of the chief changes which have taken place between December, 1896, and December, 1901 (Table I.).

From this table it is seen that during the last few years the storage capacity and the filtration area of the Southwark and Vauxhall Company have both been materially increased. A casual glance at the table, however, might probably cause a reader to come to a very erroneous conclusion as to the amount of the improvements which have taken place. The

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[1] Articles I., II., and III. appeared in THE LANCET of March 1st (p. 614), 8th (p. 692), and 15th (p. 767) 1902, respectively.

[2] Report on the Last Two Cholera Epidemics as Affected by the Consumption of Impure Water. Addressed to the Right Hon. the President of the General Board of Health by the Medical Officer of the Board. London, 1856.

[3] See minutes of evidence taken before the Select Committee on the Metropolitan Water Bill, August, 1851; Return to Inquiries of Metropolitan Sanitary Commissioners, 1850; and Remarks on the Water-supply of London by Sir W. Clay, Bart., M P., chairman of the Grand Junction and Southwark and Vauxhall Companies, 1849. Reference given in report.

[4] Colonel Sibthorpe "disapproved of the new patent water-closets, and much preferred the old system." Speech in the House of Commons, May 5th, 1848.

[5] Feb. 6th, 1899, at the forty-ninth sitting of the Commission.

# Looking Back.

FROM

## THE LANCET, *SUNDAY, MARCH* 21, 1824.

### CHEMISTRY

There is not a more important or valuable branch of Medical education than Chemistry, and the rapid advancement this science has recently made, renders it equally interesting to men of general research Among the ancient physicians, this science, or rather art, as it then existed was held in high estimation, because they found considerable benefit to result from an application of its principles in their profession, notwithstanding the imperfect knowledge they possessed respecting its action, and the consequent disadvantages they must have experienced in its employment In our times, the great value of chemistry to medical practice is every day proved by the success which attends a just application of its principles, whether adopted for the purpose of discovering the cause of disease or of prescribing remedies for its cure It is, therefore now justly regarded as the ground work of all medical knowledge and it is also indispensably a most important part of surgical education, for chemistry alone is the only key to physiological investigation, and when the medical philosopher whether surgeon or physician, enters this wide field of inquiry, he must rely on chemistry as his guide and interpreter, provided he wishes to examine with success the sublime laws of Nature as displayed in organic life, or extort from her a confession of those general regulations by which her empire is governed The real importance of this science, as it now exists, is not only felt in every branch of the medical profession, but is observed to extend its influence to every class of society, hoisting its banners in every country, and rapidly enlisting active supporters in the common cause of useful knowledge

Sensibly feeling the importance of chemistry ourselves and the probable advantage of communicating on this subject with our professional readers, we shall devote a part of our pages every week expressly to the purpose, and in order to make our papers as beneficial as possible, we shall give them as a regular series on the elements of the science, detail simple and inexpensive methods of performing the necessary experiments connected with the subject, at the same time, introducing new and original matter as we proceed either in the way of theory or practice, as it becomes known in this country or any other —We have stated that we shall give our papers as a series, on the elements of chemistry, and detail simple methods of performing those experiments which are connected with our immediate subject, our reason for adopting this plan, is because we have observed many intelligent persons who have attentively studied the best chemical works and diligently attended chemical lectures ignorant of some of the first and most simple principles of the science—possessing only a knowledge of terms and phrases which they do not understand, or have not experience to apply, and this we can fairly attribute to the want of that personal experiment which is necessary to fix the subject permanently and usefully on the mind

We may here remark, that practical operation is as necessary to the study of chemistry, as dissection and personal observation are to the study of Anatomy for in either case no useful or permanent knowledge can be obtained without actual operation, and as the experiments in chemistry, as generally laid down in chemical works or shown in public lectures, cannot be made by inexperienced individuals we shall endeavour to give such as may easily be performed by every reader of our journal however ignorant he may be of practical chemistry, we thus hope to give to those who wish to study the science with success, an opportunity of doing it in the only way that can lead to advantage, namely, by personal experiment

In our next number we shall commence an inquiry into the nature and effects of *heat*

### *Danger of Smoked Provisions* ¹

M G KERNER, a physician at Stutgard has just discovered a new species of poison proceeding from smoked provisions It appears from experiments which he has made that such provisions become subject to a species of decomposition which renders them poisonous Sausages made with liver are most liable to it and the decomposition generally takes place towards the middle of April Doctor KERNER has ascertained that of 72 persons in a district of Wurtemburg who partook of smoked sausages 37 died in a short time, and the others continued ill for a longer or shorter period —*Ibid* ¹

## NATIONAL ASSOCIATION FOR THE PREVENTION OF CONSUMPTION

ON March 18th Lord Derby presided over the third general meeting of the members of the National Association for the Prevention of Consumption and other Forms of Tuberculosis at 20 Hanover square, London

Lord DERBY in moving the adoption of the report of the council of the association, said that they had now reached that stage when they must be contented with progressing quietly on the path of progress They had reason to congratulate themselves on the success of the British Congress on Tuberculosis held last year and special thanks were due to Mr Malcolm Morris who had worked so hard in the cause The records of that congress would mark a very distinct epoch in their knowledge of the science for which that association was formed In regard to the suppression of the habit of expectoration in streets and in public places he was bound to say from personal observation that those against whom their warnings were directed were making the most of their time while it lasted, and it was not possible to say that there was any diminution in the filthy and disgusting habit. It might be suppressed in time, but at present they could only caution the public He pointed out that a great deal had been done for the proper ventilation of work rooms, and he urged upon all interested to make the best use of the means within their reach to advance the objects of the association

SIR WILLIAM CHURCH seconded the motion and said that notification of tuberculous disease was an important point He did not mean that it would aid much in the interests of the individual but it would enable them to make out where tuberculous disease was especially prevalent. Whatever the differences amongst medical men might be they were all united in the opinion that it was the environment of people which was of such special importance in regard to the prevention of tuberculosis The work of the association fell into two classes—prevention and treatment Treatment appealed more strongly to the public than prevention but prevention was far the more important That point should not be lost sight of and the public should be instructed in the prevention of the disease

Dr ELDON PRATT having addressed the meeting Colonel the Hon W Le Poer Trench made a personal explanation in regard to his retirement from the council in the course of which he remarked that Mr Alabone had been removed from the Medical Register in consequence of the Profession considering him to be a visionary in regard to his cure for consumption

The motion was then put to the meeting and was declared to be carried

The following were elected members of the council —Dr Theodore Dyke Acland and Dr L A Weatherly Sir Alexander Kinloch Mr Edgar Sever Dr G Vivian Poore, Dr W H Corfield Dr Isambard Owen, Dr F W Burton Fanning Sir George Brown and Professor McFadyean

SIR WILLIAM BROADBENT in moving the vote of thanks to the chairman said that Mr Alabone was removed from the Register for advertising and not because of any opinion he held in regard to the treatment of tuberculosis

Mr MALCOLM MORRIS seconded the vote of thanks which was suitably acknowledged by the Chairman

The proceedings then terminated

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¹ Gazette de Santé Feb 25th

BEQUESTS AND DONATIONS —Mr T Heap of Blackpool who recently gave £100 to the Victoria Hospital has just forwarded another £50 to the secretary of the hospital —The treasurers of the Middlesex Hospital have received from Miss Fen an £50 to help to defray the expenses of the cancer ward the analyst to the Local Government Board is not responsible for the statement on whose evidence is it made?

## ASYLUM REPORTS.

*London County Asylum, Claybury (Report for the year ending March 31st, 1901).*—The average number of patients resident during the year was 2496, comprising 1048 males and 1448 females. The admissions during the year amounted to 591—viz., 247 males and 344 females. Of these, 499 were first admissions. Dr. Robert Jones, the medical superintendent, states in his report that "a considerable rise has taken place in the reception of senile cases. Of all the admissions 18 per cent. were over 60 years of age," whereas in the previous year they were 10 per cent. "Many of these patients," adds Dr. Jones, "die from pure senile decay." There are many conditions, argues Dr. Jones, against the sending of such patients to the asylum; and yet they are difficult to treat at home or in an infirmary owing to habits of restlessness and wandering, especially at night, when supervision is not easy. "Their habits are defective and they are neither amenable to persuasion nor argument." Alcohol was determined to be the causal factor in 15 per cent. of the male and 11 per cent. of the female admissions, but the true proportion is regarded as higher. About one-third of the cases were attributed to heredity and previous attacks, and 10 per cent. to worry, anxiety, or adversity. "It is a grave feature that the insanity of nearly 10 per cent. of all the females who were admitted up to the age of 45 years was referable either to pregnancy, delivery, or lactation. This proportion gives 7 per cent. of all females admitted at all ages, and corresponds closely with that of the Lunacy Commissioners' Report of 1900." The number of patients discharged as recovered during the year amounted to 213—viz., 92 males and 121 females, or 8·5 per cent. of the average number resident. The deaths during the year amounted to 233—viz., 100 males and 133 females, or 9·3 per cent. as calculated on the same basis. Of the deaths five each were due to cancer and epilepsy, six to senile decay, 11 to influenza, 12 to bronchitis, 18 to cardiac disease, 22 to phthisis, 34 to pneumonia, 34 to colitis, 58 to general paralysis of the insane, and the rest to other causes. An outbreak of colitis during the year attacked 194 patients—viz., 69 males and 125 females—and resulted in 34 deaths, as above mentioned. "Special written instructions have been issued to all the attendants and nurses" having care of these cases of colitis. Suicide occurred in the case of one patient who was out with friends on trial, and this was the only instance among a considerable number of patients (nearly 30 per cent. of the admissions) with marked suicidal tendencies. The sub-committee of the asylum states in its report that the sewer drains of the whole asylum are being inlaid in concrete. The sum of £6980 has been expended during the year on repairs, and a further sum of £361 on additions and improvements. The Commissioners in Lunacy state in their report that the wards were in excellent order during their visit, the rooms bright and comfortable, the beds and dormitories clean and neat, and the personal appearance of the patients quite satisfactory. Regarding a special therapeutic measure—viz., the electric bath—Dr. Jones writes: "I have used the electric bath at Claybury for the past seven years and consider it a valuable remedy for adolescent melancholia and certain cases of stupor, alcoholic neuritis and lead neuritis."

## VITAL STATISTICS.

### HEALTH OF ENGLISH TOWNS.

In 76 of the largest English towns 8615 births and 5573 deaths were registered during the week ending March 15th. The annual rate of mortality in these towns, which had been 24·4, 23·3, and 20·5 per 1000 in the three preceding weeks, further declined last week to 19·6 per 1000. In London the death-rate was 22·0 per 1000, while it averaged 18·4 in the 75 other large towns. The lowest death-rates in these towns were 6·6 in Handsworth, 9·7 in Hornsey, 10·2 in Wigan, 11·5 in Ipswich, 11·8 in Walthamstow, and 12·0 in King's Norton; the highest rates were 23·7 in Hastings, 23·9 in Burnley, 25·0 in Hanley, 25·2 in Huddersfield, 28·4 in Plymouth, and 29·6 in Merthyr Tydfil. The 5573 deaths in these towns last week included 617 which were referred to the principal zymotic diseases, against 582, 570, and 600 in the three preceding weeks; of these 617 deaths 187 were referred to measles 136 to whooping-cough, 100 to small-pox, 71 to diphtheria 50 to scarlet fever, 46 to diarrhœa, and 27 to "fever" (principally enteric). No death from any of these diseases was registered last week in Ipswich, Devonport, Burton upon-Trent, Handsworth, West Bromwich, or Stockton-on Tees; while they caused the highest death-rates in Willesden, Northampton, Hanley, Coventry, Leicester, Grimsby Burnley, and Huddersfield. The greatest mortality from measles occurred in Reading, Northampton, Grimsby Warrington, Burnley, Barrow-in-Furness, and Huddersfield from scarlet fever in South Shields; from diphtheria in Great Yarmouth, Hanley, Coventry, and Middlesbrough from whooping-cough in East Ham, Northampton, Aston Manor, Leicester, and Birkenhead; and from diarrhœa in Merthyr Tydfil. The mortality from "fever" showed n marked excess in any of the large towns. Of the 100 fata cases of small-pox registered last week, 81 belonged to London four to West Ham, three to East Ham, two to Croydon two to Willesden, two to Tottenham, and one each t Hornsey, Leyton, Hastings, Leicester, Liverpool, and Tynemouth. The number of small-pox patients under treatmen in the Metropolitan Asylums hospitals, which had been 1321 1309, and 1512 at the end of the three preceding weeks, had further risen to 1542 on Saturday, March 15th; 450 new cases were admitted during the week, against 502, 369, and 555 in the three preceding weeks. The number of scarle fever cases in these hospitals and in the London Fever Hospital at the end of the week was 2206, against number decreasing from 3137 to 2283 on the 11 preceding Saturdays; 266 new cases were admitted during the week, against 219, 215, and 277 in the three preceding weeks. Th deaths referred to diseases of the respiratory organ in London, which had been 885, 733, and 589 in th three preceding weeks, further declined last week to 498 but were slightly above the corrected average number Influenza was stated to be the primary cause of 67 deaths in London last week, against 107, 103, and 89 in the thre preceding weeks. The causes of 57, or 1·2 per cent., o the deaths in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. Al the causes of death were duly certified in West Ham, Bristol Leicester, Nottingham, Salford, Leeds, Newcastle, and in 4 other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Blackburn Bradford, Sheffield, and South Shields.

### HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principa Scotch towns, which had been 22·6 and 25·4 per 1000 in th two preceding weeks, declined again to 23·6 during th week ending March 15th, but exceeded by 4·0 per 1000 th mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 17·3 in Paisley and 19·8 in Leith to 30·2 in Dundee and 34·0 in Greenock. The 763 deaths in these towns included 23 which were referred to whooping-cough 23 to diarrhœa, 14 to measles, eight to scarlet fever seven to small-pox, six to diphtheria, and four to "fever." In all 85 deaths resulted from these principal zymotic diseases last week, against 75 and 69 in the two preceding weeks. These 85 deaths were equal to an annual rate of 2·6 per 1000, which was 0·4 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping cough, which had been 23 and 20 in the two preceding weeks, rose again last week to 23, of which 12 occurred in Glasgow, seven in Aberdeen, and two in Leith. The deaths from diarrhœa, which had been 13 and 17 in the two preceding weeks, further rose to 23 last week, and included 11 in Glasgow, four in Dundee, three in Edinburgh, and three in Leith. The fatal cases of measles, which had been 19 and 14 in the two preceding weeks, were again 14 last week, five being registered in Dundee, four in Glasgow, and four in Greenock. The deaths from scarlet fever, which had been three, four, and seven in the three preceding weeks, further increased to eight last week, and included four in Glasgow, two in Edinburgh, and two in Greenock. The fatal cases of small-pox, which had been seven, 10, and two in the three preceding weeks, rose again last week to seven, and were all

TABLE I.—*Showing the Nature and Amount of the Chief Changes effected in the Works of the Southwark and Vauxhall Company between December, 1896, and December, 1901.*

| — | | In December, 1896. | In September, 1898. | In December, 1901. |
|---|---|---|---|---|
| Supply ... | Average daily supply in gallons | 31,996,895 | — | 28,819,380 |
| | Percentage delivered for other than domestic purposes, exclusive of waste .. | 15 to 20 | — | 15 to 20 |
| | Number of houses supplied ... ... | 119,948 | 121,991 | 126,082 |
| | Number of houses on constant supply ... ... .. | 112,455 | 114,177 | 117,286 |
| | Estimated population supplied .. | 891,213 | — | 846,010 |
| Reservoirs, subsiding and storage, unfiltered water ... | Number . .. ... | 4 | 6 | 5 |
| | Area in acres ... | 26 | 49 | 70 |
| | Available capacity in gallons ... ... | 136,000,000 | 276,000,000 | 436,000,000 |
| Storage filtered water reservoirs .. | Number... ... ... | 4 | 6 | 6 |
| | Capacity in gallons . ... ... | 18,000,000 | 19,000,000 | 19,000,000 |
| Filters ... | Number of beds . | 18 | 18 | 31 |
| | Area in acres ... | 20½ | 20½ | 31¾ |

first part of the present article has indicated wherein the fallacy may lie.

The East London Waterworks Company has by an arrangement made for that purpose with the Southwark and Vauxhall ompany of late derived water from the Battersea station of he latter company. It does not appear that the water so pplied is accounted for as distributed by the Southwark ompany. If water filtered at the Battersea station is used in the East London district and not for the supply of the Southwark Company's customers, and if still the Southwark Company is credited with the use of the Battersea filter-beds, it is evident that statistics founded on erroneous data are worse than valueless—they are misleading. This point should be made quite clear. Under the column giving the figures representing details of supply, reservoir capacity, and filtration area for the month of December, 1901, it is seen that the daily average supply in gallons was 28 819 380, the storage reservoir capacity is given as 436,000,000 gallons and the acreage of filter-beds as 31¾. Was the whole of that storage reservoir capacity used for the customers of, the Southwark Company, and were all the filter-beds used for the purification of the water supplied to them? Or were some of the filter beds used for the purification of water distributed by the East London Company? The monthly report of the Water Examiner does not give the information necessary to solve these problems. We must therefore leave these questions unanswered for the time and pass on to note the quality of the water supplied during the year 1901 by the Southwark Company. In order to present this information in the most convenient way a table has been drawn up (Table II.) which makes it easy to compare the amount of organic carbon and the amount of organic nitrogen found by Dr T. E Thorpe to be present in water supplied by the Southwark, the New River, and the Kent companies respectively. During the whole of the year it appears that only 12 complete analyses were made of the water supplied by the two last-named companies and 13 of the water supplied by the Southwark Company.

The table shows clearly enough that throughout the whole of the year the water supplied by the Southwark and Vauxhall Company whenever it was examined contained more organic carbon and more organic nitrogen than the specimens of water taken from the mains of the New River Company and of the Kent Company. It shows also that the water supplied by the Southwark Company contained more organic carbon and more organic nitrogen on Dec. 30th than on Dec 9th. The water was worse at the later date as a result of the increased impurity of the Thames during a time at which the river was in flood. The marked superiority of the Kent deep well water is apparent. It may seem curious that at the Llandaff Commission one of the experts employed by the water companies gave evidence to the effect that well water was dangerous, but on being pressed on the matter by the Chairman he referred to the case of the Caterham well which a workman, who was suffering from typhoid fever, had defiled by his alvine evacuations—a case which apparently did not convince Lord Llandaff that well water was necessarily dangerous.

TABLE II.—*Showing the Results of Analysis Expressed in Parts per 100,000 of Organic Carbon and of Organic Nitrogen in the Water supplied by the Southwark and Vauxhall Waterworks Company, the New River Company, and the Kent Company in each Month of the Year 1901 (Compiled from the Reports of the Results of Analysis made by Dr. T. E. Thorpe, F.R.S., on behalf of the Local Government Board.)*

| Month. | | Organic carbon, expressed in parts per 100,000. | | | Organic nitrogen, expressed in parts per 100,000. | | |
|---|---|---|---|---|---|---|---|
| | | Southwark and Vauxhall Company. | New River Company. | Kent Company. | Southwark and Vauxhall Company. | New River Company. | Kent Company. |
| January .. .. | | 0·212 | 0·070 | 0·039 | 0·031 | 0·010 | 0·003 |
| February ... .. | | 0·260 | 0·073 | 0·044 | 0·032 | 0·012 | 0·010 |
| March ... ... .. | | 0·290 | 0·141 | 0·043 | 0·029 | 0·013 | 0·010 |
| April ... .. | | 0·214 | 0·121 | 0·043 | 0·021 | 0·012 | 0·003 |
| May .. ... ... | | 0·093 | 0·081 | 0·042 | 0·017 | 0·013 | 0·006 |
| June .. ... . | | 0·133 | 0·068 | 0·036 | 0·021 | 0·009 | 0·007 |
| July ... ... .. | | 0·135 | 0·062 | 0·058 | 0·014 | 0·010 | 0·012 |
| August . .. | | 0·147 | 0·049 | 0·033 | 0·020 | 0·007 | 0·005 |
| September . .. | | 0·131 | 0·115* | 0·037 | 0·020 | 0·013* | 0·009 |
| October | | 0·115 | 0·016 | 0·058 | 0·013 | 0·010 | 0·007 |
| November . | | 0·128 | 0·070 | 0·055 | 0·020 | 0·009 | 0·009 |
| December | 9th | 0·111 | 0·093 | 0·048 | 0·016 | 0·009 | 0·006 |
| | 30th | 0·134 | — | — | 0·019 | — | — |

* The increase in the organic matter is said to have been due to the admixture of the water of another company.

The Report of the Water Examiner contains month after month a general statement to the effect that the Southwark and Vauxhall Company has the means during floods of pumping from the gravel beds adjoining the Thames, "and this is practically equivalent to an addition to their storage resources" More complete information on this subject would be of interest

Is the President of the Local Government Board acquainted with the present sanitary condition of the Battersea station of the Southwark and Vauxhall Waterworks Company?

Does the President of the Local Government Board consider that the Battersea station of the Southwark and Vauxhall Company is suitable for the purpose for which it is used? If not, has any representation to that effect been made to the Southwark and Vauxhall Company or to the East London Waterworks Company?

Does the President of the Local Government Board know if any, and if so how much, water from Battersea was distributed by the East London Company during each month of the year 1901 and during the months of January and February of the present year? In the case of water distributed by any company is that company responsible for the quality of the water distributed?

Has the attention of the President of the Local Government Board been called to a statement which is frequently made in the reports of the Water Examiner that "all the samples of water collected at the works of the companies were efficiently filtered"? Does the analyst appointed by the Local Government Board examine samples of water taken at the works of the companies? Has he ever examined one specimen taken at the works of any company? If so, when did he do so? And were the results of the analysis published in the report of the Water Examiner? If the analyst appointed by the Local Government Board does not take samples of water at the works of the companies is he responsible for the statement that "all the samples collected at the works of the companies were efficiently filtered"? If the analyst to the Local Government Board is not responsible for the statement on whose evidence is it made?

## ASYLUM REPORTS.

*London County Asylum, Claybury* (*Report for the year ending March 31st, 1901*).—The average number of patients resident during the year was 2496, comprising 1048 males and 1448 females. The admissions during the year amounted to 591—viz., 247 males and 344 females. Of these, 499 were first admissions. Dr. Robert Jones, the medical superintendent, states in his report that "a considerable rise has taken place in the reception of senile cases. Of all the admissions 18 per cent. were over 60 years of age," whereas in the previous year they were 10 per cent "Many of these patients," adds Dr. Jones, "die from pure senile decay." There are many conditions, argues Dr. Jones, against the sending of such patients to the asylum; and yet they are difficult to treat at home or in an infirmary owing to habits of restlessness and wandering, especially at night, when supervision is not easy "Their habits are defective and they are neither amenable to persuasion nor argument." Alcohol was determined to be the causal factor in 15 per cent. of the male and 11 per cent of the female admissions, but the true proportion is regarded as higher. About one-third of the cases were attributed to heredity and previous attacks, and 10 per cent. to worry, anxiety, or adversity. "It is a grave feature that the insanity of nearly 10 per cent. of all the females who were admitted up to the age of 45 years was referable either to pregnancy, delivery, or lactation. This proportion gives 7 per cent. of all females admitted at all ages, and corresponds closely with that of the Lunacy Commissioners' Report of 1900." The number of patients discharged as recovered during the year amounted to 213—viz., 92 males and 121 females, or 8·5 per cent. of the average number resident. The deaths during the year amounted to 233—viz., 100 males and 133 females, or 9·3 per cent as calculated on the same basis. Of the deaths five each were due to cancer and epilepsy, six to senile decay, 11 to influenza, 12 to bronchitis, 18 to cardiac disease, 22 to phthisis, 34 to pneumonia, 34 to colitis, 58 to general paralysis of the insane, and the rest to other causes. An outbreak of colitis during the year attacked 194 patients—viz., 69 males and 125 females—and resulted in 34 deaths, as above mentioned. "Special written instructions have been issued to all the attendants and nurses" having care of these cases of colitis. Suicide occurred in the case of one patient who was out with friends on trial, and this was the only instance among a considerable number of patients (nearly 30 per cent. of the admissions) with marked suicidal tendencies The sub-committee of the asylum states in its report that the sewer drains of the whole asylum are being inlaid in concrete The sum of £6980 has been expended during the year on repairs, and a further sum of £361 on additions and improvements. The Commissioners in Lunacy state in their report that the wards were in excellent order during their visit, the rooms bright and comfortable, the beds and dormitories clean and neat, and the personal appearance of the patients quite satisfactory. Regarding a special therapeutic measure—viz, the electric bath—Dr. Jones writes: "I have used the electric bath at Claybury for the past seven years and consider it a valuable remedy for adolescent melancholia and certain cases of stupor, alcoholic neuritis and lead neuritis."

## VITAL STATISTICS.

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### HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 22·6 and 25 4 per 1000 in the two preceding weeks, declined again to 23·6 during the week ending March 15th, but exceeded by 4·0 per 1000 the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 17·3 in Paisley and 19·8 in Leith to 30·2 in Dundee and 34·0 in Greenock. The 763 deaths in these towns included 23 which were referred to whooping-cough, 23 to diarrhœa, 14 to measles, eight to scarlet fever, seven to small-pox, six to diphtheria, and four to "fever." In all 85 deaths resulted from these principal zymotic diseases last week, against 75 and 69 in the two preceding weeks. These 85 deaths were equal to an annual rate of 2 6 per 1000, which was 0 4 per 1000 above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had been 23 and 20 in the two preceding weeks, rose again last week to 23, of which 12 occurred in Glasgow, seven in Aberdeen, and two in Leith. The deaths from diarrhœa, which had been 13 and 17 in the two preceding weeks, further rose to 23 last week, and included 11 in Glasgow, four in Dundee, three in Edinburgh, and three in Leith. The fatal cases of measles, which had been 19 and 14 in the two preceding weeks, were again 14 last week, five being registered in Dundee, four in Glasgow, and four in Greenock The deaths from scarlet fever, which had been three, four, and seven in the three preceding weeks, further increased to eight last week, and included four in Glasgow, two in Edinburgh, and two in Greenock. The fatal cases of small-pox, which had been seven, 10, and two in the three preceding weeks, rose again last week to seven, and were all recorded in Glasgow The deaths from diphtheria, which had been six, one, and seven in the three preceding weeks, declined again last week to six, and included three in Glasgow, where two of the four fatal cases of "fever" were also registered The deaths referred to diseases of the respiratory organs in these towns, which had been 214 and 230 in the two preceding weeks, declined again last week to 189, but were 16 above the number in the corresponding period of last year The causes of 13 or nearly 2 per cent, of the deaths in these eight towns last week were not certified

### HEALTH OF DUBLIN

The death rate in Dublin, which had been 28 6 and 29 7 per 1000 in the two preceding weeks, declined again to 20 6 per 1000 during the week ending March 15th During the past four weeks the death rate has averaged 28 1 per 1000 the rates during the same period being 26 0 in London and 22 3 in Edinburgh The 150 deaths of persons belonging to Dublin registered during the week under notice showed a decline of 66 from the number in the preceding week, and included eight which were referred to the principal zymotic diseases, against 13 in each of the two preceding weeks, of these, four resulted from measles, two from scarlet fever, one from "fever," and one from diarrhœa These eight deaths were equal to an annual rate of 1 1 per 1000, the zymotic death rates during the same period being 3 1 in London and 1 3 in Edinburgh The fatal cases of measles, which had been three, one, and six in the three preceding weeks, declined again last week to four The 150 deaths in Dublin last week included 21 of children under one year of age and 37 of persons aged upwards of 60 years, the deaths of infants and of elderly persons were respectively 11 and 38 less than the numbers in the preceding week No death from violence was registered during the week, two inquests were recorded, and 54, or more than one third, of the deaths occurred in public institutions The causes of eight, or more than 5 per cent, of the deaths in Dublin last week were not certified

## THE SERVICES

### ROYAL NAVY MEDICAL SERVICE

THE following appointments are notified —Staff Surgeons G T Collingwood to the *President*, additional for service at Deptford Victualling yard, Charles Strickland to the *Aboukir*, and Hamilton Meikle to the *Vengeance* Surgeons Walter P Dyer to the *Aboukir*, George Gibson to the *Nile*, Harold E Fryer, Algernon C Bean, and Warren G Westcott to the *Hawke*, for duty on the voyage home, and A. J Wernet to the *Pembroke*, additional, to be lent for service at Deptford Victualling yard

### ROYAL ARMY MEDICAL CORPS

Major T McCulloch has been appointed Deputy Assistant Director, Army Medical Department, at Headquarters, vice Major W G Macpherson

Colonel J F Supple C B, has been appointed Principal Medical Officer, Meerut District

Major D R. Hamilton has arrived at Colchester Captain R. S H Luhr is appointed for duty in the Home District. Captain A R. O Flaherty is appointed for duty with the 4th Battalion the East Surrey Regiment, ordered to South Africa. Lieutenant H E M Douglas, V C, D S O, is appointed for duty in the Home District

### INDIA AND THE INDIAN MEDICAL SERVICES

Colonel A Scott Reid has been appointed to succeed Surgeon General Franklin as Inspector General of Civil Hospitals in the Punjab Colonel Joubert succeeds Colonel Hutcheson in a similar capacity in the North West Provinces and Oudh Colonel Geoffrey Hall succeeds Colonel Scott Reid as Administrative Medical Officer and Sanitary Commissioner in the Central Provinces

### ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon Lieutenant Colonel E Shedd having resigned his Volunteer appointment ceases to belong to the Army Medical Reserve of Officers

### IMPERIAL YEOMANRY

Surgeon Captain G H S Daniell of the Dorset (Queen's Own), and Surgeon Captain P B Mackay, of the Yorkshire Dragoons (Queen's Own), *resign their commissions and* receive new commissions subject to the provisions of the Militia and Yeomanry Act, 1901, each retaining his present rank and seniority

### VOLUNTEER CORPS

*Royal Engineers* 1st London Edward Coldridge Roberts to be Surgeon Lieutenant *Rifle* 5th Volunteer Battalion the Royal Scots (Lothian Regiment) Surgeon-Captain J Mill to be Surgeon Major 1st Volunteer Battalion the Norfolk Regiment James Morrison Gardiner Bremner to be Surgeon Lieutenant. 2nd Volunteer Battalion the Durham Light Infantry Surgeon Lieutenant R E Brown resigns his commission 5th Volunteer Battalion the Durham Light Infantry Surgeon Captain A. A Abraham to be Surgeon Major

### SOUTH AFRICAN WAR NOTES.

Civil Surgeon Newton is reported to be improving

The following officers have been discharged from hospital to duty —Captain J D Alexander, R A.M C, Lieutenant P S O Reilly R.A M C, Lieutenant R H Lloyd, R A M C Lieutenant J W West, R A M C, and Lieutenant C D Myles Civil Surgeons Williams, Dee, Vaux, Jordan, Scott, and Lynch

### SOUTH AFRICAN AFFAIRS AND THE WAR

A great deal has taken place, although but little of it has much medical interest or significance, during the brief interval that has elapsed since we last referred to the events of the war We may shortly enumerate what has occurred The defeat of the force under General Lord Methuen at Tweebosch with the capture and subsequent release of his lordship who was seriously wounded, the grave and critical condition of Mr Cecil Rhodes, the increased, if fitful, activity of the Boer forces in the field, the widespread prevalence of enteric fever in South Africa, the improved sanitary state of the refugee camps, the arrival *in this country of large batches of* sick and wounded officers and men from South Africa, and the embarkation of reinforcements for the seat of war In addition to the foregoing there has been a debate in Parliament on war contracts involving what would have been a vote of censure on the Government on its conduct of the war had the Opposition succeeded in carrying its resolution This succinctly summarises the history of recent events which, *taken as a whole, have made up a somewhat* exciting time In the course of the late debate in the House of Commons it may be remarked that allusions were occasionally made to the army hospital question in South Africa But to refer to matters of more or less medical interest we have with regret to record that in the reverse at Tweebosch not only did *Lord Methuen* sustain a gunshot wound of the right thigh attended with compound fracture of the femur, but that Colonel Townsend, R A.M C, who was *principal* medical officer of the force, was wounded in three places after having, it is stated, greatly distinguished himself As it proved he was able to render some effective aid to Lord Methuen subsequently to their capture Both are reported as doing well In the affair at Tweebosch the Boers attacked the British troops with remarkable gallantry and courage *Delarey's subsequent* conduct to his captives seems to have been most humane and *considerate—indeed*, it may be characterised as magnanimous under the circumstances The account of the engagement furnished by the special correspondent of the *Standard*, and published in that journal of March 18th and 19th, is a very clear and graphic description, and it shows that the affair was one of the severest struggles of the war, in which the efforts of the regular *troops might possibly have saved the* situation but for the defection and stampeding of the auxiliaries Be this as it may, we have only to remark that regrettable as such a reverse undoubtedly is at this stage of the war, the force engaged was in reality too small to have any material or lasting effect. It is because it may tend in some degree to protract the operations in the field and consequently to lead to further and needless loss of life on both sides that it is mainly to be *lamented* As regards the prevalence of enteric fever in armies on field service we have so repeatedly called attention to the subject that little or nothing remains to be said A weak part in Mr Brodrick's scheme of army medical reform and reorganisation is in regard to army sanitation It is a matter which requires to be thoroughly gone into from a practical point of view, in order to see if anything can be done to prevent the occurrence of diseases of this class.

### DEATHS IN THE SERVICES.

Surgeon-General Sir William Guyer Hunter, M.D., K.C.M.G., late I.M.S., suddenly on March 15th at his residence at Norwood in his seventy-fourth year. He was educated at King's College, London, and Aberdeen University, and entered the Indian Medical Service in 1850. He served in the second Burmese war and the Indian Mutiny. Among the various offices which he held in India were those of Professor of Medicine in the Grant Medical College, Bombay, and Vice Chancellor of Bombay University. Sir W. Guyer Hunter represented for seven years the borough of Central Hackney in the House of Commons.

Colonel Robert Coleman Eaton, R.A.M.C., at St. Bartholomew's, Spezia, Italy, in his sixty-first year. He entered the service in 1866, and attained the rank of Colonel in 1896. He served in the Afghan war of 1878 and 1880 (medal).

Surgeon General John Robert Theobalds, I.M.S., Madras, aged 79 years. He retired from the service in 1880.

### PROPOSED FRENCH AMBULANCE.

The Paris correspondent of the *Times* states that Vicomte Christian de Villebois-Mareuil has just despatched an official request to the British War Office for authorisation to organise a French ambulance for the Boers and to be allowed to take charge of the ambulance himself.

## Correspondence.

"Audi alteram partem."

## THE MIDWIVES BILL.

*To the Editors of* THE LANCET.

SIRS,—Whatever our views on the subject of legislation to regulate the practice of midwives it is of prime importance that we do not misrepresent the action and the motives of those who differ from us. As one concerned in this controversy and anxious for the real—not spurious—protection of poor lying-in women I shall thank you to insert in THE LANCET the inclosed correspondence which deals with a grave error in Mr. Johnstone's presentation of the subject to Parliament. The responsibility of ignoring conditions insisted on by the General Medical Council is great and not to be minimised by positively erroneous statements. If the tragedies connected with the practice of midwifery by untrained women continue it will not be the General Medical Council that will be to blame.

I am, Sirs, yours faithfully,
Highbury-place, N., March 17th, 1902. JAMES GREY GLOVER.

[INCLOSURE.]

25, Highbury-place, N., March 10th, 1902.

DEAR MR. JOHNSTONE.—In your speech on the Midwives Bill you say that in asking for a penal clause against uncertified women practising for gain the Medical Council was contending for a stepping-stone towards rendering the practice of unqualified medical men absolutely penal (THE LANCET report). Will you allow me with much earnestness and all respect to protest against this statement. I am in a position, though not now in the Council, to say that this statement is absolutely incorrect, and that the clause asking for the penalising of practice by uncertified midwives was urged solely in the interest of lying-in women whose lives are endangered in quite a special way by the practice which it is the object of this legislation to stop.

Of course, all medical men disapprove of irregular and unqualified medical practice, but I think I may challenge you to find in all the records of the General Medical Council a resolution carried by—or even proposed in—that body, asking Parliament to stop unqualified medical practice by penalising it. I need not say that I am no enemy to proper legislation on the subject of midwives. But a measure which omits the principal protection of the poor lying-in women is not legislation but the evasion of it, and is without excuse. At any rate this is the view of the Medical Council in insisting on the clause penalising practice for gain of uncertified midwives, and nothing I am sure is further from your intention than to misrepresent the motives and views of the Medical Council. Poor women do not look at registers and are not guided by titles. So that they will not be protected by merely penalising the use of titles.

Believe me, dear Mr. Johnstone,
Yours very truly,
J. H. Johnstone, Esq., M.P. J. G. GLOVER.

House of Commons, March 12th, 1902.

DEAR DR. GLOVER,—I am very glad to hear from you, on authority, that the General Medical Council do *not* seek to penalise the unqualified practice of medicine, and I hope that by the publication of this correspondence their attitude in this matter may be made clear to the public and to the profession for all time. I owe them an apology if I have, in good faith, misrepresented their aims, but in explanation I may call your attention to the *British Medical Journal* of Feb. 22nd, which in an article dealing with the present Bill states: "It has long been admitted that this omission" (a penal clause) "is a great defect in the Medical Acts, and *to obtain their amendment in this direction every effort should be made.*" However, your letter now makes it clear that the General Medical Council do not wish to penalise the practice of unqualified medical men, while they do wish to penalise the practice of women, of which Sir William Priestley said, and said truly, "it is quite certain that the House of Commons would listen to no such proposal." We have advisedly based our Bill on the principles embodied in the Medical Acts concerning medical practitioners, and beyond that we cannot hope to go at the present time.

Believe me, very truly yours,
J. G. Glover, Esq., M.D. J. H. JOHNSTONE.

*To the Editors of* THE LANCET.

SIRS,—As one of the candidates referred to by Dr. A. McCook Weir in THE LANCET of March 8th, p. 697, as having failed to see that a Nursing Bill was introduced into Parliament at the commencement of the present session I can only plead with regret that during December and January last my state of health was such that I was quite unable to undertake the task of preparing a Bill and getting it introduced into Parliament; indeed, it was only with great difficulty that I could attend to the more pressing of my professional engagements. At my suggestion the council of the Incorporated Medical Practitioners' Association appointed a committee in December to consider the Nursing Bill drafted by Dr. McCook Weir, the suggestions of the Manchester Medical Guild, and the Bill drafted by the Parliamentary Bills Committee of the British Medical Association, but that committee failed to report in time for any action to be taken before Parliament met.

I am, Sirs, yours faithfully,
Gibson-square, N., March 12th, 1902. GEORGE BROWN.

## HIGH FREQUENCY CURRENTS IN THE TREATMENT OF CANCER.

*To the Editors of* THE LANCET.

SIRS,—As an announcement has been recently made that currents of high frequency were about to be tried in the treatment of cancer at one of our London hospitals it is exceedingly probable that medical men who are now in possession of the apparatus necessary to their production will be inclined to do likewise, either in their hospital or private practice. Since I first pointed out this "prospect of cure"[1] at least one other has adopted this treatment, and I am glad to have had a favourable report from him upon its effects in malignant disease. Hence the following remarks, the outcome of six months' experience in this method, may not be amiss. Amongst other preliminary measures the estimation of the percentage of urea should never be neglected. This in cases of cancer is always extraordinarily low (in the last case that has come under my care only 0·46 per cent.), but this improves as treatment continues and gives us useful guidance in the progress of the case.

The treatment is both general and local, and it will be found advantageous to commence with the former by placing the patient within the large solenoid for half an hour daily for the first three days. This is generally called "auto-conduction," but as the currents thus set up within the body are entirely induced, it seems to me that "auto-induction" is the better term. Recourse to this will be had from time to time whenever it is necessary to suspend the local treatment. General treatment can also be applied by auto-condensation, but this method is best used in conjunction with local treatment, which may be either uni-polar or bi-polar. It will be convenient to call that electrode which is on the end of the solenoid which is connected to earth "the kathode," and that which is fixed to the distal end of the solenoid, or resonator (if that is used), "the anode." For auto-condensation the kathode may be a sheet of metal beneath the mattress on the couch; for bi-polar treatment it may be of nickel of a convenient shape for the hand or ending in a plaque either of metal or wet clay when applied to the abdomen at such times as the anode is inserted into the vagina or rectum. The best and most manageable plaque can be improvised from thick lead foil. A similar plaque is a very useful means of applying the anode over any considerable surface; the great point recorded in Glasgow. The deaths from diphtheria, which had been six, one, and seven in the three preceding weeks, declined again last week to six, and included three in Glasgow, where two of the four fatal cases of "fever" were also registered. The deaths referred to diseases of the respiratory organs in these towns, which had been 214 and 230 in the two preceding weeks, declined again last week to 189, but were 18 above the number in the corresponding period of last year. The causes of 13, or nearly 2 per cent., of the deaths in these eight towns last week were not certified.

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[1] THE LANCET, Sept. 28th, 1901, p. 845.

### *HEALTH OF DUBLIN.*

The death-rate in Dublin, which had been 28·6 and 29·7 per 1000 in the two preceding weeks, declined again to 20·6 per 1000 during the week ending March 15th. During the past four weeks the death-rate has averaged 28·1 per 1000, the rates during the same period being 26·0 in London and 22·3 in Edinburgh. The 150 deaths of persons belonging to Dublin registered during the week under notice showed a decline of 66 from the number in the preceding week, and included eight which were referred to the principal zymotic diseases, against 13 in each of the two preceding weeks; of these, four resulted from measles, two from scarlet fever, one from "fever," and one from diarrhœa. These eight deaths were equal to an annual rate of 1·1 per 1000, the zymotic death-rates during the same period being 3·1 in London and 1·3 in Edinburgh. The fatal cases of measles, which had been three, one, and six in the three preceding weeks, declined again last week to four. The 150 deaths in Dublin last week included 21 of children under one year of age and 37 of persons aged upwards of 60 years, the deaths of infants and of elderly persons were respectively 11 and 38 less than the numbers in the preceding week. No death from violence was registered during the week, two inquests were recorded, and 54, or more than one third, of the deaths occurred in public institutions. The causes of eight, or more than 5 per cent., of the deaths in Dublin last week were not certified.

## THE SERVICES.

### ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Staff Surgeons: G. T. Collingwood to the *President*, additional for service at Deptford Victualling-yard; Charles Strickland to the *Aboukir*, and Hamilton Meikle to the *Vengeance*. Surgeons: Walter P. Dyer to the *Aboukir;* George Gibson to the *Nile;* Harold E. Fryer, Algernon O. Bean, and Warren G. Westcott to the *Hawke*, for duty on the voyage home, and A. J. Wernet to the *Pembroke*, additional, to be lent for service at Deptford Victualling-yard.

### ROYAL ARMY MEDICAL CORPS.

Major T. McCulloch has been appointed Deputy Assistant Director, Army Medical Department, at Headquarters, vice Major W. G. Macpherson.

Colonel J. F. Supple, C.B., has been appointed Principal Medical Officer, Meerut District.

Major D. R. Hamilton has arrived at Colchester. Captain R. S. H. Fuhr is appointed for duty in the Home District. Captain A. R. O'Flaherty is appointed for duty with the 4th Battalion the East Surrey Regiment, ordered to South Africa. Lieutenant H. E. M. Douglas, V.C., D.S.O., is appointed for duty in the Home District.

### INDIA AND THE INDIAN MEDICAL SERVICES.

Colonel A. Scott Reid has been appointed to succeed Surgeon-General Franklin as Inspector-General of Civil Hospitals in the Punjab. Colonel Joubert succeeds Colonel Hutcheson in a similar capacity in the North-West Provinces and Oudh. Colonel Geoffrey Hall succeeds Colonel Scott Reid as Administrative Medical Officer and Sanitary Commissioner in the Central Provinces.

### ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon Lieutenant-Colonel E. Shedd having resigned his Volunteer appointment, ceases to belong to the Army Medical Reserve of Officers.

### IMPERIAL YEOMANRY.

Surgeon Captain G. H. S. Daniell, of the Dorset (Queen's Own), and Surgeon Captain P. B. Mackay, of the Yorkshire Dragoons (Queen's Own), resign their commissions and receive new commissions subject to the provisions of the Militia and Yeomanry Act, 1901, each retaining his present rank and seniority.

### VOLUNTEER CORPS.

*Royal Engineers*: 1st London: Edward Coldridge Roberts to be Surgeon Lieutenant. *Rifle*: 5th Volunteer Battalion the Royal Scots (Lothian Regiment): Surgeon-Captain J. Mill to be Surgeon Major. 1st Volunteer Battalion the Norfolk Regiment: James Morison Gardiner Bremner to be Surgeon Lieutenant. 2nd Volunteer Battalion the Durham Light Infantry: Surgeon Lieutenant R. E. Brown resigns his commission. 5th Volunteer Battalion the Durham Light Infantry: Surgeon Captain A. A. Abraham to be Surgeon-Major.

### SOUTH AFRICAN WAR NOTES.

Civil Surgeon Newton is reported to be improving.

The following officers have been discharged from hospital to duty:—Captain J. D. Alexander, R.A.M.C.; Lieutenant P. S. O'Reilly, R.A.M.C.; Lieutenant R. H. Lloyd, R.A.M.C., Lieutenant J. W. West, R.A.M.C., and Lieutenant C. D. Myles. Civil Surgeons Williams, Dee, Vaux, Jordan, Scott, and Lynch.

### SOUTH AFRICAN AFFAIRS AND THE WAR.

A great deal has taken place, although but little of it has much medical interest or significance, during the brief interval that has elapsed since we last referred to the events of the war. We may shortly enumerate what has occurred. The defeat of the force under General Lord Methuen at Tweebosch with the capture and subsequent release of his lordship who was seriously wounded; the grave and critical condition of Mr. Cecil Rhodes; the increased, if fitful, activity of the Boer forces in the field, the widespread prevalence of enteric fever in South Africa, the improved sanitary state of the refugee camps, the arrival in this country of large batches of sick and wounded officers and men from South Africa; and the embarkation of reinforcements for the seat of war. In addition to the foregoing there has been a debate in Parliament on war contracts involving what would have been a vote of censure on the Government on its conduct of the war had the Opposition succeeded in carrying its resolution. This succinctly summarises the history of recent events which, taken as a whole, have made up a somewhat exciting time. In the course of the late debate in the House of Commons it may be remarked that allusions were occasionally made to the army hospital question in South Africa. But to refer to matters of more or less medical interest we have with regret to record that in the reverse at Tweebosch not only did Lord Methuen sustain a gunshot wound of the right thigh attended with compound fracture of the femur but that Colonel Townsend, R.A.M.C., who was principal medical officer of the force, was wounded in three places after having, it is stated, greatly distinguished himself. As it proved he was able to render some effective aid to Lord Methuen subsequently to their capture. Both are reported as doing well. In the affair at Tweebosch the Boers attacked the British troops with remarkable gallantry and courage. Delarey's subsequent conduct to his captives seems to have been most humane and considerate—indeed, it may be characterised as magnanimous under the circumstances. The account of the engagement furnished by the special correspondent of the *Standard*, and published in that journal of March 18th and 19th, is a very clear and graphic description, and it shows that the affair was one of the severest struggles of the war, in which the efforts of the regular troops might possibly have saved the situation but for the defection and stampeding of the auxiliaries. Be this as it may, we have only to remark that regrettable as such a reverse undoubtedly is at this stage of the war, the force engaged was in reality too small to have any material or lasting effect. It is because it may tend in some degree to protract the operations in the field, and consequently to lead to further and needless loss of life on both sides, that it is mainly to be lamented. As regards the prevalence of enteric fever in armies on field service we have so repeatedly called attention to the subject that little or nothing remains to be said. A weak part in Mr. Brodrick's scheme of army medical reform and reorganisation is in regard to army sanitation. It is a matter which requires to be thoroughly gone into from a and Vice-Presidents was read to the Council at their meeting held this day, and that the Council having heard the same expressed their concurrence in the conclusion arrived at by the Nomination Committee.

I am, dear Sir, yours faithfully,

Jan. 16th, 1902. S. FORREST COWELL, Secretary R.C.S.

Having received this official decision I called upon the author of the letter to withdraw his statement, and under the pressure of an action at law he has now done so and given me an ample apology in writing. I should not trouble you, but that the slander having been widely spread I shall be obliged by your assistance in spreading equally widely the refutation of it. I have placed the apology in the hands of the President of the Royal College of Surgeons of England. I am, Sirs, yours faithfully,

W. D. HALLIBURTON.

King's College, London, March 15th, 1902.

## GREY HAIR AND EMOTIONAL STATES.

*To the Editors of* THE LANCET.

SIRS,—I trust that you will allow me to add a supplementary note to my letter on the above subject (published in THE LANCET of March 8th, p. 696) for the purpose of drawing attention to a remarkable case of hair-blanching which is in danger of being overlooked. The case is one incidentally referred to by Sir W. R. Gowers in his lecture on Metallic Poisoning (published in THE LANCET of Nov. 2nd, 1901, p. 1173). A man received a blow on the head which resulted in an effusion of blood over the left hemisphere, death occurring after three days. This injury so disturbed the innervation of the hair follicles of the right side of the moustache and beard that the hair in this region, which was brown, gradually became blanched and at the time of death was almost white. This was sufficiently remarkable, but what made the case more remarkable still was the fact that the blanched hair of the right side was separated from the normal brown hair on the left side by a narrow median zone of almost black hair, as though the pigment abstracted from the blanched area had become deposited in this darkened zone. Sir W. R. Gowers would, I presume, infer from this case that the nutrition of the hair follicles on one side of the body is under the control of the opposite cerebral cortex.

I am, Sirs, yours faithfully,

Wimpole-street, W., March 16th, 1902. HARRY CAMPBELL.

## THE SUBJUGATION OF SMALL-POX.

*To the Editors of* THE LANCET.

SIRS,—I have been looking over your article in THE LANCET of the 8th inst., headed "The Subjugation of Small-pox," and I find that some of the passages therein relating to vaccination are utterly ridiculous and I cannot understand how it is that they have made their appearance in the columns of such a journal as THE LANCET. The only conclusion that I can arrive at is that they have been made by a party who probably knows nothing of the history of vaccination. The statistics and experiences with vaccination, which have been recorded since the practice became general, go to show that vaccination has not only been useless but it has proved harmful, even to the extent of causing several deaths. I see in your issue it is stated: "Every individual human being carries within himself the soil in which the germs of disease may be implanted. The soil must be made unfit for such noxious growth, and this, in essence, is what vaccination does." This statement is really very absurd, as I can myself quote cases where parties have been vaccinated and caught small-pox and *died* with it, from any time directly after the vaccination. Also, cases where parties have been vaccinated as many as six or seven times and eventually died of small-pox. Also, cases where persons have been vaccinated several times and had small-pox more than once or twice and eventually died of it.

If, as THE LANCET states, vaccination makes the human system unfit for the development of small-pox, how is it that it is possible to have cow-pox first, and catch small-pox and have them at one and the same time hand in hand with the result that the attack of small-pox proves the victor by a fatal termination? It is also stated that "every person has it in his power to render himself *safe* from an attack of small-pox." If this is so, I would be greatly obliged if you would let me know how it can be done, as I for one must confess that beyond the fact of studying the laws of health and living cleanly I am ignorant of any preventive measures having ever been introduced whereby a person may render himself immune from this filthy disease, or even modify it. You conclude: "The epidemic wave will pass in time, but very much can be done to check its career and to diminish its intensity by the general adoption of a practice of which the efficacy has been proved by the experience of all civilised nations during the century that has elapsed since its introduction."

I am not aware that anything has been *proved* as yet with regard to the benefit that vaccination has been, and I feel sure nobody else is. The practice is based upon a superstition put forward by an ignorant set of milkmaids and is not based upon any scientific foundation, and was boomed by an unscrupulous person—i.e., Edward Jenner—who purchased his M.D. for £15, and, as history informs us, he knew all the time that his "discovery" (which, by the way, was not his at all) was a complete fraud. There is a great mass of information on this subject which, if people would only give to it their unanimous attention, I feel sure that vaccination and all its evil effects would be a thing of the past.

I trust you will not find I am writing too lengthily, but I feel, after what I have learned, that I could not resist the temptation of writing you on the matter appearing in your journal.

I beg to remain, yours respectfully,

Tottenham, March 13th, 1902. A. J. WHITEHEAD.

⁂ We think it well to publish this effusion, for our readers seldom have the opportunity of reading such statements.—ED. L.

## THE NAVAL ESTIMATES.

*To the Editors of* THE LANCET.

SIRS,—At page 760 of your issue of March 15th you rightly ask why deputy inspectors-general of the Royal Navy receive no increase of pay while every other class of medical officer has been so dealt with. The explanation is that the naval authorities have followed in the main the recommendations of the Army Advisory Board on the pay of the Royal Army Medical Corps. This latter board, in a stupid way, excluded the colonel's rank in the Royal Army Medical Corps from any increase of pay, although it was as urgently needed for them—indeed, more so than in the case of most medical officers. These officers are principal medical officers of districts and have much responsibility, yet in a few weeks when the warrant is issued they will receive *less annual pay* than senior lieutenant-colonels in charge of hospitals serving under their command. Further, with reference to the pay of R.A.M.C. colonels, by comparison with other colonels on the staff of the army please note the absurd position which now exists. Colonels on the staff for infantry and Royal Artillery, annual pay, £980 18*s.* 5½*d.*; colonels on the staff for Royal Engineers, £1163 8*s.* 5½*d.*; colonels on the staff, R.A.M.C., £947 9*s.* 3*d.* Could anything be more absurd? What is needed is an increase of 10*s* per diem both to colonels R.A.M.C. and deputy inspectors-general of hospitals. This is absolutely needed for those important classes of officers.

I am, Sirs, yours faithfully,

March 17th, 1902. I.V.R.O

## SOCIETY OF LICENTIATES AND MEMBERS OF THE LONDON ROYAL COLLEGES.

*To the Editors of* THE LANCET.

SIRS,—Why on earth the holders of the Conjoint M.R.C.S., L.R.C.P., should petition for the right to a gratuitous degree any more than any other qualified practitioners puzzles me greatly. A person holding the L.S.A. Lond., L.A.H. Dub., L.R.C.P., L.R.C.S., L.F.P.S., or M.R.C.S. has surely an equal right to an honorary M.D. I certainly think that every qualified man should be allowed this privilege. But if there is to be a gift of this sort all qualified practitioners must share alike. I am, Sirs, yours faithfully,

March 17th, 1902. JUSTITIA.

is to make it fit so closely that no sparking takes place on to the patient. In other cases the anode may be of the ordinary cylindrical shape. For cavities—vagina, rectum, &c.—the most efficacious form of anode is that of a highly-exhausted glass cylinder, of a size suited to the locality, provided with a single pole; this gives good efflorescence and is quite harmless when used with d'Arsonval's apparatus or Oudin's resonator. It is of importance that the skin around the orifices should be well dried and even powdered with starch before inserting the electrode, as a precaution against the spark jumping from the electrode on to the moist skin; also, the electrode should be in position before the current is turned on. The local application will be needed for from 10 to 20 minutes. For broken surfaces the best results are first obtained by the anodic spray.

Any improvement must necessarily be slow and too much must not be expected at first. The earliest signs will be shown in the general condition, in the cessation of pain, the lessening of the cachectic appearance, the increase of urea, the renewed vigour, and interest in life. How far these results will be permanent is as yet too early to decide, and I think that it would be wise not to estimate a case as cured until some considerable time has elapsed. We must not be disappointed if very little change is found in the size of the cancerous masses. They appear to shrink somewhat and this I take to be due to the cessation of action in the growing edge. Apostoli has remarked that in the electric treatment of uterine fibroids, devised by him, the tumours do not disappear although they cease to grow and give no further trouble to the patient. Quite recently it has been shown that several tumours which have been treated in this manner have become polypoid and have come within the reach of easy removal. The treatment by high frequency currents has the advantage of being painless and easy of application.

I am, Sirs, yours faithfully,
HORACE MANDERS.
Bentinck street, March 15th, 1902.

## THE DISSEMINATION OF KNOWLEDGE CONCERNING VACCINATION.

*To the Editors of* THE LANCET.

SIRS,—I was unaware that the Jenner Society is taking steps for giving popular lectures on vaccination. I feel sure that they will be useful. It is possible that anti-vaccinationists will attend to challenge the facts, and for such contingencies the lecturer ought to be prepared. Lectures, illustrated by lantern slides, on "The Germs of Disease" would probably be well received. The bacillus tuberculosis, bacillus diphtheriæ, and bacillus typhosus could be shown, and interesting facts mentioned as to their mode of growth, manner of infection, and the proper steps to be taken for their destruction. Small-pox and vaccinia can be illustrated by slides exhibiting the germs identified by Klein and other observers as peculiar to these affections, and, as already suggested by me, coloured slides could also be used to prove what a case of genuine small-pox really is.

I hope that by such methods those that "came to scoff" might be induced to be vaccinated; and the society of which Dr. F. T. Bond is the honorary secretary will no doubt do most valuable work in furthering this good cause.

I am, Sirs, yours faithfully,
HERBERT W. G. MACLEOD, M.D. Edin., D.P.H. Cantab.
Streatham, S.W., March 11th, 1902.

## CANCER IN INDIA AND IN CHINA.

*To the Editors of* THE LANCET.

SIRS,—In THE LANCET of Jan. 18th, p. 192, Mr. C. B. Keetley inquires in the course of his letter on the subject of cancer whether Mahomedans practise circumcision or not. Possibly long before this letter can reach you some one else will have given Mr. Keetley the information which he seeks, but in case no other person has supplied the want I beg to bring forward the following note on the subject. The subject is an interesting one, and the facts regarding it cannot very well be condensed without obscurity, so that I must apologise if my communication is rather lengthy.

All Mahomedans practise circumcision, though there is absolutely no reference to the rite in the Koran. There is also no authentic account of the circumcision of the Prophet Mahomed himself, but certain authors assert that he was born circumcised. This allegation is, however, denied by the most eminent scholars. The rite is held to be *Sunnah*—that is to say, founded upon the practice of the Prophet. It is directed to be performed between the ages of seven and 14 years, though it is stated in the Sahih ul Bukhāri that Abraham was circumcised at the age of 80 years with an axe. He is further said to have been the first to have received the injunction to submit himself to the rite, which is there stated to be one of the five duties appertaining to *Fitrah* or observance of the acts of the Prophet, the others being shaving of the pubes, plucking the hair from the armpits, clipping the beard and whiskers, and paring the nails. It is clear from this association that circumcision (*Khitān*) was regarded as purificatory rather than ceremonial. An account of the ceremonies attending the rite of circumcision among Moslems will be found at page 30 of Herklots, "On the Manners and Customs of Muhammadans of India." Consult also Hughes, "Dictionary of Islām," article "Circumcision." I hope that this note may be of some service to Mr. Keetley.

I am, Sirs, yours faithfully,
GEORGE S. A. RANKING, M.D. Cantab.,
Lieutenant-Colonel, I.M.S.
Calcutta, Feb. 26th, 1902.

*To the Editors of* THE LANCET.

SIRS,—I regret to see from Mr. C. B. Keetley's letter in THE LANCET of Jan. 18th, p. 192, that he has taken umbrage at my attempt to assist him in his inquiries regarding cancer. My desire was to point out what I believe to be a misapprehension regarding the comparative immunity of Hindoos to cancer. To say, as Mr. Keetley does, that I alone am responsible for all the medical and surgical wants of 30,000,000 Hindoos in Southern India is as absurd as it would be to say that Mr. Keetley was responsible for the whole population of London. I have only 90 beds under my charge, the average daily sick occupying those beds being something under that number. These are all males and all surgical cases. Amongst this small number of cases I almost always have one or two Hindoos suffering from cancer, and this fact is, as I stated in my former letter, strong evidence to the effect that cancer is common amongst these people. My belief is shared by every medical man, both native and European, with whom I have conversed upon the subject. I regret for Mr. Keetley's sake that I am unable to give any statistics regarding the question, but my colleague, Captain W. J. Niblock, is at present engaged in collecting information of this nature and no doubt will publish the results of his investigation. The answer to Mr. Keetley's query regarding circumcision is that all Mahomedans undergo this rite. It is as obligatory upon the Mahomedan as baptism is upon the orthodox Christian.

I am, Sirs, yours faithfully,
J. MAITLAND, M.D. Edin.,
Lieutenant-Colonel, I.M.S.
General Hospital, Madras, Feb. 2[illegible]th, 1902.

## THE NOVEMBER PRIMARY F.R.C.S. ENG. EXAMINATION.

*To the Editors of* THE LANCET.

SIRS,—Shortly after the primary Fellowship examination last November I was informed that a slanderous rumour was being actively propagated to the effect that I had prematurely divulged to the members of my class the nature of the questions which had been set for the written part of that examination. This slander was set in motion by a letter written by a medical practitioner to a demonstrator of physiology in one of the London medical schools. The writer was an entire stranger to me. The letter was, without my knowledge, passed on to the President of the Royal College of Surgeons of England who summoned a meeting to consider the matter. I was invited to be present at this meeting. The result of the inquiry will be gathered from the following letter which I subsequently received from the Secretary of the College:—

DEAR SIR,—I am directed to inform you that at a meeting of the Nomination Committee on Dec. [illegible] the following resolution was adopted—viz.: That the evidence taken by the President and Vice-President [illegible] submitted to the Council [illegible] that the Council be informed that after careful consideration of [illegible] Committee conclude that there is no evidence that Dr. Hal[illegible] either intentionally or unintentionally supplied information on the subject of the questions at the last Primary Fellowship examination."

I am to add that a report of the evidence given before the President workhouse hospitals have had such happy results, died at his residence at Greenbank on March 6th at the ripe age of 83 years. The late Mr. Rathbone was also instrumental in the establishment of the training home in Ashton-street in 1860, which was to provide professional nurses for the Royal Infirmary in the first instance; secondly, district nurses for the poor; and thirdly, sick nurses for private families. Within four years from the date of this new and interesting departure Liverpool was divided into 18 districts, each under the management of a lady superintendent with a nursing staff. At first the nurses lived in lodgings, but it was one of Mr. Rathbone's aims that there should be permanent district nurses' homes. Another object of his desire was to render the movement not merely local but national. In both these respects his efforts were crowned with success. The example set by Liverpool was first profited by in London, where, in 1868, Mrs. Stuart Wortley founded the East London Nursing Society. The Metropolitan and National Nursing Association was shortly afterwards established. The initiative was taken by the Council of the Order of St. John of Jerusalem, the chief promoters being Lady Strangford, Mr. William Rathbone, Sir H. W. Acland, Sir Edmond Lechmere, and Sir Robert Wigram. The object of the association was to train a body of skilled nurses to nurse the sick poor in their own homes and to establish associations for that purpose in London and throughout the country. The training home was established in connexion with St. Katherine's Hospital. In 1890 the Queen Victoria Jubilee Institute, as it was then named, was incorporated by Royal Charter. Mr. Rathbone was appointed one of the vice-presidents. District associations were established in many of the chief towns of the kingdom, the Liverpool association being affiliated with the Jubilee Institute. Through Mr. Rathbone's advocacy the fund raised in Liverpool in celebration of the late Queen's Diamond Jubilee was devoted to this charity and was applied to the provision of district homes. Mr. Rathbone, in the face of great difficulties and opposition on the part of the Select Vestry of the Parish of Liverpool, of which he was a member for 40 years, succeeded in reforming the manner in which the sick poor were nursed at the Liverpool Workhouse in the year 1868. The nursing which was carried out by paupers was a mere farce. In his enthusiasm to reform the lamentable treatment of the sick there he undertook to bear the whole of the additional expense of the new system for a term of three years. He brought down a staff of nurses trained at the Florence Nightingale School at St. Thomas's Hospital. The late Miss Agnes Jones, an experienced lady, also from St. Thomas's Hospital, was intrusted with the superintendence of this staff After two years' trial of the reformed system, which worked out admirably, the Select Vestry had no alternative but to adopt it. To revert to the old system was out of the question. Birmingham and Manchester soon followed in the wake of Liverpool in reforming the nursing arrangements of their workhouses. The following resolution was unanimously carried at the recent meeting of the committee of the Royal Infirmary :—

> The committee desire to place on record their deep sense of the loss they and the Royal Infirmary have suffered by the death of Mr. William Rathbone. Mr. Rathbone was the senior member of the committee, having been elected in 1860, and had always taken the warmest interest in the welfare of the institution, more especially in that part of the work connected with nursing. To Mr. Rathbone the committee are indebted for the nurses' home which he built entirely at his own expense and presented in 1862 and which has proved itself of inestimable value In the building of the new infirmary Mr. Rathbone took a most active part and by his death the institution has lost a friend it can ill afford to lose and the committee a colleague for whom they had the highest regard and esteem.

### *West Derby Guardians: a Costly Lunatic.*

At the last meeting of the West Derby Board of Guardians it was reported that an inmate of the Rainhill Lunatic Asylum whose maintenance was chargeable to the West Derby Union had died on March 6th. The patient had cost the union close upon £900, having been an inmate of Rainhill Asylum since 1862.

### *Ladies' Charity and Lying-in Hospital: the School of Midwifery.*

The report of the board of management of this institution states that the out-door patients during 1901 numbered 1554, as against 1523 in the previous year. By the removal of pupils to the "home" the number of beds for patients had been increased to 20, and 218 patients had been admitted (against 204 in 1900), of whom 18 were unmarried girls. There were three deaths in the hospital and three in the out-door department. A ward had been specially fitted up for the treatment of difficult cases. In the school of midwifery 39 pupils were trained, of whom 29 received certificates; 22 monthly nurses were trained by the matron; and 18 medical students took out their course of practical midwifery in the out-door department. Mr. Walter Clark had given £400 for investment, being impressed with the serious condition of the finances. The debit balance now amounts to £430.

### *The Medical Officer of Health on the Value of Revaccination: Interesting Facts.*

At the recent meeting of the Health Committee, Dr. E. W. Hope (the medical officer of health) related to the committee an interesting incident in connexion with vaccination. A certain lodging-house had been temporarily closed and all the inmates who would submit to it were revaccinated. 71 lodgers and 14 of the servants were revaccinated. 13 lodgers, however, refused absolutely to be revaccinated. It was a remarkable and significant fact that none of the 71 lodgers or the 14 servants who were revaccinated took small-pox; but out of the 13 lodgers who refused the operation nine had already developed the disease. But the serious point in the matter was that nine people who were ultimately removed to hospital with small-pox had been roaming about here, there, and everywhere before they could be got hold of and in that way a considerable amount of mischief might have been done.

### *The New Parish Infirmary.*

The erection of the new infirmary for the parish of Liverpool, which the Select Vestry has had in contemplation for some time past, will shortly take place. A tender of £74,650 for the purpose has been accepted.

March 18th.

## WALES AND WESTERN COUNTIES.

(From our own Correspondents.)

### *Rhondda Isolation Hospital.*

A well-equipped isolation hospital was formally opened in the Rhondda Valley on March 13th. There is accommodation in two ward pavilions and an observation block for 36 patients and the population served is about 120,000. The entire cost of the land, buildings, and furnishing was nearly £15,000, and this sum has been paid out of the current rate of the district, so that the institution has been completed without any interference from the Local Government Board, though the recommendations of the Board have in all essential particulars been adopted. The general arrangement of the buildings follows the lines usually adopted in the erection of a fever hospital but differs in some important points of detail. For example, in every bedroom, whether occupied by nurse or servant, there is a fixed lavatory basin with hot and cold water laid on—a luxury which is not so extravagant as at first sight it would appear to be, for not only is there saved the first cost of washhandstands, &c., but there is no current charge for broken jugs and basins. In the pavilions the single bed wards, although overlooked by observation windows from the nurse's duty room, can be completely cut off from the large wards and can be entered by a separate lobby from the outside. The entire flooring in one pavilion is of terrazzo. The type of slop-closet is an excellent one, and is so contrived that a bed-pan is placed in a rounded cupboard closed in with a tightly-fitting glass door, and the contents of the pan can be kept in contact with a disinfectant for any length of time and finally discharged into the soil-pipe. The pan is completely cleaned out without any risk of contaminating surrounding surfaces or of splashing the ward-maid. The inlet ventilators at the floor level are adapted for cleaning from the inside and the cavity in the walls is lined with glazed tiles to facilitate the wiping of the interior, thus preventing that accumulation of dirt which always takes place when the gratings both on the outside and inside are made immoveable.

## NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

*Great Increase of the Plague Epidemic.—The Continued Famine.—Density of Population and One-roomed Tenements —Medical Appointments.*

THE outbreak of plague shows an increase in nearly every province of India. For the week ending Feb. 8th there were 15,165 deaths from plague, as against 12,192 for the previous seven days and 4377 in the corresponding week of 1901. The Bombay Presidency returns 4676 deaths; Bombay city, 549; Karachi, 44; the Madras Presidency, 562; Mysore State, 576; the Bengal Presidency, 953; Calcutta, 124; the North-West Provinces, 1526; the Punjab, 5529; Kashmir, 479; and the Hyderabad State, 146. As I forecasted, there are a great increase in Bombay city and the Punjab and a marked development in Calcutta and the North-West Provinces.

It is not generally noticed that the famine increases rather than diminishes. There are now 280,000 people under relief and there was an increase of 50,000 during the past week In consequence of the failure of the winter rains in the Punjab the Bombay Government estimated its famine expenditure during the coming financial year at 45 lakhs of rupees.

The percentage of the population occupying one-roomed tenements in Indian cities is enormous and it indicates the widespread poverty of the people. For comparison I will take London with 18 per cent. of tenements as one-roomed; Stockholm, 49 5; Berlin, 44, and Christiania, 37. Bombay has no less than 87 25 per cent. of the total tenements one-roomed, and it is estimated that about 80 per cent. of the population reside in tenements of one room, the average number of occupants to each tenement being between four and five. Compare, again, Leeds with 1·3 per cent. of tenements one-roomed; Gateshead, 10 2; Stockport, 1, and Southampton, 6 2. It was stated by the Registrar-General of England that overcrowding may be said to exist where the average number of persons per room is more than two. In Bombay city it is between four and five. To complete the percentage there are only 6 54 per cent of two-roomed tenements and 2 36 per cent. of three roomed tenements in Bombay, the remainder being a little more than 1 per cent. Take, again, the respective populations living under these conditions. In London 9 4 per cent. occupy one-room tenements, whereas in Bombay city it is about 80 per cent. In certain districts of the city the overcrowding and poverty are extreme. In the district of Dongri 95 per cent. of the population are in single rooms and seven other districts have over 90 per cent. living under similar conditions. The district of Kumbharwada has 598 persons to the acre, that of 2nd Nagpada 546, and that of Khara Talao 556. It is difficult to realise what these figures actually mean without a visit to these places.

Mr. J Nield Cook has been reappointed for a term of three years as health officer of Calcutta.—Colonel A. Scott Reid, I.M.S, has been appointed to succeed Surgeon-General Franklin as Inspector General of Civil Hospitals, Punjab, and Colonel Jubert succeeds Colonel Hutcheson similarly in the North-West Provinces.

14th.

## BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

### *The Birmingham General Hospital.*

THE 122nd annual report of the hospital just presented at a meeting of governors gives some interesting details. It states that the final reports and accounts of the building committee have been adopted, and that the old building, which was sold to the corporation, has been pulled down after an existence of some 130 years. A portrait of Sir John Holder, presented by 208 governors, has been added to the valuable portraits already adorning the walls as a memento of one of the greatest benefactors of the hospital. A sum of £5131 odd was received from the Hospital Sunday Fund Committee, and the amount of £3100 from the Hospital Saturday collections Under a recent new law six lady governors were appointed as lady visitors; two of these visit together in rotation, arrangements being made for special attention being given to the female wards and the nurses' and the servants' quarters. The board of management expresses great satisfaction at the receipt of four sums of £1250 each for the dedication of four more beds in the hospital. It is contemplated to appoint an honorary officer to take charge of the ear and throat department alone, and some further modification in the rearrangement and payment of the resident medical officers is proposed. The number of in-patients during the year was 5170 and of out-patients 62,643 or 1778 more than in the previous year. The ordinary expenditure was £24,411, an adverse balance of over £5000 remaining at the end of the year. The report of the Jaffray Branch was also submitted at the same meeting when it was shown that the income for the year was £2471 and the expenditure £2522. During the year 233 patients have been treated, the average length of stay being 14 weeks In this branch there are 10 beds, each of which has been endowed at a cost of £1250, and the committee wisely draws attention to them as a suitable means of perpetuating the memory of relatives or friends.

### *Queen's Hospital, Birmingham.*

The committee, in the sixty-first annual report, calls attention to certain figures which state the income to have been during the year £9606 and the expenditure £11,258; the number of in-patients has been 2189 and that of out-patients 28,895. The amount of £2000 was received from the Hospital Saturday collection during the year. Various other handsome amounts have also been received. A system of internal telephonic communication has been installed and a register of nurses for private cases has been established. Nurses who have completed four years' training and have obtained their certificates are eligible to have their names placed on the register. New residences for nurses and servants are about to be erected and in various directions improvements are to be carried out which will greatly facilitate the working details of the administration.

### *Birmingham Medical Institute.*

The annual report, to be presented on March 25th, states that there are 202 members; during the past year 13 have resigned and 15 have joined. The committee speaks regretfully of the heavy loss sustained annually by arrears of subscriptions and recommend more decisive steps to be taken to secure a prompter payment of these. The revenue account for the year shows the expenditure as £472 15*s*., the balance of excess of income over expenditure being £13 18*s*. 10*d* The committee recommends that all dentists on the Dentists Register shall be eligible for admission. It also recommends that such persons (other than those on the Medical, Dental, and Veterinary Registers) whom the committee may consider entitled by virtue of their office or profession to such privileges may be admitted as subscribers.

March 18th.

## LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

### *Formal Opening of the David Lewis Northern Hospital by the Princess Louise (Duchess of Argyll).*

THE Princess Louise, who was accompanied by her husband, the Duke of Argyll, formally opened the David Lewis Northern Hospital on March 13th. The ceremony was performed in a specially erected pavilion in the grounds of the hospital which accommodated 1400 people. Her Royal Highness was presented with a handsome gold key as a memento of the occasion. The new hospital contains 220 beds and has cost £120,000 This large sum, as stated in a former issue of THE LANCET, has been provided by the David Lewis trustees (Mr Benn Wolfe Levy and Mr. George J. Cohen). Purses were presented to the Princess, containing £1605, in response to the appeal of the committee on behalf of the Sustentation Fund. The whole cost of the opening ceremony was generously defrayed by Mr. Benn Levy, which is only one of the many generous gifts bestowed by him upon the hospital

### *Death of a Liverpool Philanthropist: Tribute by the Committee of the Royal Infirmary.*

Mr. William Rathbone, formerly M.P. for Liverpool, whose efforts to reform the system of nursing formerly in vogue in seem to the court to be inadequate they propose that the salaries should all be raised to £350, the fees to be paid into the fee fund. The sum required for this would be an annual grant of between £2500 and £2800. The scheme of university extension lectures could be reorganised provided the University had sufficient funds for the purpose. This scheme was at one time in existence, but failed solely on account of want of funds. Post-graduate lectureships and scholarships are much needed and would be of the greatest value to the university. It would also be desirable to increase the annual class grants which are made to the scientific and medical classes and which are spent by the professors on apparatus and on perishable materials used in the classes. The University has at present no means at its disposal to increase those grants. Additional assistance is also required by some of the professors. The need of additional accommodation for the library is urgent, and the grant for books has long been felt to be insufficient.

### *Dundee College.*

In the case of the Dundee College the necessity for medical buildings is very urgent. Five new chairs and one permanent lectureship in the Faculty of Medicine of the University of St. Andrews were founded in 1898 with the condition that the work should be carried on in University College, Dundee, and in addition several lecturers were appointed by the University Court. For those new departments temporary accommodation had to be made, as there was no adequate accommodation in the existing buildings. Plans and specifications for a new building have been drawn out and tenders for the work have been received. For the whole work involved in building and equipping the School of Medicine the cost may be summarised as follows: for buildings and fittings, a sum of £6000; for equipment, a sum of £5000. Reconstruction of the existing buildings is also much needed, and it is hoped that this may be shortly carried out at a cost of from £30,000 to £40,000. A scheme spreading the expenditure over seven years is suggested, the items of capital expenditure being as follows: medical buildings, fittings, and equipment, £11,000; chemistry extension, building, and equipment, £3000; engineering extension and equipment, electrical engineering, &c., £42,800; botany, £500; zoology, £500; geology, £500; library, £1000; total, £66,100. In addition to this annual grants are desired for the maintenance of laboratories and museums, as well as for books and periodicals. The most urgent needs of the University of St. Andrews may therefore be summarised as follows—viz.: 1. (*a*) St. Andrews.—The alteration of the present buildings and the erection of additional new buildings, including laboratories of research for chemistry and physics. (*b*) Dundee.—The erection and completion of the medical buildings. 2. The provision of additional accommodation for the University library in St. Andrews and a larger annual sum for expenditure on books and scientific journals. 3. A lectureship in German. 4. A lectureship in geology.

March 19th.

## IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

### *The National Hospital for Consumption.*

THE annual meeting of the supporters of the National Hospital for Consumption, Newcastle, co. Wicklow, was held on March 14th in the hall of the Royal College of Physicians of Ireland. His Excellency the Lord Lieutenant of Ireland honoured the meeting by his presence, and in proposing the adoption of the report he delivered a most interesting speech in which he alluded to a former meeting in that hall over which he had presided and at which the question of tuberculosis was discussed in reference to the congress which had since taken place in London and which had been initiated by His Majesty the King. The President of the Royal College of Physicians of Ireland, Sir Christopher Nixon, seconded the motion and stated that he looked upon it as a matter of regret that His Most Gracious Majesty had seen fit to abandon his visit to Ireland, as he would have got not only a warm but an enthusiastic reception in that country. Referring to the very favourable statistics contained in the hospital report, he said that he took a deep interest in the proposed sanatorium for the consumptive poor of the north side of Dublin, in connexion with which a special inducement would soon be offered to which the general public and the corporation itself would find it very hard to refuse support. In reply to a vote of thanks to His Excellency, proposed by Dr. J. Magee Finny, the Lord Lieutenant said, in allusion to the remarks of the President of the Royal College of Physicians of Ireland, that nobody regretted the abandonment of the King's visit more than he did, and he added that he would go further and say that nobody would share that regret more than His Majesty himself, with whom the idea of the visit had originated.

### *Notification of Infectious Disease in Dublin.*

After a very long delay the Urban District Council of Blackrock has decided to adopt the Notification of Diseases Act, 1889, and the Prevention of Diseases Act, 1900, in the township. On March 11th Mr. D. E. Flinn, the Local Government Board medical inspector, addressed the councillors of Kingstown and endeavoured to induce them to adopt the same measure. In that case the matter was referred to a committee for further consideration and it will therefore be probably delayed much longer. It seems a misfortune that these Acts, which are compulsory in England, should still continue to be only voluntary here.

### *Small-pox in Belfast.*

On March 13th a man who had been arrested in Govan (Glasgow) on a charge of bigamy and had been brought over to the county gaol in Belfast developed signs of small-pox, which he had contracted in Glasgow, and was immediately removed from the prison to the Belfast Union Infirmary. The attack is, so far, a mild one.

### *Death of Mr. James Tomb, M.D., M.Ch.R.U.I.*

I regret to announce the death of Dr. James Tomb which occurred on March 13th at his residence in Crumlin-road, Belfast, after an illness of a few days, from pneumonia secondary to influenza. After studying at Belfast Dr Tomb graduated M.D. of the Royal University in 1887. For a time he acted as assistant to Dr. Stewart of Portadown (one of whose daughters he married). Subsequently he settled in the north end of Belfast, where, by the utmost attention to, and care of, his patients, he developed a large working-class practice. He leaves a widow and two children. Dr. Tomb was only 41 years of age. He was buried in Belfast on the afternoon of March 15th, an immense number of friends attending the funeral.

### *The Lisburn Workhouse.*

The inspector of the Local Government Board reports in reference to his official visit to the workhouse at Lisburn on Feb. 5th and 6th that while that institution affords sufficient accommodation as to size, it does not do so in regard to internal arrangement. Separate wards for consumption and for specific disease have not yet been provided in the infirmary, and there are neither day-rooms for convalescent patients nor an operating table. The infirmary in respect of size is not adequate to the wants of the union. The inspector suggests that the vacant auxiliary hospital at the front of the workhouse should be used for the accommodation of consumptive and convalescent patients. He recommends that the guardians should send samples of milk and butter for analysis and that modern grates (to prevent waste of coal) should be provided. He hopes that the drainage of the workhouse will receive attention and that a vehicle will be provided to bring patients to the fever hospital. The inspector considers the windows to be totally unfit for a hospital and he recommends the gradual introduction of a new type of beds. He points out that the infirmary floors are in bad order. Altogether the Lisburn guardians have a good deal of work before them if they make the necessary reforms suggested in this report.

March 18th.

## PARIS.

(FROM OUR OWN CORRESPONDENT.)

### *An Election Circular.*

WITHIN a few weeks a general election will be held throughout France. Preparations for the struggle have already begun and committees are being formed to support

### *The Prevention of Spitting.*

The Public Health Acts do not appear to give any power to sanitary authorities to frame by-laws for the prevention of spitting in public places, and an attempt has been made by at least one corporation—that of Liverpool—to obtain the power by means of a private Bill. Under the Local Government Act, 1888, however, a county council may make by-laws for "the good rule and government of their county" and such by-laws are not subject to the approval of any higher authority, but merely come into force 40 days after they have been sent to a Secretary of State. The Glamorganshire County Council in the exercise of this power has passed a by-law which reads thus: "A person shall not spit on the floor of any public carriage, or of any church, chapel, public hall, waiting-room, schoolroom, theatre, or shop, whether admission thereto be obtained upon payment or not." There is a maximum penalty of £5 for offending against the by-law. The Sanitary Committee of the Monmouthshire County Council will suggest at the next meeting of the council a similar by-law for Monmouthshire. If these by-laws are not held by the courts to be *ultra vires* it will be found that the powers of county councils are not so restricted as was at one time supposed.

### *A Coroner and the Home Office.*

On Saturday, March 1st, a girl employed at the Aberdare Tinplate Works lost her life by falling into a tank of vitriol. Such an accident is one more than any other which ought to be inquired into by one of His Majesty's inspectors of factories. It is to be deplored, therefore, that at the inquest which was held on the following Monday the coroner should have refused to adjourn the inquiry in order to enable the factory inspector to visit the scene of the accident. Section 21 of the Factory and Workshop Act, 1901, provides that the coroner need not adjourn an inquest held in connexion with the death of a person caused by an accident in a factory or workshop if he has sent to the factory inspector a notice of the inquest to reach him not less than 24 hours before the holding of the inquest and if the majority of the jury think it unnecessary to adjourn. The coroner in this instance does not appear to have been familiar with this section of the Act and the Home Secretary, upon being questioned in the House of Commons on March 13th, gave it as his opinion that a notice received at an inspector's office on Sunday of an inquest to be held on Monday is not a proper notice as required by the Factory and Workshop Act, and he added that the coroner's refusal to adjourn the inquest appears to have prevented the jury from having all the facts of the case brought before them.

### *Risca Health Report.*

The annual report of the medical officer of health (Dr N. Cullinan) upon the sanitary condition of Risca, a mining district of Monmouthshire, is not very satisfactory reading. The death-rate in 1901 was 20 per 1000, and for the previous 10 years it was 17·7 per 1000. Polluted water-supplies, insufficient means of sewage disposal, lack of isolation accommodation, and overcrowding of houses all appear to contribute to the high death-rate.

### *Bristol Medical Mission.*

The annual meeting of the friends of this mission was held on March 13th, under the presidency of the Lord Mayor of Bristol. The medical report stated that 7895 patients had been treated during 1901, including 1994 who were attended at their homes, 25,936 visits being paid. The financial statement was satisfactory, and it showed that the unfavourable balance of £372 with which the year commenced had been reduced to £30.

### *Sanatoriums for Phthisical Patients.*

A county meeting was held at Dorchester on March 11th, under the presidency of Lord Ilchester, for the purpose of considering whether Dorsetshire should establish a separate sanatorium for phthisical patients or should combine with Devonshire and Cornwall in the erection and maintenance of such a sanatorium. On the proposition of Lord Portman, seconded by Lord Stalbridge, a committee was appointed to consider the question. The general feeling of the meeting was apparently in favour of a joint sanatorium for the three counties.

March 17th.

## SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

### *The Examination of Pathological Products in Edinburgh.*

IN THE LANCET of March 1st, p. 622, reference was made to this matter. At that time the Public Health Committee of the Edinburgh Town Council had decided that no arrangement for the performance of this kind of work could be regarded as final and satisfactory which did not provide for its being done by the public health authorities, and that in view of this the present arrangement with the Royal College of Physicians should be continued. When this recommendation of the Public Health Committee came up before the town council it was debated and rejected, the council deciding that the work should be transferred to the Usher Institute of Public Health attached to the University. Following upon this a meeting of the members of the medical profession in Edinburgh was called for Tuesday, March 18th. Some 60 members put in an appearance, and the chair was occupied by Dr. G. A Gibson The speaking was all against the action of the town council and a deputation was appointed to wait upon the council and to represent the views of the meeting.

### *Close of the Winter Session.*

The winter session of the classes in the Faculty of Medicine, Edinburgh, close on Friday, March 21st.

### *Death of Mr. Stanley Donald.*

Quite a gloom has been cast over the medical students on the University of Aberdeen by the untimely death on March 17th of one of their number, Mr. Stanley Donald, son of Dr. Donald of Banff. The news of Mr. Donald's death has been received with feelings of deepest regret and genuine sympathy is being extended by all classes of the community to his bereaved relatives.

### *The Strachan Bursary.*

The Strachan bursary for Clinical Medicine and Therapeutics has been won by Mr. Hugh S. Brander, M.A., of Aberdeen.

### *Presentation to Dr. T. W. Ogilvie.*

A large number of the people of Torry met in the Old Free Church, Torry, on March 15th, when Dr. T. W. Ogilvie was made the recipient of a dressing-case and a sporting rifle on the occasion of his leaving for Kimberley. Baillie Meff presided and ex-Lord Provost Mearns made the presentation. Dr. Ogilvie replied suitably.

### *St. Andrews University and the Carnegie Trust.*

The report of the University Court of St. Andrews to the Executive Committee of the Carnegie Trust has now been published. In the prefatory statement an account is given of the improvements which have already been made. The urgent needs of the University arise from the efforts which have thus been made. The average number of students at the University from 1880-81 to 1889-90 was 206. This number has gradually risen to 415 this year, through the admission of women, the addition of Dundee students, and other causes. The most urgent need of the University is the alteration and extension of the buildings of the United College. The present buildings were erected at two periods—the east wing in 1827-29 and the north wing in 1846-49 They were built to accommodate only the classes then in existence, and the class-rooms were laid out in a manner which has now become antiquated, this being especially seen in the case of the class-rooms of chemistry and physics, which are unsuitable in every way. No provision has been made for expansion. There are no separate class-rooms for the chair of education or for the lectureships which have been instituted since 1891 For necessary additions to the present buildings about £10,000 might be sufficient. For separate research laboratories in chemistry and physics £10,000 would be required. In the lectureship department the most urgent need is the establishment of a permanent lectureship in German. Lectureships in geology and applied mathematics might also with great advantage be established. The court are also of opinion that the lectureships in botany, French, history, ancient history, and political philosophy, political economy, German, geology, and applied mathematics should be permanently established in the University. As the salaries of the lecturers on those subjects the charge of an attendant. In the reading-room all the important medical journals are kept on file and the rooms are open to members from 2 to 6 P.M. and from 8 to 11 P.M. The society recently discussed the proposition to have medical inspection of schools for the city of Montreal. No definite arrangement was recommended as the whole matter is to come up again at another meeting shortly. The stated meetings of the society are held on the first and third Fridays of the month from October to June inclusive. The officers for the present year are as follows: President, Dr. George E. Armstrong; Vice-President, Dr. H. S. Birkett; treasurer, Dr. J. M. Jack; secretary, Dr. Alfred T. Bazin; trustees, Dr. G. A. Brown, Dr. F. J. Shepherd, and Dr. James Perrige.

### *The Undergraduates' Medical Society of McGill.*

This society was organised in 1879 through the influence of Dr. William Osler and Dr. Frank Buller, and shortly afterwards it undertook to support a reading-room. That it commenced on a very small scale is apparent seeing that all the literature provided at that time was one daily newspaper and the *Illustrated London News*. In 1886 the faculty took the reading-room under its wing and since that time each medical student is charged $1 for its maintenance along with his other dues In the new medical buildings recently constructed the society is provided with a very handsome reading-room where all the leading daily and weekly papers of the Dominion of Canada and a few of the United States are on file. In addition there are supplied all the leading medical and scientific journals. Very recently a beautiful tablet has been erected in this reading-room to the memories of Harold L. Borden, B.A., of Canning, Nova Scotia, and A. Patrick O'Reilly of Hamilton, Ontario, both of whom lost their lives in active service in South Africa in 1900. Both were medical students. sons of two prominent medical men of the Dominion.

### *A New Hospital in New Brunswick.*

The Chipman Memorial Hospital was opened on the afternoon of Feb. 4th at St. Stephen's, N.B , by the Hon. L. J. Tweedie, Premier of the Province. This hospital, which is situated on the banks of the St. Croix River, a short distance below the town, comprising building, grounds, and modern equipment, has been presented to the town by Lady Tilley, wife of the late Sir Leonard Tilley, formerly Lieutenant-Governor of the Province, and other heirs of the Chipman Estate. It has accommodation for 20 patients, and on the day of its dedication the men of St. Stephen's presented to it $1000.

## NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

### *A Bill to Establish a National Board of Public Health in the United States.*

A BILL has been introduced into the House of Representatives of the United States to establish a National Board of Public Health. It is proposed that such board shall consist of a commissioner and of a representative from each State and territorial board of health, the surgeons-general of the army and navy, the supervising surgeon-general of the Marine Hospital Service, or such other medical officer from either service as may be designated by the chief thereof. The duties of the commission will be to supervise all matters affecting public health and especially the laws relative to quarantine. Much of the work which the proposed board would undertake is now efficiently performed by the United States Marine Hospital Service, and for this reason it is thought by many that the creation of a national commission is unnecessary.

### *Registration of Deaths and Mortality Statistics of the United States.*

The lack of uniformity in the several States of the Union in the methods employed in registering deaths and collecting vital statistics has long been an obstacle in the way of gathering accurate statistics of mortality in the United States. In this country registration heretofore has been done better or worse, or has been wholly neglected, according to the will of separate and independent States, and always without regard to the practice of neighbouring States or to the broader utility of registration for certain purposes of the Federal Government. The United States Census Office, together with a committee of the American Public Health Association, has concluded to take up the matter and to endeavour to introduce the needful changes into the system. The committee of the American Public Health Association has published a circular in which it is stated that it is very desirable that Congress, the United States Census Office, the medical departments of the Government, the legislatures of all the States, their boards of health and registration bureaus, municipal boards of health, and all sanitary, medical, statistical and economic associations should unite in efforts to extend in this country the practice of accurate registration of deaths and the publication and utilisation of the valuable data resulting therefrom. The committee has drawn up what it deems to be the essential requirements of a law for the registration of deaths and the collection of mortality statistics.

### *Amended Vaccination Act for New York State.*

The existing regulations in regard to vaccination in force in New York State will be rendered far more stringent if the Vaccination Bill in its amended form now before the State Legislature becomes law. The Bill in question provides for the compulsory vaccination of school-children, making it incumbent upon superintendents and principals of schools to refuse permission to enter schools to any children who have not been vaccinated or revaccinated within a certain period. Another clause of the Bill provides that every person in a house in which small-pox has broken out shall be vaccinated, and in case of refusal it allows a local board of health to quarantine for 14 days the recalcitrant individuals. The heads of colleges, hospitals, public institutions, fire and police departments, factories, business-houses, &c., are made responsible for the vaccination and revaccination within a certain period of those under them, neglect to comply with these regulations being visited with heavy penalties. The people of New York State, and, indeed, of the United States generally, are in the main conscious of the great benefits conferred by vaccination and seem determined to insist upon the operation being performed efficiently and often enough to check the spread and to modify the virulence of small-pox.

### *The New York State Charities Bill.*

Much dissatisfaction has been aroused throughout New York State by the action of the governor in introducing a Bill whereby the patronage and control of the 14 State charitable and correctional institutions will be taken from the State Board of Charities and lodged with the Executive at Albany. The State Board of Charities has managed these institutions for many years and with satisfactory results, and the resolve of the governor to dispense with its services has given rise to protests not only from the medical journals, but from the lay journals also. The press has condemned the governor's action with remarkable unanimity and on March 3rd the State Board of Charities gave the governor to understand that the members of the board could not conscientiously accept the essential provisions of his Bill; they pointed out that they were opposed to stripping the local boards of managers of their present powers, but would favour any Bill aimed to extend and to safeguard the present system. As a result of the ground taken by the State board, the governor and the special committee of legislators which drafted the proposed Charities Bill could not agree with the members of the State board on a measure which the board would stand for. The chief objection brought against the Bill is that it will place the charitable and correctional institutions of the State, including lunatic asylums, directly in the hands of politicians who it is feared may use the patronage attached to them for political purposes and not for the good of the inmates.

### *Crusade against Vice in Buffalo.*

The ministers of religion and the police authorities of Buffalo have come to an agreement whereby disorderly houses are to be restricted within certain limits, and all thoroughfares are to be kept free from the vicious element. This departure on the part of Buffalo, however, is not a new or untried one in the United States. For nearly 20 years in Minneapolis, Minn., there has been in force a like arrangement. All the saloons have been, and they are now, in an area confined to six blocks in width from the Mississippi River on each side, and houses of prostitution in a narrower limit. This district is regularly patrolled by the police; keepers of houses the candidates of the different parties. Various leagues are organised and electoral circulars are being sent out. One of these which I have seen is an astounding document such as it is hardly possible to believe could have been sent out at the beginning of this century, one, moreover, which is not the work of a practical joker but which is issued by a genuine committee. The committee is composed of provision merchants whom the laws destined to check adulteration, although such laws are very mild and are not applied with any rigour in France, annoy in their nefarious work. These provision dealers propose to take vengeance for the discredit thrown upon articles supplied by them by systematically voting against all Parliamentary candidates who happen to be medical men. Many deputies are medical men, but most of them do not practise and their indifference to all matters which are of interest to the medical profession and even to the question of public health is notorious. All the same the circular in point is worthy of reproduction. It runs thus: "Electors and business men! On the eve of the elections the friend of the small dealers calls your attention to the present very grave danger—namely, the invasion of the Chamber of Deputies by medical men. Oppose medical candidates, replace them by commercial men. And why! Because the trend of hygienists is to exercise an insupportable dictation concerning the supplying of food. To increase their authority these hygienists do not hesitate to exaggerate in an absurd manner the importance of food frauds, and then they pose as saviours of human life. Thus sometimes these hygienists, who are nothing but quacks, accuse purveyors of milk, sometimes wholesale provision dealers or rather grocers. No branch of food-supplying is free from their accusation of fraud and falsification. Defend yourselves, then, against the calumny. The business of food-supplying is already too much discredited, has been for some years too persecuted by the mountebanks of hygiene. They must be given a lesson. Food purveyors of Paris and the provinces! Vote against medical men. Let all parties choose other men to uphold their flag. Let them, for instance, choose food purveyors."

### *Sudden Death.*

At the meeting of the Academy of Medicine held on March 11th M. Lancereaux read a very interesting and surprising paper. He had made 50 post-mortem examinations on the bodies of individuals who had died suddenly and whose death had been attributed, wrongly as it turned out, to embolism or to the rupture of an aneurysm. M. Lancereaux was surprised to find that all the organs were perfectly healthy, particularly the heart, which was empty, as is observed in physiological experiments in the production of death by bulbar anæmia. M. Lancereaux, therefore, had to seek elsewhere for the cause of death occurring while the patient was apparently perfectly well and he attributed it to a gastric reflex which had been observed chiefly in gouty dyspeptics. This form of dyspepsia brought about great irritability of the heart even when it was otherwise normal but especially when the heart was at all dilated or was much overlaid with fat; it was well known that indigestion might easily produce cardiac palpitation, weakness, or even syncope. A sharp blow on the pit of the stomach or the ingestion of ice-water was able to bring about sudden death by arrest of the heart owing to a reflex shock originating in the stomach M. Lancereaux, starting from this point of view, made the remark that most sudden deaths occurred at very significant times of the day, that is to say, from four to five hours after midday or between two and three o'clock in the morning. They, however, rarely occurred in the morning between 10 and 11 o'clock—that is to say, they occurred at such a distance after a meal that digestive troubles were beginning to be felt in dyspeptics who suffered from dilated stomach. The way to ward off this catastrophe was to order dyspeptics an appropriate diet, such as grilled meat, eggs, and green vegetables; they should drink nothing but water or should live entirely on milk and they should have their meals at regular intervals. All acid substances should be forbidden and a little bicarbonate of soda should be taken. The excitability of the nervous system could be modified by bromides and opium. If there was much cardiac palpitation a little digitalis might be given, and life must be taken quietly. If syncope came on rhythmical traction of the tongue, slapping on the face, and injections of ether, caffeine, and above all of morphia might be given.

March 18th.

# CANADA.

(FROM OUR OWN CORRESPONDENT.)

### *Attendance at McGill University.*

THE total number of students attending classes at McGill University during the present session is put down at 1114, divided amongst the different faculties as follows: law, 60; medicine, 490; arts, 294; applied science, 254; and veterinary science, 16. In 1901 the total number of degrees conferred was distributed as follows: law, 17; medicine, 93; arts, 42; applied science, 51; and veterinary science, three.

### *Death of a Prominent Alienist.*

Dr. Richard Maurice Bucke, superintendent of the Asylum for the Insane at London, Ontario, died on Feb. 19th. About 11 o'clock on that evening before retiring for the night he took a stroll on the verandah of his residence, when he slipped accidentally upon some ice, the fall resulting in immediate death. Dr. Bucke was born in 1837 at Methwold, Norfolk, England, at which place his father was curate. Coming to Canada at an early age, he graduated in medicine at McGill University in 1862 as gold medalist of his class. He entered the Ontario asylum service in 1876 as superintendent of the Hamilton Asylum, being transferred to the superintendency of the London Asylum in the following year, a position which he held up to the time of his unfortunate death. He was a life-long friend of the poet Walt Whitman and his literary executor, and he had the largest and best Whitman collection in the world. Dr. T. A. McOollum of Dunnville, Ontario, a prominent surgeon of the Niagara Peninsula, has been appointed as his successor.

### *An Association of the Hospitals of Ontario.*

Representatives from the leading hospitals of the province of Ontario recently met in Toronto for the purpose of forming the Ontario Hospital Association, the object being to insure united action in guarding the interests of the hospitals in the province. The movement was instituted by Ottawa hospital authorities, and has been brought about owing to the falling-off in hospital funds. The cause of this is laid at the door of the Ontario Government which lately cut down the grant to 30 cents per day, and further to the fact that the Succession Duties Act bore so heavily upon the estates of wealthy citizens that nowadays these dying left nothing to the hospitals as formerly, believing that a portion, say 10 per cent., of the duties were handed over to the hospitals by the Government. The new association will meet every year in Toronto at the time of the meeting of the provincial legislature. The officers will consist of a president, five vice-presidents, a secretary-treasurer, and a committee of seven. Dr. John Ferguson of the Western Hospital, Toronto, was elected the first secretary-treasurer.

### *A New Medical Building for Toronto University.*

The medical department of Toronto University will erect a fine new building in the Queen's Park, adjoining the other university buildings, at a cost of $125,000. It will be constructed on the same plan as the new medical building of Harvard University. The laboratories will be on the "unit system," each one being 23 by 30 feet and capable of being enlarged or decreased in size to suit large or small classes. The faculty will probably lease a portion of the building when completed to the arts department of the University.

### *The Efficacy of Vaccination Proven at Montreal.*

Since May last, according to Dr. J. E. Laberge of the Montreal Contagious Diseases Hospital, there have been in that institution 240 cases of small-pox, and in no instance had any of the patients been vaccinated before contracting the disease Besides, a staff of 18 persons, medical men and nurses, have been in daily and hourly contact with these small-pox patients, and not one of them has contracted the disease. The special order of the Provincial Board of Health of Quebec with regard to compulsory vaccination has been pretty generally obeyed throughout the province, as over 347 municipalities have notified the board that they have adopted this by-law.

### *Montreal Medico-Chirurgical Society.*

During the past year this society has secured fine new commodious quarters, which comprise a large meeting-hall capable of seating 125 persons, a cloak-room, a library-room, a reading-room, and a committee-room. All are in

British Medical Association the question of meeting in consultation the medical officers of the Associated Friendly Societies' Institute at Brisbane was discussed. It was stated that the establishment of the institute had enabled the friendly societies to dictate terms to the medical profession, and the objections to it were (1) that the sum paid per member to its medical officers was less than that paid to medical officers of friendly societies not connected with the institute; and (2) that no one was excluded from membership of the institute, whatever his income or position might be. It was finally resolved unanimously:—

1. That members of the branch shall not meet in consultation the medical officers of the Brisbane Associated Friendly Societies' Medical Institute.

2. That members of the branch shall not meet in consultation medical men who meet in consultation the medical officers of the Brisbane Associated Friendly Societies' Medical Institute.

3. That, except by a special resolution of the branch at a meeting called for the purpose, the members of the branch shall not meet in consultation medical men who now hold, or shall have held, the position of medical officer to the Brisbane Associated Friendly Societies' Medical Institute.

4. That Resolution 3 shall also apply to medical men referred to in Resolution 2.

5. That the foregoing resolutions be not put into effect until they have been ratified at the next general meeting (Friday, Feb. 7th, 1902) and until each member of the branch in Brisbane has been made acquainted with them.

6. That a printed copy of the foregoing resolutions be sent to every medical practitioner in Brisbane.

Feb. 11th.

# Obituary.

## SIR WILLIAM GUYER HUNTER, K.C.M.G., M.D. ABERD., F.R.C.P. LOND., F.R.C.S. EDIN.

WE much regret to announce the death of Sir William Guyer Hunter, which occurred on Friday, March 14th, at his residence, Anerley-hill, Upper Norwood.

Sir William Guyer Hunter was the eldest son of the late Mr. Thomas Hunter, of Catterick, Yorkshire, and was born in 1829, being in his seventy-third year at the time of his death. He received his education at King's College School and King's College Hospital, and in 1849, at the earliest possible opportunity, he became a Member of the Royal College of Surgeons of England, graduating later in Medicine at Aberdeen University and taking, also, the Fellowship of the Royal College of Surgeons of Edinburgh. In the following year he entered the medical service of the Bombay Presidency, where he was destined to take part in stirring events. He served through the second Burmese war of 1852–53 which led to the annexation of Pegu, and during the campaign nearly fell a victim to a severe attack of cholera. For his services in this war he received a medal with clasp. Five years later came the Indian Mutiny, through which he served as a surgeon, obtaining brevet rank. At the time of the mutiny he was civil surgeon in Upper Sind, and the strain upon him compelled him, when the sepoys had been suppressed, to return home on furlough. He was recalled to take up a vacant professorship in the Grant Medical College, Bombay, when he was also elected physician to the Jamsetjee Hospital. In 1876 he was appointed principal of the Grant Medical College and in 1877 was specially promoted to the rank of surgeon-general. In 1878 he made a valuable report to the Government of Bombay upon the famine fever of the previous year, for which he was specially thanked by the Indian Government. It is a melancholy coincidence that the brilliant Anglo-Indian, Sir Richard Temple, whose death took place on the day following the death of Sir William Guyer Hunter, received the report in question, for he had just been made Governor of Bombay, in recognition of his excellent work in connexion with the famine troubles. In 1879 Sir William Guyer Hunter was appointed by Sir Richard Temple Vice-Chancellor of the University of Bombay—a distinction, at any rate at that time, usually reserved for members of the Legislative Council and judges of the High Court in India. In 1880, on a new organisation of the Indian Medical Service being promulgated, Sir William Guyer Hunter retired from the service, leaving behind him an admirable record of arduous and enlightened labour. A highly complimentary order referring to him was issued by the Government, a public address was presented to him by the inhabitants of Bombay, and a subscription was raised to found a scholarship and to present him with his portrait to be placed in the Grant Medical College.

In 1883, very soon after his retirement from the service, he was sent to Egypt by the British Government to inquire into the cause of epidemic cholera in Egypt. His great experience of cholera during his service in India made him well qualified to discharge the mission. Cholera, it may be remembered, had broken out with suddenness and severity at Damietta, and at Mansourah, some 30 miles up the Nile, and the position of Damietta on the Mediterranean coast made it of the utmost importance to ascertain the origin and nature of the outbreak. Surgeon-General Hunter was prompt to speak. Within a few weeks of his arrival in Egypt he submitted a brief report, stating that cholera of the ordinary Indian type had to be dealt with immediately by the formation of an adequate sanitary service; that "quarantines" and "cordons" had never more completely failed to arrest the disease than they had done in Egypt; and that to talk of sanitation in connexion with Cairo and other Egyptian centres of population was an abuse of words. His subsequent full reports to Lord Granville and certain papers read before the Medical Society of London and the Epidemiological Society came in for a great deal of criticism. He repudiated entirely the contagiousness of cholera, and regarded the epidemic in Egypt as an exacerbation of an endemic form of cholera which had been existent in the country for at least 30 years. His views were obviously based upon insufficient and untrustworthy evidence, while, curiously enough, the cases that he recorded went to prove exactly the influence of contagion and the spread along lines of human intercourse which he denied to exist. But the good done by his vigorous indictment of the unhealthy conditions prevailing in Cairo remained, and the question as to whether he had misinterpreted the meaning of facts which he had laboured to collate did not detract from that good. Surgeon-General Hunter was made a K.C.M.G. for his services on this occasion.

In 1885 Sir William Guyer Hunter entered Parliament as Conservative member for Central Hackney and was returned again in the following year for the same constituency, for which he sat until 1892. He was a sound but infrequent speaker, contributing to debate only when his special experience made his views of value.

He was twice married—firstly to a daughter of the Reverend C. Packe, vicar of Ruislip, and, secondly, to a daughter of Mr. J. Stainburn.

Sir William Guyer Hunter was honorary surgeon to His Majesty the King and consulting physician to Charing Cross Hospital. All medical men will feel that in him they have lost a colleague who did their profession great credit. A shrewd and laborious man, he made a great reputation for himself in India while still a young man, and until the close of his life he worked hard in responsible positions for the good of his generation.

## SURGEON-GENERAL JOHN ROBERT THEOBALDS,

LATE INDIAN MEDICAL STAFF, MADRAS PRESIDENCY.

SURGEON-GENERAL J. R. THEOBALDS died at his residence at Weston-super-Mare on March 7th in his eightieth year. The deceased was born in India, and in 1848 he entered the Indian Medical Staff, and retired in 1880, after 32 years' service, with the rank of Surgeon-General. Surgeon-General Theobalds whilst in the service was engaged in the pursuit of the notorious Tantia Topee during the Indian Mutiny. His skill as a surgeon and his management of the various hospitals over which he had the control are spoken of in the highest terms in the Government reports. On his retirement he settled in Weston-super-Mare where he took the greatest interest in municipal matters and gave his personal and financial support to a large number of the local benevolent institutions. Surgeon-General Theobalds was of a genial and kindly disposition and will be much missed in Weston-super-Mare. He died after a short illness from cardiac failure following an attack of pneumonia. The funeral, which took place on March 13th, was largely attended.

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THE *Star* points out that the pages of "Burke" contain the names of two persons, both medical men, who are in their ninety-fourth year—Sir Charles Nicholson, M.D., who held for a considerable time a distinguished position in the Legislature of New South Wales, and received a baronetcy in 1859; and Sir Henry Pitman, M D. Cantab., who was for many years registrar of the Royal College of Physicians of London, and who was knighted in 1883.

of ill-fame are regularly fined, and it is asserted by inhabitants of the far western city that the adoption of the system has been attended with complete success and that no city of the Union can show a cleaner street record than can Minneapolis. The proper government of American cities is a most serious question and one that is arousing the attention of philanthropists and sanitarians from a moral and physical standpoint. The control of prostitution is an especially difficult feature with which to deal successfully, and in no city are the obstacles in the way of solving the problem more obvious than in New York. A committee of 15 was appointed to investigate the matter and to suggest remedies and it has lately published a volume dealing exhaustively with the subject. The working of the arrangement come to at Buffalo will therefore be watched with interest throughout the United States, and if successful there other large cities may be induced to enter into a like arrangement.

### *Report on Mosquitoes in Baltimore.*

In the February-March number of the *Bulletin of the Johns Hopkins Hospital* is a report by Mr. Leonard K. Hirshberg and Mr. Gustavus C. Dohme on the result of their investigations of the distribution of the anopheles claviger in the vicinity of Baltimore. They place no faith in the use of oil as an exterminator of the larvæ of the mosquitoes and declare that it is hopeless to expect to eradicate malaria by such means. In concluding their observations these investigators say: "Of special importance is the careful screening of doors by wire gauze or mosquito netting as suggested by Celli. Where this cannot be done fitting the beds with netting will offer security, inasmuch as most anopheles bite at night." They recommend that cases of malarial infection shall be reported to the City Board of Health just as are the contagious diseases, thus enabling precautions against the spread of malaria to be carried out under the proper supervision.

### *Mosquitoes and Dengue.*

Dr. Harris Graham, professor of pathology at the American College, Beyrouth, Syria, contributed to the *Medical Record* of Feb. 8th an article on the Mode of Propagation and Pathology of Dengue. Dr. Graham points out that since the epidemic of 1889 a strong opinion has prevailed among those who have given the matter careful study that dengue is a purely contagious disease, but that up to the present no logical explanation has been offered of the soundness of this theory. He therefore at the beginning of the epidemic which has prevailed in and around Beyrouth since July, 1901, commenced a series of experiments in order to determine, if possible, whether the culex which exists in perfect swarms in the city could carry the dengue from person to person. The careful experiments carried out by Dr. Graham convinced him that the mosquito was the means of carrying the disease and he was therefore forced to the conclusion that the cause must be sought in the blood. The blood of patients whose constitutional symptoms were marked and in whom the course was typical were systematically examined and the parasite was, in Dr. Graham's opinion, definitely isolated. It is described as resembling in many ways the plasmodium malariæ, but its cycle of production or formation in the human blood is so much longer than that of the malarial parasite that the changes in its life-phase come more slowly and are more difficult to follow. Dr. Graham concludes his paper by saying: "It may not be absolutely proved that this hæmatozoon is the cause of the dengue, but its constant presence in the red blood corpuscle during the fever, its resemblance to the parasite of the Texas cattle fever, its likeness in manner of growth and mode of propagation (by the mosquito) to the malarial parasite, all point in the same direction and lead us to believe by analogy, if by no other way, that in this parasite we have the cause of dengue."

March 10th.

## AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

### *Australasian Science Association.*

THE meeting of the Australasian Association for the Advancement of Science was held at Hobart in the first week in January. The President, Professor F. W. Hutton, F.R.S., Director of the Christchurch (N.Z.) Museum, chose as the subject of his address "Evolution and its Teaching." He explained the theory of the evolution of the constellations from the cosmic dust and said it was possible that the creation of the cosmic dust itself occurred less than 200,000,000 years ago. He then traced the evolution of life on the earth from protoplasm. The first germ of ethical evolution was in parental affection, and morality appeared to have arisen from sympathy; and the long and constant use of formal morality made it instinctive and gave rise to conscience. It could not be thought that this process was confined to the earth and long after the sun was cold and dark other stellar systems would probably continue the development of life and mind. The conclusions of science showed that mind pervaded all matter, and in the composition, size, and position of the earth there was overwhelming evidence of design. Physical evolution, biological evolution, and psychological evolution were still going on. So far as the earth was concerned physical evolution had reached its optimum, so had biological evolution in man. Psychological evolution was still going on and the development of human mind was still in its infancy. This psychological evolution was not making for happiness, and ethical evolution seemed leading up to something not displayed on earth and which they could only conceive as a further development when mind was freed from matter.—The President of the Hygiene Section was Sir T. N. Fitz-Gerald, C.B., F.R.C.S. Irel., whose address was entitled "The Nature of Disease." Of the extensive causes of disease heredity, he said, stood foremost but did not occupy the important position now that it did formerly. Nervous affections, from insanity to migraine, were transmissible. Deformities and disfigurements due to defective development were handed on, though uncertainly. Deformities were rather the result of what horse-breeders called a "nick." Two perfectly healthy people free from any deformity married and their entire family might display evidences of imperfect development, as cleft palate, auricular appendages, &c. Their offspring in turn might beget healthy, normal children. It was doubtful if intermarriage had much to do with the appearance of deformities. Heredity formed a small factor in the causation of tuberculosis and assurance companies loaded lives on this account in a most reckless and senseless manner. As to cancer, also, the tendency is to doubt its hereditary character and to assign apparent inheritance to coincidence or to infection. It had yet to be brought home to the public that lunatic asylums, hospitals, and benevolent asylums were charged with the consequences of syphilis, which still stalked rampant through the land, while if controlled by the regulation of the class by which it was spread tabes and general paralysis might be almost wiped out. Another scourge of society and cause of disease was alcoholism. Habitual drunkards should be regarded as pests, liable to be removed and to be confined in the same manner as fever patients. Among the poorer classes the habit of drinking was largely acquired from the monotony of their lives, and more good would be done by affording better resources in the way of amusements than by restrictive legislation.—Mr. T. A. Coghlan, Government statistician of New South Wales, contributed an interesting paper on Child Measurements, giving the results of his investigations of a number of children attending the Sydney schools. He found that the children of the non-labouring class were physically more robust than those of the labouring class—that hindrances to growth showed themselves at an early age, and that many of the conditions that made for evil were remediable. The results of measurements of height corresponded with observations elsewhere. As to weight the Sydney boys were slightly heavier than English boys up to nine years—thence to 12 years they were slightly lighter. By 12½ years the Australian boy regained his superiority in weight and at 13 years he was about three pounds heavier, and the advantage was maintained during adolescence. The prevailing colour of the skin and hair was blonde and the eyes were most frequently blue. The chest expansion was small compared to that of European children.—At the first meeting of the association the following resolution was passed:—

> That the sanitary legislation of every State should contain provision for the notification of phthisis as an infectious disease and for the prevention of its spread by the taking of proper precautions, especially through the sputum of consumptives; that there should be provided in every State at least one sanatorium where tuberculosis patients could be treated on terms within the means of all.

### *The Queensland Branch of the British Medical Association and the Brisbane Associated Friendly Societies' Medical Institute.*

At the January meeting of the Queensland Branch of the

two to Mrs. Evans's Home at Solihull. In some cases railway fares have been paid to enable patients to go into the country, or towards their expenses in boarding at farm houses. Surgical appliances have been supplied and in some instances patients have been relieved at their own homes for many consecutive weeks with milk, groceries, coal, or meat. During the past year the patients and their friends have contributed £7 15*s.* 2*d.* towards expenses.

The Liverpool School of Tropical Medicine.—The report of the Liverpool School of Tropical Medicine for 1901, being the third year of the existence of the school, shows that steady progress has been made in the work during the past year. The hospital report states that four nurses were trained in 1901 at the expense of the school in the special tropical ward of the Royal Southern Hospital. Three of these nurses were sent by the Colonial Nursing Association of London. In connexion with the hospital a special department for out-patients suffering from tropical diseases was opened in October last which will be of great value to the school. During the year 131 cases were treated. Financial support has been freely forthcoming from those interested in the work of the school, but its operations entail a very large annual expenditure and as the school is not endowed it is to be hoped that liberal support will continue to be given.

British Laryngological, Rhinological, and Otological Association.—Under the chairmanship of their President, Dr. J Macintyre of Glasgow, the members of the British Laryngological, Rhinological, and Otological Association held their annual dinner on March 14th at the Café Royal, Regent-street, London. Dr. C. O Hawthorne proposed the toast of "The Association," and said that in the wide field of medicine general practitioners were debtors to the association for distinct contributions to their knowledge and their capacity to deal with suffering humanity The President proposed the toast of "The Guests," which was responded to by Sir William Dunn, M.P., and Mr Wilhelm Ganz Dr R H. Woods of Dublin assisted in the entertainment of the guests by a humorous recitation and Dr. R A. D. Daniel contributed some humorous songs. The music provided by Mr. Wilhelm Ganz, with the assistance of Sénor Guetary and Mr. Mervyn Dene, was highly appreciated.

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# Medical News.

FOREIGN UNIVERSITY INTELLIGENCE.—*Heidelberg:* Dr. Hermann Stendel has been recognised as *privat-docent* of Medicine.—*Jena:* Dr. Eggelling of Strasburg has been appointed Prosector in the Anatomical Institute.—*Konigsberg:* Dr. O. Ehrhardt, assistant surgeon in the Surgical Clinic, has been recognised as *privat-docent* of Surgery.—*Munich:* Dr. F. Wanner has been recognised as *privat-docent* of Otology.—*Rostock:* Dr. Wolters of Bonn has been appointed Extraordinary Professor of Dermatology.—*Strasburg:* Dr. Weidenreich, assistant in the Frankfort Institute for the Investigation of Cancer, has been appointed First Assistant in the Anatomical Institute.

ST. MARY'S DAY NURSERY AND HOSPITAL FOR SICK CHILDREN, PLAISTOW.—In connexion with this institution there have been during the year 1901 742 in-patients, 3553 out-patients, 14,664 casualty patients, and 71,010 attendances. The attendances show an increase of 11,766 over last year's figures. The average cost per bed occupied per year was £59 *7s* 3$\frac{1}{10}$*d*. Efforts are being made to raise funds for the building of a new hospital, for which not less than £25,000 will be required.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, VICTORIA PARK.—The annual general meeting of the governors of this hospital was held on March 4th at Gresham College, when Sir E. Sassoon, M.P., treasurer, presided. The report stated that the heavy decrease in the amount received from legacies, together with the greatly-increased number of in-patients and out-patients, accounted very largely for the unavoidable sale of £2000 stock to meet the current expenses of the year. The chairman, in moving the adoption of the report, said that during the year 966 in-patients were admitted as new cases, showing an increase of 134. In the out-patient department 9678 new cases were treated, showing 62,931 attendances, 2128 in excess of those of the year 1900 A nurses' home was to be built within the precincts of the hospital at a cost of from £8000 to £9000

ROYAL HOSPITAL FOR SICK CHILDREN, GLASGOW.—The report of this hospital for the year ending Dec. 31st, 1901, stated that during the period under notice the outdoor patients treated at the dispensary numbered 8247, involving 28,990 separate attendances. The dispensary sisters and nurses paid 1439 special visits to patients at their homes to see that the instructions of the medical men were properly attended to and to supply nourishment in the more necessitous cases. 810 patients were treated at the hospital, and there was an average of 100 cases on the books as awaiting admission at the close of every month. Good work is done by this institution but it is greatly hampered in its ministrations through want of funds. The income is far short of the ordinary expenditure. Moreover, the increased work of the hospital has necessitated the provision of a country branch which is in course of erection.

CRAIG COLONY FOR EPILEPTICS.—The eighth annual report of this institution, founded in honour of the late Oscar Craig of Rochester, N.Y., the objects of which are to "secure the humane, curative, scientific, and economical care and treatment of epileptics," states that on Oct. 1st, 1900, the colony had 612 patients, 329 of whom were males and 283 females. During the year 259 patients were received—198 males and 61 females; while during the same period 81 were discharged, 34 died, and 13 were transferred as insane to State hospitals. On Sept. 30th, 1901, there were 743 patients in the colony, 440 of whom were males and 303 females, making an actual gain of 131 for the year. The death-rate for the year, it will be noticed, is less than 5 per cent. The cost of maintenance per head during the year was $762 less than in the previous year. In connexion with the colony Dr. Frederick Peterson offers a prize of $200 for the best contribution to the pathology and treatment of epilepsy, originality being the main condition. The prize is open to universal competition, but all manuscripts must be submitted in English. Essays will be judged by a committee of three members of the New York Neurological Society and the award will be made at the annual meeting of the board of managers of the Craig Colony on Oct. 14th, 1902. The essay must be accompanied by a sealed envelope containing the name and address of the author and bearing on the outside the motto or device which is inscribed upon the essay. The successful essay will become the property of the Craig Colony for Epileptics. Manuscripts should be sent to Dr. Frederick Peterson, 4 West 50th Street, New York City, on or before Sept. 1st, 1902.

FEMALE SANITARY INSPECTOR.—The Rochdale Town Council are making what is for them a new departure in appointing a female sanitary inspector at "28s. a week and uniform." The chairman of the Health Committee gave good reasons for proposing the appointment, saying that while a very large reduction in the death-rate had taken place during the last 20 or 25 years, there had been very little difference in the deaths of infants. "A female sanitary inspector was better able to approach parents and recommend to them suitable food, clothing, and other matters with respect to infants than a male inspector could." In Manchester the health visitors employed by the Ladies' Health Society perform this useful function.

LITERARY INTELLIGENCE.—Messrs. Harrison and Sons, 59, Pall-mall, S.W., will shortly reissue Banting's well-known work under the title of "The Rational Cure for Corpulency." The book has been revised and brought up to date.—In April the fourth edition of "The Operations of Surgery" will be published This new edition has been subjected to a thorough revision at the hands of Mr. W. H. A. Jacobson and Mr. F. J. Steward, surgeon and assistant surgeon respectively to Guy's Hospital. The work will be found to contain 1524 pages in royal 8vo size in place of 1352 pages in demy 8vo, while there will now be 152 additional illustrations, bringing up the number to 550. To meet the convenience of the reader it has been decided to issue the book in two volumes. Messrs. J. and A. Churchill are the publishers.

ROYAL DENTAL HOSPITAL OF LONDON.—On March 13th the annual general meeting of the governors of this hospital was held at the new hospital in Leicester-square, the chairman of the managing committee, Mr. John Hampton Hale, a vice-president of the institution, being in the chair. The report of the committee opened with an appreciation of the great honour conferred on the hospital by His Majesty the King in becoming its patron and by commanding that it should in future be known as the "Royal Dental Hospital," an honour which, the committee felt, would go far to emphasise the worthiness of the objects of the charity. The new buildings were now as complete in every detail as could be suggested by modern science, and they had during the past nine months been open for the reception of patients. During the year now closed 70,040 cases had been treated, an increase of 864 over the previous year and 50,785 more than the number treated in 1874 (the first year of the hospital's existence). Though the committee was gratified to record a small increase in the income, yet it was far from sufficient for the needs of the institution and an earnest appeal was made for increased help to meet the payments for extinguishing the debt and the additional expenses entailed by the extra service and the higher rates and taxes, &c., due to the enlarged buildings and the more efficient administration. A vote of thanks to the Chairman, proposed by Mr. Morton Smale, the dean of the school, closed the proceedings.

THE QUEEN'S HOSPITAL, BIRMINGHAM.—This hospital has been enlarged recently at a cost of £40,000. The annual report states that provision has been made for an increase in the number of beds to 132 for the reception of accidents and urgent medical, surgical, ophthalmic, and obstetric cases, an addition which has considerably increased the expenditure of the hospital. The in-patients treated last year amounted to 2169 and the out-patients to 288,895 The yearly expenditure is over £10,000, the whole of which sum, with the exception of about £1000 received from investments, is dependent upon voluntary offerings and annual subscriptions. The report of the Queen's Hospital Aid Society for 1901 shows that the work of the charity has gone on increasing, and it fills a useful place in assisting the patients of the hospital. During the past 12 months 57 patients have been sent to Blackwell; six to the Home of Rest, Sutton; five to Sister Dora Home, Milford; and nine to the Stratford-on-Avon Nursing Home. Besides these, between 30 and 40 children have been sent from the wards to Moseley Hall and

two to Mrs. Evans's Home at Solihull. In some cases railway fares have been paid to enable patients to go into the country, or towards their expenses in boarding at farm houses. Surgical appliances have been supplied and in some instances patients have been relieved at their own homes for many consecutive weeks with milk, groceries, coal, or meat. During the past year the patients and their friends have contributed £7 15*s.* 2*d.* towards expenses.

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# Parliamentary Intelligence.

## NOTES ON CURRENT TOPICS

### *Laundries and Factory Legislation*

THE Bill introduced into the House of Lords by the Earl of Lytton to bring laundries within the scope of certain of the provisions of our factory legislation is making substantial progress in that chamber. During the committee stage the Government proposed no amendments, but Lord Belper, speaking on their behalf, intimated that the Home Secretary was making inquiries into certain points and that as a result *amendments might be moved by the Government when the Bill reached* the House of Commons.

### *Midwives Bill*

Very few alterations of substance were made in the Midwives Bill *during its passage through the Grand Committee on Law*. The Bill remains a measure to protect the title of midwife and provides no penalty for women who may practise without having been certified. There is no change in the constitution of the proposed central Midwives Board but words have been inserted to secure that before the Privy Council approves of any rules framed by the Board it shall submit them to the General Medical Council and take into consideration any representations made by the latter body. By way of compromise on the question of an annual issue of certificates the promoters of the Bill agreed to the insertion of a provision which makes it necessary *for a certified woman to give notice in the month of* January of each year to the local supervising authority that she continues in practice in the area of the authority. Another change is that the maximum fee for certification has been raised from 10*s.* to one guinea, while in one of the early clauses words have been introduced saying that only certified midwives shall be entitled to recover professional fees in a court of law.

## HOUSE OF COMMONS

### THURSDAY, MARCH 13TH

### *The Conscientious Objector*

Mr. FORSTER asked the President of the Local Government Board if he would state the number of urban sanitary authorities in the United Kingdom from which he had received resolutions advocating the repeal of Clause 2 of the Vaccination Act of 1898 relating to the conscientious objector, and what steps, if any, he proposed to take to carry out the policy advocated by them.—Mr. LONG replied: I have received resolutions of this nature from 251 urban sanitary authorities. The Vaccination Act, 1898, will expire at the end of 1903 and the question of its renewal will have to be considered next year. In the meantime I do not propose to take any steps *for the repeal of the section* referred to.

### *Small-pox Epidemic at Dartford*

Sir WILLIAM HART DYKE asked the President of the Local Government Board whether he was aware that in the town of Dartford and surrounding villages and district the small-pox was spreading with great rapidity, whether he was aware that about 2000 workmen had been lately employed upon new buildings of the small-pox hospital near Dartford, and that the said workmen were lodging in Dartford and the neighbouring villages and causing thereby the spread of the disease in all directions, whether steps could be taken to secure accommodation for these workmen upon the spot where *they worked and thus arrest the danger of contagion*, and whether any and what communications had taken place between the *Local Government Board* and the Asylums Board on this subject.—Mr. LONG replied that he was aware that there had been numerous cases of small-pox in the localities referred to. It was a fact that about 2000 workmen were being employed upon new buildings at the small-pox hospital near Dartford. Some of these men were lodging in Dartford and the neighbouring villages, but a large proportion of them slept in huts built for them on the site. It was not expected that all would avail themselves of this accommodation, and if it were made compulsory for the men to live on the site it was probable that they would leave their work. It was most important that the buildings should be completed as soon as possible. He had been in communication with the managers of the *Metropolitan Asylums District* on this subject and he was pressing upon them to use every effort to secure that the workmen were accommodated on the site as far as practicable. He might add that every facility for vaccination was afforded to the workmen and that as regards those employed nearest to buildings containing cases of small-pox they were some time since required to be vaccinated.

Sir WILLIAM HART DYKE asked the right hon. gentleman whether he was aware that a very large number of these workmen after their week's work at this hospital were in the habit of travelling to London by train and returning by train to their work on the following Monday morning, and whether in view of the great risk this caused, not only with regard to the railway carriages, he did not see the absolute necessity of securing the detention of these workmen and their accommodation on the spot.—Mr. LONG said that he quite agreed that this was a very serious matter indeed, but he had no power to secure the detention of these men on the spot and, indeed, it was impossible to provide for them on the spot. It was true that it was most important to prevent any risk of the spread of the disease outside the metropolitan area, but it was more important still that provision should be made as rapidly as possible for the reception of cases within the metropolitan area. *If that was not done the risk of the spread of the disease would* be even greater than it was at present. Every effort had been made to provide for these workmen on the spot and to secure their revaccination. If people in the district concerned would only take the precaution of being revaccinated the risk would be largely diminished.

Mr. BAYLEY asked whether the provision of another hospital ship would not lessen the risk.—Mr. LONG replied that it would not in the smallest degree. It would be impossible to provide another hospital ship in time to take the place of the building accommodation now being provided. The Metropolitan Asylums Board was trying to double its supply of beds by buildings now being erected.

### FRIDAY, MARCH 14TH

### *The Ventilation of the House*

Mr. WYLIE in the course of debate called attention to the imperfect ventilation and other sanitary arrangements of some parts of the House of Commons building and to the expediency of putting electric ventilating fans into every lobby, passage, room, and apartment where practicable, and suggested that a committee of experts should be appointed to inquire into the whole question of ventilation and sanitation of the building. The hon. member declared that the existing system of ventilation was antiquated and unsatisfactory.—Mr. AKERS DOUGLAS, First Commissioner of Works, who has charge of the building, said that the present system of ventilation had been approved by *various committees in recent years, but he was prepared to have* another committee appointed, and he would consider whether it should be a committee of experts or a committee of Members of the House. Samples of the atmosphere, he said, had been taken and were now in process of analysis.

### MONDAY, MARCH 17TH

### *Enteric Fever in South Africa*

Sir WALTER FOSTER asked the Secretary of State for War whether he was aware that when Lord Roberts was in command in South Africa all cases of enteric fever among the troops as well as those occurring amongst civilians were notified to the health office at Pretoria, and that after the departure of Lord Roberts notification of cases amongst the soldiers was stopped, and what were the reasons that led to the cessation of the system of notification which was recognised as an essential part of sanitary administration.—Mr. BRODRICK said: This notification was carried out for a brief period but it was held that the notification of every case of enteric fever in a country where the disease is endemic was unnecessary and that intercommunication of any outbreak of infectious diseases between the health officer and the principal medical officer was sufficient.—Sir WALTER FOSTER asked the Secretary of State for War whether any special sanitary officers had been appointed to inquire into the origin and spread of enteric fever and other preventable diseases among the troops in South Africa, to inspect the localities in which such diseases were most prevalent, and to advise with regard to their prevention.—Mr. BRODRICK replied: Yes, special sanitary officers have been sent out to South Africa.

### *Water in Butter*

Mr. HANBURY, in reply to a question on this subject, said that he would draw up the new regulations as strictly as he could with a view to prevent the sale of milk-blended butter containing water above the standard fixed by him.

### *Cancer Research*

Mr. WEIR asked the First Lord of the Treasury, in view of the action taken by foreign Governments in the matter of research into the cause, cure, and prevention of cancer, was the Government now prepared to consider the advisability *of the appointment of a commission for the* purpose of determining how research respecting this disease could best be stimulated?—Mr. ARTHUR LEE asked the right hon. gentleman if he could now state whether the Government was prepared to extend financial assistance to the forthcoming inquiry into the causes and cure of cancer.—Mr. BALFOUR said: My view remains that this subject, important as it is, can best be dealt with by private though not unorganised enterprise. I am told that the Royal College of Physicians of London and the Royal College of Surgeons of England have appointed a joint committee to consider how an investigation into the possible cure of cancer can best be carried out and I have received communications from the President of the Royal College of Physicians of London and from other quarters which led me to believe that their efforts will be successful and that the scientific staff which they have at their command and the liberality of the public will enable a really important scientific investigation into this subject to be undertaken and carried through. In these circumstances I think it would be unwise for the Government to intervene in a matter which after all Governments are not able to conduct with very great success from a scientific or public point of view.

## MIDWIVES BILL

### PROCEEDINGS IN THE GRAND COMMITTEE

The *Grand Committee* of the House of Commons on Law met again on March 14th, with Sir JAMES FERGUSSON in the chair, and completed the consideration of the Midwives Bill.

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two to Mrs. Evans's Home at Solihull. In some cases railway fares have been paid to enable patients to go into the country, or towards their expenses in boarding at farm houses. Surgical appliances have been supplied and in some instances patients have been relieved at their own homes for many consecutive weeks with milk, groceries, coal, or meat. During the past year the patients and their friends have contributed £7 15*s.* 2*d.* towards expenses.

**The Liverpool School of Tropical Medicine.**—The report of the Liverpool School of Tropical Medicine for 1901, being the third year of the existence of the school, shows that steady progress has been made in the work during the past year. The hospital report states that four nurses were trained in 1901 at the expense of the school in the special tropical ward of the Royal Southern Hospital. Three of these nurses were sent by the Colonial Nursing Association of London. In connexion with the hospital a special department for out-patients suffering from tropical diseases was opened in October last which will be of great value to the school. During the year 131 cases were treated. Financial support has been freely forthcoming from those interested in the work of the school, but its operations entail a very large annual expenditure and as the school is not endowed it is to be hoped that liberal support will continue to be given.

**British Laryngological, Rhinological, and Otological Association.**—Under the chairmanship of their President, Dr. J. Macintyre of Glasgow, the members of the British Laryngological, Rhinological, and Otological Association held their annual dinner on March 14th at the Café Royal, Regent-street, London. Dr. C. O. Hawthorne proposed the toast of "The Association," and said that in the wide field of medicine general practitioners were debtors to the association for distinct contributions to their knowledge and their capacity to deal with suffering humanity. The President proposed the toast of "The Guests," which was responded to by Sir William Dunn, M.P., and Mr. Wilhelm Ganz. Dr. R. H. Woods of Dublin assisted in the entertainment of the guests by a humorous recitation and Dr. R. A. D. Daniel contributed some humorous songs. The music provided by Mr. Wilhelm Ganz, with the assistance of Sénor Guetary and Mr. Mervyn Dene, was highly appreciated.

**Royal Institution.**—The following are the lecture arrangements at the Royal Institution after Easter:—Dr. Allan Macfadyen, three lectures on Recent Methods and Results in Biological Inquiry; Professor F. York Powell, three lectures on English Kings and Kingship; Professor Karl Pearson, three lectures on the Laws of Heredity, with Special Reference to Man (the Tyndall Lectures); Professor Dewar, three lectures on the Oxygen Group of Elements; Dr. A. Smith Woodward, three lectures on Recent Geological Discoveries; Mr. M. H. Spielmann, three lectures on Contemporary British Sculpture; Mr. W. H. Cummings, three lectures on British National Song (with musical illustrations); Professor Walter Raleigh, three lectures on Poets and Poetry: and Professor Brander Matthews, three lectures on the Development of the English Drama: (1) the Art of the Dramatist, (2) the Drama of the Middle Ages, and (3) the Drama under Elizabeth. The Friday evening meetings will commence on April 11th when Professor Dewar will deliver a discourse on Problems of the Atmosphere. Succeeding Friday evening discourses will be delivered by Sir John H. A. Macdonald, Dr. J. Mackenzie Davidson, Sir Robert Ball, Sir Benjamin Baker, Professor A. E. Tutton, and other gentlemen.—Magnetism in Transitu formed the subject of the Friday evening discourse delivered on March 14th by Professor Silvanus Thompson. The subject was illustrated not only by diagrams, models, and numerous experiments, but also by pictures projected by means of the animatograph, in which diagrams of lines in motion represented the formation, growth, and disappearance of magnetic lines of force. One of the experiments was of a remarkable nature. Faraday showed long ago that when an electric current was passed through a wire an induced current was created in a second wire parallel to, but insulated from, the first one. The currents in the two wires travelled in opposite directions. Professor Thompson found that the magnetic lines of force existing between the two wires could be twisted in space by passing one wire through one loop and the other wire through the other loop of a figure-of-8 made of thin iron rod. The primary and the induced currents then travelled in the same direction. A series of 20 such figures-of-8, each so made that the metal composing it did not touch at the point of crossing, was fixed edgeways on a board about two feet long, all of them separate and similarly situated; the straight primary wire passed through one row of loops and the secondary wire through the other row.

**Chesterfield Hospital.**—The annual meeting of the governors of, and subscribers to, the Chesterfield Hospital, was held on March 13th. The report stated that during the year 420 persons were admitted, being 10 less than in 1900. The total number treated was 462. Of the 42 patients in the hospital at the end of 1900, 33 were discharged cured, six were relieved, and three were discharged at their own request. Of those admitted in 1901, 315 were discharged cured, 19 were relieved, 38 died, and 48 remained under treatment. The average stay of each patient was 33·92 days, against 28·63 days in 1900. In the out-patient department 2076 persons received benefit, as compared with 1858. There were 1211 casualties dealt with. The total expenditure for the year, exclusive of extraordinary expenditure, was £3421 13*s.* 4*d.* This exceeds the amount of any previous year owing to the number of patients. The extraordinary expenditure amounted to £752, and was incurred in connexion with the sanitary and heating arrangements. The report having been adopted the chairman announced that a gift of £2240 had been received from the trustees of the Renishaw Park Colliery Explosion Fund.

**Freemasonry.**—*University of London Lodge, No. 2033.*—The usual spring meeting of this lodge was held at Freemasons' Hall on March 13th. In the absence of the Worshipful Master, Dr. Samuel Hague, the chair was occupied by Brother H. W. Kiallmark, P.G.D. Amongst those present were Dr. A. E. Sansom, Mr. R. A. Germaine, M.A. (Recorder of Lichfield), Mr. Beaumont Morice, LL.B. (Recorder of Hythe), Dr. A. W. Burrell, and Mr. F. E. Lemon, M.A., treasurer. The secretary of the Chère Reine Lodge was a guest. The Permanent Committee brought up a proposal whereby busy members might be enabled to keep their names on the books without being expected to attend the meetings so regularly as those desiring to go forward and to take up office in the usual way. As this lodge numbers amongst its members a considerable number of graduates whose engagements are numerous and increasing and who yet do not wish their connexion with the lodge to be severed, this amendment of by-laws, if adopted, is likely to prove useful. A general feeling was expressed that the lodge has now assumed such a degree of importance that a petition should be sent to the University asking that its periodical meetings should be noted on the agenda published in the *University Gazette.*

**Irish Medical Schools' and Graduates' Association.**—The annual general meeting of the above association was held on March 17th (St. Patrick's Day) at the Hotel Cecil, London, when the out-going President, Dr. William Alexander (Liverpool) resigned the chair to Sir Philip C. Smyly (Dublin). There was a very large attendance of members. A vote of condolence with the relatives of the late Sir William MacCormac, a foundation member and former president of the association, was passed. The members and their guests, to the number of 257, subsequently sat down to dinner under the chairmanship of Sir Philip Crampton Smyly, the guests of the evening being Lord Rathmore, Sir John Edge, and Dr. Brendan MacCarthy. Dr. Brendan MacCarthy was introduced to the President by Mr. P. J. Freyer and was presented with the Arnott Memorial Medal founded by Mr. David Arnott in memory of his father, the late Sir John Arnott. Dr. MacCarthy in the autumn of last year joined the late Mr. William Smyth in attending the typhus patients during the epidemic in the island of Arranmore on the coast of Western Donegal. The only boat that these two medical men could get to convey the sick from the island sank after they reached the main land because of its unseaworthiness. Dr. MacCarthy said that if it had not been for the tragic way in which Mr. Smyth died he did not think that anything would have been heard of the matter. "Our Defenders" was proposed by Dr. W. E. St. Lawrence Finny and was responded to by Inspector-General W. H. Lloyd, R.N., Brigade-Surgeon W. Ffolliott, and Surgeon-Major J. J. de Zouche Marshall, A.M.R. Dr. T. Gilbart Smith gave the toast of "Our Guests," to which Lord Rathmore replied in an eloquent speech in which he referred in feeling terms to the late Sir William MacCormac and the late Sir Richard Quain Sir John Edge also responded to the toast and Sir William Broadbent having proposed the toast of "Ourselves" was followed by the President whose short speech concluded the evening The singing of Miss Kate Rooney was much admired and Surgeon Major Marshall's songs were enthusiastically received

# Parliamentary Intelligence.

## NOTES ON CURRENT TOPICS

### *Laundries and Factory Legislation*

THE Bill introduced into the House of Lords by the Earl of Lytton to bring laundries within the scope of certain of the provisions of our factory legislation is making substantial progress in that chamber During the committee stage the Government proposed no amendments but Lord Belper, speaking on their behalf intimated that the Home Secretary was making inquiries into certain points and that as a result amendments might be moved by the Government when the Bill reached the House of Commons

### *Midwives Bill*

Very few alterations of substance were made in the Midwives Bill during its passage through the Grand Committee on Law The Bill remains a measure to protect the title of midwife and provides no penalty for women who may practise without having been certified There is no change in the constitution of the proposed central Midwives Board but words have been inserted to secure that before the Privy Council approves of any rules framed by the Board it shall submit them to the General Medical Council and take into consideration any representations made by the latter body By way of compromise on the question of an annual issue of certificates the promoters of the Bill agreed to the insertion of a provision which makes it necessary for a certified woman to give notice in the month of January of each year to the local supervising authority that she continues in practice in the area of the authority Another change is that the maximum fee for certification has been raised from 10s to one guinea, while in one of the early clauses words have been introduced saying that only certified midwives shall be entitled to recover professional fees in a court of law

## HOUSE OF COMMONS

### THURSDAY, MARCH 13TH

### *The Conscientious Objector*

Mr FORSTER asked the President of the Local Government Board if he would state the number of urban sanitary authorities in the United Kingdom from which he had received resolutions advocating the repeal of Clause 2 of the Vaccination Act of 1898 relating to the conscientious objector and what steps if any he proposed to take to carry out the policy advocated by them —Mr LONG replied: I have received resolutions of this nature from 251 urban sanitary authorities The Vaccination Act 1898 will expire at the end of 1903 and the question of its renewal will have to be considered next year In the meantime I do not propose to take any steps for the repeal of the section referred to

### *Small pox Epidemic at Dartford*

Sir WILLIAM HART DYKE asked the President of the Local Government Board whether he was aware that in the town of Dartford and surrounding villages and district the small pox was spreading with great rapidity, whether he was aware that about 2000 workmen had been lately employed upon new buildings of the small pox hospital near Dartford, and that the said workmen were lodging in Dartford and the neighbouring villages and causing thereby the spread of the disease in all directions, whether steps could be taken to secure accommodation for these workmen upon the spot where they worked and thus arrest the danger of contagion, and whether any and what communications had taken place between the Local Government Board and the Asylums Board on this subject —Mr LONG replied that he was aware that there had been numerous cases of small pox in the localities referred to It was a fact that about 2000 workmen were being employed upon new buildings at the small pox hospital near Dartford Some of these men were lodging in Dartford and the neighbouring villages but a large proportion of them slept in huts built for them on the site It was not expected that all would avail themselves of this accommodation and if it were made compulsory for the men to live on the site it was probable that they would leave their work It was most important that the buildings should be completed as soon as possible He had been in communication with the managers of the Metropolitan Asylums District on this subject and he was pressing upon them to use every effort to secure that the workmen were accommodated on the site as far as practicable He might add that every facility for vaccination was afforded to the workmen and that as regards those employed nearest to buildings containing cases of small pox they were some time since required to be vaccinated

Sir WILLIAM HART DYKE asked the right hon gentleman whether he was aware that a very large number of these workmen after their week's work at this hospital were in the habit of travelling to London by train and returning by train to their work on the following Monday morning, and whether in view of the great risk this caused, not only with regard to the railway carriages he did not see the absolute necessity of securing the detention of these workmen and their accommodation on the spot —Mr LONG said that he quite agreed that this was a very serious matter indeed, but he had no power to secure the detention of these men on the spot and indeed it was impossible to provide for them on the spot It was true that it was most important to prevent any risk of the spread of the disease outside the metropolitan area but it was more important still that provision should be made as rapidly as possible for the reception of cases within the metropolitan area If that was not done the risk of the spread of the disease would be even greater than it was at present Every effort had been made to provide for these workmen on the spot and to secure their revaccination If people in the district concerned would only take the precaution of being revaccinated the risk would be largely diminished

Mr BAYLEY asked whether the provision of another hospital ship would not lessen the risk —Mr LONG replied that it would not in the smallest degree It would be impossible to provide another hospital ship in time to take the place of the building accommodation now being provided The Metropolitan Asylums Board was trying to double its supply of beds by buildings now being erected

### FRIDAY, MARCH 14TH

### *The Ventilation of the House*

Mr WYLIE in the course of debate called attention to the imperfect ventilation and other sanitary arrangements of some parts of the House of Commons building and to the expediency of putting electric ventilating fans into every lobby passage, room, and apartment where practicable, and suggested that a committee of experts should be appointed to inquire into the whole question of ventilation and sanitation of the building The hon member declared that the existing system of ventilation was antiquated and unsatisfactory —Mr AKERS DOUGLAS First Commissioner of Works who has charge of the building, said that the present system of ventilation had been approved by various committees in recent years, but he was prepared to have another committee appointed and he would consider whether it should be a committee of experts or a committee of Members of the House Samples of the atmosphere, he said had been taken and were now in process of analysis

### MONDAY, MARCH 17TH

### *Enteric Fever in South Africa*

Sir WALTER FOSTER asked the Secretary of State for War whether he was aware that when Lord Roberts was in command in South Africa all cases of enteric fever among the troops as well as those occurring amongst civilians were notified to the health office at Pretoria, and that after the departure of Lord Roberts notification of cases amongst the soldiers was stopped and what were the reasons that led to the cessation of the system of notification which was recognised as an essential part of sanitary administration —Mr BRODRICK said: This notification was carried out for a brief period but it was held that the notification of every case of enteric fever in a country where the disease is endemic was unnecessary and that intercommunication of any outbreak of infectious diseases between the health officer and the principal medical officer was sufficient —Sir WALTER FOSTER asked the Secretary of State for War whether any special sanitary officers had been appointed to inquire into the origin and spread of enteric fever and other preventable diseases among the troops in South Africa to inspect the localities in which such diseases were most prevalent and to advise with regard to their prevention —Mr BRODRICK replied Yes special sanitary officers have been sent out to South Africa

### *Water in Butter*

Mr HANBURY in reply to a question on this subject, said that he would draw up the new regulations as strictly as he could with a view to prevent the sale of milk blended butter containing water above the standard fixed by him

### *Cancer Research*

Mr WEIR asked the First Lord of the Treasury in view of the action taken by foreign Governments in the matter of research into the cause, cure, and prevention of cancer was the Government now prepared to consider the advisability of the appointment of a commission for the purpose of determining how research respecting this disease could best be stimulated?—Mr ARTHUR LEE asked the right hon gentleman if he could now state whether the Government was prepared to extend financial assistance to the forthcoming inquiry into the causes and cure of cancer —Mr BALFOUR said: My view remains that this subject important as it is can best be dealt with by private though not unorganised enterprise I am told that the Royal College of Physicians of London and the Royal College of Surgeons of England have appointed a joint committee to consider how an investigation into the possible cure of cancer can best be carried out and I have received communications from the President of the Royal College of Physicians of London and from other quarters which led me to believe that their efforts will be successful and that the scientific staff which they have at their command and the liberality of the public will enable a really important scientific investigation into this subject to be undertaken and carried through In these circumstances I think it would be unwise for the Government to intervene in a matter which, after all Governments are not able to conduct with very great success from a scientific or public point of view

## MIDWIVES BILL

### PROCEEDINGS IN THE GRAND COMMITTEE

The Grand Committee of the House of Commons on Law met again on March 14th with Sir JAMES FERGUSSON in the chair, and completed the consideration of the Midwives Bill

The fourth clause of the Bill as it came before the committee was in these terms—viz: "On the passing of this Act the Lord President of the Council shall take steps to secure the formation of a Central Midwives Board, which shall consist of (1) four registered medical practitioners one to be appointed by the Royal College of Physicians of London, one by the Royal College of Surgeons of England one by the Society of Apothecaries and one by the Incorporated Midwives Institute) (2) two persons (one of whom shall be a woman) to be appointed for terms of *three years* by the Lord President of the Council; and (3) one person to be appointed for a term *of three years* by the Association of County Councils. After *two years* from the commencement of this Act the members appointed under subsection (1) shall retire, but shall be eligible for reappointment annually. Any vacancy occurring by resignation or death shall be filled up in the case of a member appointed under subsections (1) and (3) by the body which appointed him, and in the case of a member appointed under subsection (2) by the Lord President of the Council. The duties and powers of the Board shall be as follows: I. To frame rules (subject to the approval of the Privy Council after consultation with the General Medical Council) (*a*) regulating the issue of certificates and the conditions of admission to the roll of midwives; (*b*) regulating the course of training and the conduct of examinations; *(c) regulating the admission to the roll of women already* in practice as midwives at the passing of this Act; (*d*) regulating, supervising, and restricting within due limits the practice of midwives; (*e*) deciding the conditions under which midwives may be suspended from practice; and (*f*) defining the particulars required to be given in any notice under Section 10 of this Act. II. To appoint examiners. III. To decide upon the places where, and the times when, examinations shall be held. IV. To publish annually a roll of midwives who have been duly certified under this Act. V. To decide upon the removal from the roll of the name of any midwife for disobeying the rules and regulations from time to time laid down under this Act by the Central Midwives Board, or for other misconduct, and also to decide upon the restoration to the roll of the name of any midwife so removed. VI. To issue certificates; and generally to do any other act or duty which may be necessary for the due and proper carrying out of the provisions of this Act."

Sir **FRANCIS POWELL** moved to amend the first sentence of the clause by substituting "the General Medical Council" for "the Lord President of the Council." He pointed out that the General Medical Council appeared in this connexion in the Bill of 1900, and he argued that it was the fitter body to undertake the formation of the proposed Central Midwives Board.

Mr. **HEYWOOD JOHNSTONE** said that all that was required of the Lord President of the Council in this connexion was to secure the formation of the Board whose component elements were set out in the Bill. All his lordship would have to do would be to see that a few letters were written.

Mr. **JESSE COLLINGS**, *Under Secretary of State for Home Affairs*, after reminding the committee that the Privy Council was recommended by the Select Committee of 1893, submitted that the proposed work ought to be in the hands of a Government department and not in those of a private corporation or body, however eminent. The Central Midwives Board would practically have the power of levying taxation upon the local authorities, because the expenses of the Board so far as they were not provided for by the fees were to be levied upon the local authorities. And if they must have a Government department there could be no Government department more suitable than the Privy Council which already had charge of the administration of the Medical Acts.

Sir **WALTER FOSTER** said that it was a great pity that the committee were without a representative of the Privy Council, because nobody ever expressed a stronger opinion upon this point than the Lord President himself. In 1898, when the Lord President received a deputation of the promoters of the Bill, he said that the only form in which the measure would be acceptable would be if the Midwives Board were placed under the General Medical Council. He said that it was extremely desirable that before another Bill was introduced the promoters should come to some definite understanding with the medical profession as represented by the General Medical Council. The result of this statement was that when the Bill was brought in in 1900 the clause now under consideration read that the President of the General Medical Council should take steps to secure the formation of a Central Midwives Board.

Mr. **HEYWOOD JOHNSTONE**: The promoters of the Bill were invited to amend it in this direction.

Sir **WALTER FOSTER** said that he would like to hear some explanation on the point from the Privy Council itself. The General Medical Council was not a private body but a public body created by statute, working under the Privy Council and responsible to the Privy Council.

Mr. **JESSE COLLINGS**: The General Medical Council has *no powers to* tax local authorities.

Sir **WALTER FOSTER** asked why, if the General Medical Council had no powers to tax local authorities, should the proposed Central Midwives Board be entrusted with them? He thought that such powers would be much safer in the hands of the General Medical Council than in those of this Board. Not only so, but he thought that if this matter were entrusted to the General Medical Council it would contribute to the smooth working of the whole measure.

Mr. **VICARY GIBBS** spoke in support of the clause as it stood.

Sir **JOHN BATTY TUKE** said that as a member of the General Medical Council he spoke with some diffidence on this matter, but he could not help thinking that the powers proposed for this Board were powers which could only be exercised by a medical body. The education and examination of midwives *involved such purely* medical considerations that he could not understand how the Privy Council could undertake them. It would come to this—that the whole matter would be handed over to the medical adviser of the Privy Council, who would be the *only person whose opinion would be taken.*

Mr. **JESSE COLLINGS** said that it was not altogether a medical question, but in any case the fact that the Privy Council was over the General Medical Council in the matter of the Medical Acts would not place the Privy Council over the General Medical Council in regard to this Act. The promoters of the Bill had, he thought, gone as far as they possibly could when they gave the General Medical Council a statutory right to be consulted by the Privy Council.

Mr. **COHEN**, speaking with all respect for the General Medical Council, could not regard it as the proper body to see to the formation of the proposed Board.

Mr. **LEES KNOWLES** said that if the General Medical Council were accepted *as the authority all Parliamentary* control would be lost.

Mr. **JOHN BURNS** considered it most important that Members of the House of Commons should be able to discuss the action of the proposed Board in Committee of Supply on the vote for the salary of the Lord President of the Privy Council.

The amendment of Sir Francis Powell was negatived without a division.

Mr. **ROBERT AMBROSE** moved an amendment to the effect that the Board should consist of "seven registered medical practitioners *nominated by the General Medical Council. After two years from the* passing of this Act one-half of the six members of the Board selected by the General Medical Council shall retire, but shall be eligible for re-election, and thereafter one half of such members of the Board shall retire annually in such manner that each of such members shall serve a term of two years before retiring, and members so retiring shall be eligible for re-election. In the event of the death or resignation of a member of the Board the successor elected or appointed shall hold office for the remaining period for which the deceased or resigned member was elected, and must be qualified equally with such deceased or resigned member to hold office as a member of the Board, and shall, on retiring, be eligible for re-election. No member of the Board shall *act as teacher, instructor or examiner of midwives, and no member of* the Board shall take any part in any inquiry respecting the conduct of any midwife to whom he had acted as teacher or instructor."

Mr. **HEYWOOD JOHNSTONE** *said that the committee had just decided* that the General Medical Council should not have the duty and responsibility of forming the Board and now the committee was asked to say that the President of the Privy Council should have his hands tied and have a Board ready made for him on the nomination of the General Medical Council. The substantial point, however, was whether this Central Midwives Board should be composed entirely of medical men or whether there should be laymen on it. As the Bill stood there must be a majority of registered medical practitioners on the Board. Of the seven members four must be registered medical practitioners and there was nothing to say that the other three might not be registered medical practitioners.

Mr. **T. P. O'CONNOR** said he did not think that the Board should be entirely a medical board. There might be taxation and if there was there must be representation and therefore he approved of the representation of the county councils. At the *same time he thought the* medical element should predominate.

Sir **WALTER FOSTER** agreed that four registered medical practitioners were enough, but he thought that there should be more ladies on the *Board than was proposed.*

*After some further discussion* Mr. **AMBROSE** agreed to withdraw his amendment.

Mr. **T. P. O'CONNOR** then moved to delete from the clause the references to the Royal College of Physicians of London, the Royal College of Surgeons of England, the Society of Apothecaries, and the Incorporated Midwives Institute, and to make the clause read, "Four registered medical practitioners to be nominated by the General Medical Council, each of whom shall be holding the appointment of teacher of midwifery at a recognised medical school in England, or who shall have previously held such an appointment." The General Medical Council he said, was representative of the whole medical profession, and was, in his opinion, entitled to this nomination.

Mr. **HEYWOOD JOHNSTONE** said that the real objection here was to the Incorporated Midwives Institute. He thought that the committee would thoroughly *realise that a Board of this sort ought to have upon* it some representative of the governed as well as the governors; that there ought to be some person upon it able to speak for and represent those who were to be put under the authority of the Board and subject to the rules framed by it. That was of itself a sufficient reason for including the Incorporated Midwives Institute. He regretted to say that during the second-reading debate he made an erroneous statement with reference to the institute. It was not incorporated by royal charter, but was incorporated under the Companies Act by special licence *from the Board of Trade as a limited* company not carrying on business for the purposes of profit and therefore entitled to call itself "incorporated" without the addition of "Limited" to its name. It was originally founded in 1881 and incorporated in 1889, the objects of the body as stated in the memorandum of incorporation being to raise the efficiency and to improve the status of midwives, to petition Parliament for *their recognition, and to provide for the* examination and the granting of certificates of qualification to midwives. The institute was the only representative body of midwives in the whole kingdom, and he submitted that it was well entitled to have the appointment of *one of the registered medical practitioners* to the Central Midwives Board.

Sir **WALTER FOSTER** said that his hon. friend was not quite fair in saying that the inwardness of this amendment was to strike a blow at *the Incorporated* Midwives Institute. That was not the motive in his mind or in the mind of the mover of the amendment. The medical profession in looking over this Bill were very anxious that this clause should be modified in the direction of giving the ordinary medical practitioner more control over the constitution of this Board. With regard to the two Royal Colleges it had been suggested to him that if they were to be left in the clause the election should be in the hands of the Members of the Colleges. Each of these bodies was at present governed by a comparatively small Council—a Council which was practically self-elected and therefore *it did not command the confidence* of the whole body of the Members. Now the General Medical Council was representative more or less of the whole profession—not so representative as it might be, but it had certain Direct Representatives who were elected by the whole body of the registered practitioners. Therefore, he thought that the right thing would be to give the *appointment of these four practitioners, or three* of them at any rate, to the General Medical Council. He did not want to bring the Incorporated Midwives Institute into the question at all and he would exclude it, and say that the General Medical Council should appoint three out of the four medical practitioners, one of the three to be a woman.

Mr. **LAWRENCE** said that he was satisfied about the Incorporated Midwives Institute, but he would like to hear something about the other three bodies, and especially the Apothecaries' Society.

Mr. **GEORGE HARWOOD** spoke in favour of the recognition in this connexion of the General Medical Council.

Mr. **O'CONNOR** disclaimed *the idea of his amendment being* directed against the Incorporated Midwives Institute. If he had his choice between the institute and the Apothecaries' Society he would give all his support to the former body, because he recognised the force of the statement that it represented the governed body.

The **CHAIRMAN** then put the question that the words "one to be appointed by the Royal College of Physicians of London" stand part of the clause.

This question was answered in the affirmative by a majority of 24 against 7 votes

Mr T P O Connor then said he would be prepared to move the omission of the name of the Apothecaries Society and the substitution of the General Medical Council if he thought the latter body would accept the duty of appointing one of the four registered medical practitioners

Sir John Batty Tuke They would not accept it

Mr O Connor said that in these circumstances he would move to delete the name of the Apothecaries Society in order to substitute that of the Royal British Nurses Association This body he said was the most representative body of the women engaged in nursing in this country

Mr Heywood Johnstone asked whether the hon Member could refer to any reference to midwives in the charter of the Royal British Nurses Association

Mr O Connor said that he knew that a very considerable number of the nurses of the association were trained in midwifery and that the association had a list of members who had obtained certificates qualifying them to act as midwives

Mr Schwann said that out of 2800 nurses who were members of the association 254 had been trained as midwives

Mr O Connor insisted on urging the claims of the association the hostility to which he could not understand

Mr Heywood Johnstone assured the hon Member that he had nothing to say against the association which was in his opinion a very deserving body As a matter of fact however midwifery was really no essential part of the training of the association Moreover, the hon Member had not shown that the association had any desire to be represented in this matter

Mr O Connor The president of the association is desirous that the body should be represented

Mr Heywood Johnstone said that the question had never been brought before the association as a whole As for the Apothecaries Society its name had always appeared in these Bills and had never before been challenged

Sir John Batty Tuke pointed out that the Apothecaries Society was not a mere trading body or pharmaceutical society, but one of the largest qualifying bodies in the three kingdoms

Mr John Burns added that the Society had interested itself in the midwives question as long ago as 1813

Sir Walter Foster speaking in support of the amendment said he doubted whether the total membership of the Incorporated Midwives Institute was more numerous than the nurses trained in midwifery on the list of the Royal British Nurses Association

Mr Schwann explained that the institute had 700 members

Mr O Connor thought that as the questions to be dealt with by the proposed Board would be largely questions of nursing the association should be represented in its constitution

Sir Michael Foster pointed out that the Bill dealt with midwives and not with nurses There was a tale in the medical profession as to the difference between physicians and surgeons The physicians always said that they were surgeons and something more A midwife was a nurse and something more and it was with regard to that something more that they were specially dealing in this Bill

The question was then put that the words one by the Society of Apothecaries stand part of the clause and it was answered in the affirmative by 23 votes against 5

Mr Ambrose moved to delete the Incorporated Midwives Institute in order to insert the name of the Victoria University He did so with the view of having the great manufacturing districts represented on the proposed Board

Sir Walter Foster agreed that the provinces should be represented in some way

Mr Emmott took the view that anything in the way of sectional representation of the universities would do more harm than good

The amendment was rejected by 24 votes against 3

Mr Griffith Boscawen who had not been present during the previous debate moved to give a representative to the Royal British Nurses Association

Mr O Connor intimated that he would vote for the amendment

Mr Heywood Johnstone asked the committee to reject it

On a division the amendment was rejected by 19 votes against 4

On the motion of Mr Heywood Johnstone it was agreed to give the Board power to cancel as well as to issue certificates and to add at the end of the section these words—viz 'Rules framed under this section shall be valid only if approved by the Privy Council, and the Privy Council before approving any such rules shall submit them to the General Medical Council and shall take into consideration any representations which that Council may make with respect thereto In moving the addition of these words the hon Member said that there must be a Government department in the background to give sanction to the rules but he hoped the words carried out the intention of the promoters of the Bill—to recognise the position of the General Medical Council and to show due deference to it by giving it a place in the Act and providing that it should be consulted

The words subject to the approval of the Privy Council after consultation with the General Medical Council were struck out of the clause

In Clause 5 dealing with fees and expenses Sir Walter Foster moved to substitute one guinea for 10s as the maximum fee to be charged to women on presenting themselves for certification He did so he said, with a view of lessening the burden likely to fall upon the rates His calculation was that they would require at least £2000 a year to carry on the work connected with the qualifying of these women and he did not think one guinea too much for them to pay for their certificate

Mr Jesse Collings pointed out that the sum mentioned in the Bill originally was one guinea and 10s had been substituted at the instance of the Home Office but he was quite willing to leave the matter to the decision of the committee

Mr Heywood Johnstone said that he was prepared to accept the amendment remarking that if in experience one guinea was found to be too high a fee steps could be taken to reduce it

The amendment was agreed to

In Clause 10 dealing with notification of practice it was agreed, on the motion of Mr Heywood Johnstone to insert words requiring the midwife to give notice to the local supervising authority in the month of January of every year during which she continues to practise within the area of the authority

Mr Griffith Boscawen moved to insert a new clause to provide that "any woman certified under this Act who shall undertake the charge of a case of abnormality or disease shall be liable upon summary conviction to a fine not exceeding £10

Mr Heywood Johnstone said that no woman undertook the charge of these cases because nobody could tell beforehand when a case was going to be abnormal or normal Moreover the practice of these women would be limited and restricted within due limits by the Central Midwives Board, and if the Board could solve a question which had not yet been solved and say whether a case would be abnormal or not no doubt it would do it One of the main objects of the Bill was to have a person in attendance who would know when to send for a medical man

Sir Walter Foster said that while nobody could tell beforehand whether a case was going to be natural or abnormal it was of the greatest importance that the strongest possible incentive should be given to women in attendance to send for qualified assistance the moment anything went wrong

Mr Jesse Collings said that this matter had been very carefully considered and he hoped the committee would not accept the proposed clause

On a division it was rejected by 22 votes against 4

This completed the consideration of the Bill and accordingly the Bill as amended was ordered for report to the House of Commons

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The Medical Annual A Year book of Treatment and Practitioners' Index 1902 Price 7s 6d net be appointed for terms of *three years* by the Lord President of the Council; and (3) one person to be appointed for a term of *three years* by the Association of County Councils. After *two years* from the commencement of this Act the members appointed under subsection (1) shall retire, but shall be eligible for reappointment annually. Any vacancy occurring by resignation or death shall be filled up in the case of a member appointed under subsections (1) and (3) by the body which appointed him, and in the case of a member appointed under subsection (2) by the Lord President of the Council. The duties and powers of the Board shall be as follows: I. To frame rules (subject to the approval of the Privy Council after consultation with the General Medical Council) (*a*) regulating the issue of certificates and the conditions of admission to the roll of midwives; (*b*) regulating the course of training and the conduct of examinations; (c) regulating the admission to the roll of women already in practice as midwives *at the passing of this Act*; (*d*) *regulating*, supervising, and restricting within due limits the practice of midwives; (*e*) deciding the conditions under which midwives may be suspended from practice; and (*f*) defining the particulars required to be given in any notice under Section 10 of this Act. II. To appoint examiners. III. To decide upon the places where, and the times when, examinations shall be held. IV. To publish annually a roll of midwives who have been duly certified under this Act. V. To decide upon the removal from the roll of the name of any *midwife for disobeying* the rules and regulations from time to time laid down under this Act by the Central Midwives Board, or for other misconduct, and also to decide upon the restoration to the roll of the name of any midwife so removed. VI. To issue certificates; and generally to do any other act or duty which may be necessary for the due and proper carrying out of the provisions of this Act."

Sir FRANCIS POWELL moved to amend the first sentence of the clause by substituting "the General Medical Council" for "the Lord President *of the Council." He pointed out that the General Medical Council* appeared in this connexion in the Bill of 1900, and he argued that it was the fitter body to undertake the formation of the proposed Central Midwives Board.

Mr. ROBERT AMBROSE moved an amendment to the effect that the Board should consist of "seven registered medical practitioners nominated by the General Medical Council. After two years from the passing of this Act one half of the six members of the Board selected by the General Medical Council shall retire, but shall be eligible for re election, and thereafter one half of such members of the Board shall retire annually in such manner that each of such members shall serve a *term of two years before retiring, and members so retiring shall be* eligible for re-election. In the event of the death or resignation of a member of the Board the successor elected or appointed shall hold office for the remaining period for which the deceased or resigned member was elected, and must be qualified equally with such deceased or resigned member to hold office as a member of the Board, and shall, on retiring, be eligible for re election. No member of the Board shall act as teacher, instructor or examiner of midwives, and no member of *the Board shall take any part in any inquiry respecting the conduct of* any midwife to whom he had acted as teacher or instructor."

Mr. HEYWOOD JOHNSTONE said that the committee had just decided that the General Medical Council should not have the duty and responsibility of forming the Board and now the committee was asked to say that the President of the Privy Council should have his hands tied and have a Board ready made for him on the nomination of t General Medical Council. The substantial point, however, was whe *this Central Midwives Board should be composed entirely of me* men or whether there should be laymen on it. As the Bill stoo must be a majority of registered medical practitioners on th Of the seven members four must be registered medical pr and there was nothing to say that the other three m registered medical practitioners.

Mr. T. P. O'CONNOR said he did not think that the F entirely a medical board. There might be taxation *there must be representation and therefore he ap* sentation of the county councils. At the same t medical element should predominate.

Sir WALTER FOSTER agreed that four register

This question was answered in the affirmative by a majority of 24 against 7 votes

Mr T P O Connor then said he would be prepared to move the omission of the name of the Apothecaries Society and the substitution of the General Medical Council if he thought the latter body would accept the duty of appointing one of the four registered medical practitioners

Sir John Batty Tuke They would not accept it

Mr O Connor said that in these circumstances he would move to delete the name of the Apothecaries' Society in order to substitute that of the Royal British Nurses Association This body he said was the most representative body of the women engaged in nursing in this country

Mr Heywood Johnstone asked whether the hon Member could refer to any reference to midwives in the charter of the Royal British Nurses Association

Mr O Connor said that he knew that a very considerable number of the nurses of the association were trained in midwifery and that the association had a list of members who had obtained certificates qualifying them to act as midwives

Mr Schwann said that out of 2800 nurses who were members of the association 254 had been trained as midwives

Mr O Connor insisted on urging the claims of the association the hostility to which he could not understand

Mr Heywood Johnstone assured the hon Member that he had nothing to say against the association which was in his opinion a very deserving body As a matter of fact however midwifery was really no essential part of the training of the association Moreover, the hon Member had not shown that the association had any desire to be represented in this matter

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The Medical Annual A Year book of Treatment and Practitioners Index 1902 Price 7s 6d net

# Appointments.

*Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to* The Lancet *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

Armour, Donald John, B.A., M.B., M.R.C.P. Lond., F.R.C.S. Eng., has been appointed Assistant Surgeon to the Belgrave Hospital for Children.

Baigent, W., M.D. Durh., has been re-appointed Medical Officer of Health for Northallerton

Beegling, D. H., B.A. Syd. Univ., M.B., C.M. Edin., has been appointed Medical Officer to the Post-office at Huddersfield.

Brodrick, Charles Cumberland, L.R.C.P., L.R.C.S., L.M. Edin., has been appointed Medical Officer and Public Vaccinator for the Whitchurch District of the Tavistock (Devon) Union for three years.

Cheesewright, J. F., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer of Health to the Greasborough Urban District Council.

Cruise, Richard, M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Bristol Eye Hospital.

Evans, J. Jameson, M.B. Edin., F.R.C.S. Eng., has been appointed Ophthalmic Surgeon to the Birmingham Workhouse and the Marston green Cottage Homes.

Findlay, G. B., M.B. Aberd., has been re appointed Medical Officer of Health for Brailes.

Fletcher, J. L., M.B., C.M. Edin., has been re-appointed Medical Officer of Health to the South Darley Urban District Council.

Gaylor, E., L.R.C.P. Edin., L.F.P.S. Glasg., has been re appointed Medical Officer for Alfreton Rural District.

Gooding, Matthew Richard, L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer for the Barnstaple Port Sanitary Authority.

Highet, H. Campbell, M.D. Glasg., D.P.H., has been appointed Medical Officer of Health for Bangkok, vice Dr. P. A. Nightingale, retired.

Holmes, Chas. J., M.B., B.S. Durh., has been appointed Junior Resident House Surgeon to the Provincial Hospital, Port Elizabeth, Cape Colony.

Judson, J. E., M.R.C.S. Eng., L.R.C.P. Lond., late Senior Resident Medical Officer of the Manchester Workhouse, Crumpsall, has been appointed House Surgeon to the District Infirmary, Ashton-under-Lyne.

Kerswill, John Bedford, M.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health by the St. Germans (Cornwall) District Council.

Meachen, G. Norman, M.B., B.S. Lond., M.R.C.P. Edin., has been appointed Honorary Dermatologist to the Tottenham Hospital, N.

Morse, Edward, L.R.C.P., L.R.C.S. Edin., has been re appointed Medical Officer of Health for Torrington (Devon).

Mudge, Zachary Billing, L.R.C.P., M.R.C.S., has been re appointed Medical Officer of Health by the Phillack (Cornwall) Urban District Council.

Nettle, William, M.R.C.S., L.S.A., J.P., has been re appointed Medical Officer of Health for Liskeard (Cornwall).

Palmer, A. M., M.R.C.S., L.R.C.P. Edin., has been re appointed Medical Officer of Health for the Urban District of Whittington.

Starkie, E. G. B., M.B., C.M. Edin., has been re-appointed Medical Officer of Health for Poulton-le Fylde.

Wilson, W. Cheyne, M.D., C.M. Edin., has been appointed Honorary Physician to the South Devon and East Cornwall Hospital, Plymouth.

# Vacancies.

*For further information regarding each vacancy reference should be made to the advertisement (see Index).*

Bedford County Hospital.—Senior House Surgeon. Salary £100 a year, with apartments, board, and washing.

Bradford Poor-law Union Hospital and Workhouse.—First Resident Assistant Medical Officer, unmarried. Salary £125, with rations, apartments, and washing.

Brecon Infirmary.—Resident House Surgeon, unmarried. Salary £120 per annum, with apartments, board, attendance, fire, and gas.

Brentford Union Infirmary and Workhouse.—Assistant Medical Superintendent, unmarried. The person appointed will be required to devote his whole time to the service of the guardians. Salary £120 per annum, with apartments, rations, washing, &c.

Bridgwater Infirmary.—House Surgeon. Salary £80 a year, with board and residence.

Brighton and Hove Lying-in Institution and Hospital for Women.—House Surgeon, unmarried. Salary £80 per annum, with apartments, board, gas, coals, and attendance.

Chelsea Hospital for Women, Fulham-road, S.W.—Pathologist.

Chesterfield and North Derbyshire Hospital and Dispensary.—Resident House Surgeon. Salary £120, with board, apartments, and laundress.

Cornwall County Asylum, Bodmin.—Junior Assistant Medical Officer. Salary £120, rising to £150, with board, apartments, &c.

Durham County Hospital.—House Surgeon, also Assistant House Surgeon. Salary of Senior £100, Junior £65, with board and lodging in each case.

Grey's Hospital, Pietermaritzburg, Natal, South Africa.—Resident Medical Superintendent. Salary, £350 first year, £400 second year, with board, lodging, and washing.

Hanley, Stoke, and Fenton Joint Hospital Board.—Lady Resident Assistant Medical Officer. Salary £60 per annum, with board, residence, and washing.

Hospital for Consumption and Diseases of the Chest, Brompton.—Resident House Physicians for six months. Honorarium £25.

Hoxton House Asylum, London, N.—Resident Clinical Assistant. Salary £60 a year, with board, lodging, and washing.

Liverpool Dispensaries.—Head Surgeon, unmarried. Salary £200 per annum, with board and apartments. Also two Assistant Surgeons, unmarried. Salary £100 per annum, with board and apartments.

Norfolk and Norwich Hospital.—House Surgeon, unmarried. Salary £80 per annum, with board, lodging, and washing.

North-Eastern Hospital for Children, Hackney-road, N.E.—House Physician for six months. Salary at rate of £80 per annum, with board, residence, and laundry.

Nottingham General Infirmary.—Assistant Resident Surgeon, unmarried. Salary £160 per annum, increasing by £10 every year, with apartments, attendance, light, and fuel.

Paddington Infirmary.—Clinical Assistant; also Second Assistant to the Medical Superintendent. Both for six months. Honorarium of £36, with board, lodging, and washing.

Portsmouth Borough Asylum.—Assistant Medical Officer, unmarried. Salary £120 to £156 per annum, with board, lodging, &c.

Royal Berkshire Hospital.—House Surgeon. Also Assistant House Surgeon, both for six months. Salary £80 and £50 per annum respectively, with board, lodging, and washing.

Royal University of Ireland.—Examiners in Surgery, salary £50; Midwifery, salary £35, Pathology, salary £25; and Ophthalmology, salary £20; in each case with travelling allowances.

Southampton Incorporation, New Workhouse Infirmary, Shirley Warren.—Resident Assistant Medical Officer. Salary £100 per annum, with apartments, rations, washing, and attendance.

Teignmouth Hospital, S. Devon.—House Surgeon. Salary £70 a year, with board, lodging, and washing.

Tottenham Hospital.—House Surgeon. Salary £50 per annum, with board, residence, and laundry.

Tunbridge Wells General Hospital.—House Surgeon, unmarried. Salary £100 per annum, with board, apartments, gas, firing, and attendance.

Victoria Hospital Folkestone.—House Surgeon. Salary £100 per annum, with board, residence, and laundry.

Victoria Hospital for Children, Queen's-road, Chelsea, S.W. House Physician for six months. Honorarium of £25, with board and lodging.

# Births, Marriages, and Deaths.

## BIRTHS.

Bowles.—On March 13th, the wife of Alfred Bowles, M.R.C.S., L.R.C.P. Lond., of a son.

Gillbard.—On March 13th, at St. Margarets, Purley, the wife of R. Gillbard, M.R.C.S., L.R.C.P. Lond., of a son.

## MARRIAGE.

Holcroft—Richardson.—At St. Breoch Church, Wadebridge, Cornwall, on the 12th inst., W. F. Lucius Austen Holcroft, M.B., B.Ch. Edin., son of the late T. W. Holcroft of Sevenoaks, Kent, to Ruth Seymour, eldest daughter of J. B. Richardson, Esq., M.D., of Trevanion, Wadebridge, and Greenfield, Flintshire.

## DEATHS.

Eaton.—On March 15th, at St. Bartolomeo, Spezia, Italy, Colonel Robert Coleman Eaton, Royal Army Medical Corps, aged 60.

Hetley.—On March 13th, at Norbury Lodge, Upper Norwood Frederic Hetley, M.D. St. And., in his 81st year.

Johnstone.—On March 16th, at Brighton, Athol Archibald Wood Johnstone, F.R.C.S., in his 82nd year.

Preston.—On March 16th, in London, William John Preston, M.D. St. And., aged 82 years.

Theobalds.—On March 7th, at Cliffansty, Weston-super-Mare, John Robert Theobalds, Surgeon General, late I.M.S. Madras, aged 79.

*N.B.—A fee of 6s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

# Notes, Short Comments, and Answers to Correspondents.

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### *TRUTH* AND AN EMINENT SURGEON'S FEE.

THE following paragraph appeared in *Truth* of March 13th and requires a few words of comment:—

> The desire to get all you can and stick to it is not, I imagine, confined to any one profession or trade. A gentleman who did not—luckily for him—happen to know any London doctor, recently wrote, on the advice of a pharmaceutical chemist, to an eminent London surgeon asking for an appointment for his wife. He stated at the same time that the lady was suffering from insomnia, kidney derangement, and swelling of the feet. The appointment was made and the lady attended, but after a short consultation the surgeon said, as was to be expected, that the case was not one for him, but for a physician. For this opinion he charged three guineas. The husband then wrote explaining the circumstances under which he asked for the appointment, and that he was ignorant at the time that he was addressing a surgeon, not a physician. He pointed out that it must have been obvious from his first letter that the case was not one for a surgeon, he denied the right of the doctor to take a fee under such circumstances, and he demanded the return of the three guineas. His demand was certainly made in a peremptory rather than a conciliatory tone, but the answer was still more peremptory:—
>
> — Cavendish square, W.,
> February 13, 1902.
>
> SIR,—My solicitor's name and address are — ——, Esq., ——— street, E.C.
>
> I am yours faithfully,
> — ———

We do not understand why it was lucky that the husband "did not happen to know any London doctor," as the trouble seems to have arisen precisely from his ignorance in that direction. Nor can we admit that it must have been obvious to the eminent London surgeon from the husband's first letter "that the case was not one for a surgeon," for nothing can ever be certainly deduced from a layman's letters. Who diagnosed kidney derangement? Presumably the pharmaceutical chemist. And obviously insomnia and swelled feet can each and both have a *surgical cause*. The eminent London surgeon was perfectly right to see the patient. If, as the story goes in *Truth*, after a short "consultation" (examination is probably meant) the eminent surgeon was able to say confidently that the case was not one which he could treat we do not think that he should have asked for or retained a fee. But if the valuable time of the eminent surgeon was much taken up in finding out that the case was a medical case—not a point that it would be as easy for an eminent surgeon as *for a pharmaceutical chemist to decide*—and certainly if there was any consultation, he ought to be paid for his trouble. If the husband had consulted his family medical man in the first instance he would not have made a mistake that has led to his wasting three guineas, but because he has not a family medical man and is so unfortunate as not "to know any London doctor," why should he waste an eminent surgeon's time with impunity? By the way, there are only four surgeons living in Cavendish square, but perhaps "*Cavendish Square*" is a sort of *generic address for an* eminent surgeon.

### WANTED—A HOME.

*To the Editors of* THE LANCET.

SIRS,—Could any of your readers inform me if there are any homes, either seaside or country, where a weak-minded boy could be taken care of and at the same time receive a little education? In this case the parents are not well off but could afford to pay a small amount a year.

I am, Sirs, yours faithfully,
E. CHAMBERS MUSPRATT.

27, Darlington-street, Wolverhampton.

### THE "TRIUMPH" STOKER.

AGAIN and again have we urged that in the case of the furnaces of factories or of electric light generating stations or of mammoth hotels *there can be no* excuse for the production of filthy black *smoke*. It is only deliberate negligence in regard to stoking which leads to the formation of smoke in these instances. Our attention in this connexion has been drawn to a new mechanical stoker known as the "Triumph" stoker which gives most satisfactory results, for not only is the production of smoke prevented, but, as is inevitable, an economy of fuel and a clear gain of heating efficiency result. The "stoker" secures the sprinkling of the coal over the fire at intervals in such a way that two successive charges never fall in the same place. In other words, the fire is never choked by adding an excess of fuel and the furnace is thus cooled down as little as possible, while air gains access to every particle of fuel. The apparatus works quite automatically and with little attention and we could detect no smoke issuing from the chimney on the occasion of more than one surprise visit which we paid to a factory where the "Triumph" stokers were at work. There can be little doubt that if such an appliance could be universally adopted the evil of fog would be greatly minimised. And there is no reason why it should not be so, for the apparatus is quite simple and easily managed, while it leads to a great saving of fuel which would amply repay the manufacturer or others for the initial outlay *incurred*. *The "Triumph" stoker is manufactured by* **Messrs.** Ransomes and Rapier, engineers, of London and Ipswich.

### "PUBLIC HEALTH IN ITALY."

WE have received a copy of a little paper published in Rome entitled "Public Health in Italy: Official Notes." Probably some of our readers have seen the paper already, which has for its laudable object "the patriotic intention to remove all the Calumnies which foreign newspapers propagate respecting the sanitary state of Italy." The programme of the paper is better than its English, judging by the specimen which has been sent to us. The sanitary office of the Commune of Rome, for example, states that:—

> Last January we enjoyed a very good weather and it is well known that no infective disease passed through Rome. On such a purpose we may add that Rome is not a fruitful ground for infective diseases, so that *in* Rome *it is* very *difficult to such* disease to unfold themselves. As to what regards the *malaria* there is no need to spend too many words to state that during these months there is no *malaria* in Rome.

This particular number includes an article on Rome as a health resort by Mr. J. J. Eyre.

### THE NASAL DOUCHE AS A PREVENTIVE.

*To the Editors of* THE LANCET.

SIRS,—Now that we are in the midst of an epidemic of small-pox I should like to call attention to the necessity for the proper sanitation of the nasal passages and would plead for a doctrine which I have preached to my patients for some years—viz., the thorough and regular washing out of the nose and naso-pharynx. We all know the condition of the inside of the nose with its happy family of microbes, &c. I am sure that if the organ was properly cleansed daily with a slightly astringent douche such as a weak solution of sea salt we should hear much less of diseased condition and it would be much less likely to afford a channel for infectious germs. The saline douche washes away the accumulation of dirt and acting also as a slight astringent keeps the mucous membrane healthy and renders it less likely to absorb poisonous germs. Children should be taught to use the nasal douche when they are taught to use the tooth brush.

I am, Sirs, yours faithfully,
Devonshire street, W., March 11th, 1902. W. R. H. STEWART.

### THE DIAGNOSIS OF SYPHILIS.

*To the Editors of* THE LANCET.

SIRS,—May I beg for an answer to the following questions through the medium of THE LANCET:—(1) The possibility and reliability of the differential diagnosis of the hard and soft chancre by bacteriological methods; (2) the best method of demonstrating the bacillus of syphilis (Lustgarten) in films from hard chancre; (3) the bacillus of soft sore, how may it be demonstrated and distinguished from other organisms; and (4) literature on the above.

I am, Sirs, yours faithfully,
March 17th, 1902. BACTERIOLOGIST.

*** Our correspondent's questions are by no means easy to answer. Lustgarten's bacillus is only the most likely organism which has yet been described to prove the cause of syphilis. It is very difficult to stain even in a section of a hard sore and we doubt whether any trustworthy result could be got by staining films from the living sore. Ducrey's bacillus of soft chancre has been cultivated, though with difficulty. The evidence that it really is the cause of soft sore is fairly good. A tolerably complete account of the subject with literature will be found in No. 6 of the "Referate" of the *Centralblatt für Bakteriologie* for this year. (This journal is now published in two parts, "Referate" and "Originale.") The article to which we refer is a "Zusammenfassendes Referat"—i.e., a complete account of the knowledge of the subject up to date.—ED. L.

### CLIMATE AND CHRONIC PULMONARY TROUBLE.

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SIRS,—Can any of your readers kindly tell me why with some persons where there is a chronic tendency to torpidity (from heart dilatation) of the lungs, *tending to slight congestion of the lungs, a dry, cold* air suits them and not a cold damp air?

I am, Sirs, yours faithfully,
Bournemouth, March 18th, 1902. HENRY A. HAMMOND.

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SIRS,—Cases of revaccination with recrudescence of the pocks appear to be fairly common but receive no comment in the literature. I have seen three cases lately in which from four to six weeks after the revaccination, the scabs having fallen off, a fresh pock has developed on one of the scars and after going through a normal or somewhat hurried cycle has scabbed over. What is the explanation? It is usually supposed, I believe, that fresh pocks cannot be produced after the areola

## Appointments.

*Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to* THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

ARMOUR, DONALD JOHN, B.A., M.B., M.R.C.P. Lond., F.R.C.S. Eng., has been appointed Assistant Surgeon to the Belgrave Hospital for Children.

BAIGENT, W., M.D. Durh., has been re-appointed Medical Officer of Health for Northallerton.

BREGLING, D. H., B.A. Syd. Univ., M.B., C.M. Edin., has been appointed Medical Officer to the Post-office at Huddersfield.

BRODRICK, CHARLES CUMBERLAND, L.R.C.P., L.R.C.S., L.M. Edin., has been appointed Medical Officer and Public Vaccinator for the Whitchurch District of the Tavistock (Devon) Union for three years.

CHEESEWRIGHT, J. F., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer of Health to the Greasborough Urban District Council.

CRUISE, RICHARD, M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the Bristol Eye Hospital.

EVANS, J. JAMESON, M.B. Edin., F.R.C.S. Eng., has been appointed Ophthalmic Surgeon to the Birmingham Workhouse and the Marston green Cottage Homes.

FINDLAY, G. B., M.B. Aberd., has been re-appointed Medical Officer of Health for Brailes.

FLETCHER, J. L., M.B., C.M. Edin., has been re-appointed Medical Officer of Health to the South Darley Urban District Council.

GAYLOR, E., L.R.C.P. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer for Alfreton Rural District.

GOODING, MATTHEW RICHARD, L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer for the Barnstaple Port Sanitary Authority.

HIGHET, H. CAMPBELL, M.D. Glasg., D.P.H., has been appointed Medical Officer of Health for Bangkok, vice Dr. P. A. Nightingale, retired.

HOLMES, CHAS. J., M.B., B.S. Durh., has been appointed Junior Resident House Surgeon to the Provincial Hospital, Port Elizabeth, Cape Colony.

JUDSON, J. E., M.R.C.S. Eng., L.R.C.P. Lond., late Senior Resident Medical Officer of the Manchester Workhouse, Crumpsall, has been appointed House Surgeon to the District Infirmary, Ashton-under-Lyne.

KERSWILL, JOHN BEDFORD, M.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health by the St. Germans (Cornwall) District Council.

MEACHEN, G. NORMAN, M.B., B.S. Lond., M.R.C.P. Edin., has been appointed Honorary Dermatologist to the Tottenham Hospital, N.

MORSE, EDWARD, L.R.C.P., L.R.C.S. Edin., has been re-appointed Medical Officer of Health for Torrington (Devon).

MUDGE, ZACHARY BILLING, L.R.C.P., M.R.C.S., has been re-appointed Medical Officer of Health by the Phillack (Cornwall) Urban District Council.

NETTLE, WILLIAM, M.R.C.S., L.S.A., J.P., has been re-appointed Medical Officer of Health for Liskeard (Cornwall).

PALMER, A. M., M.R.C.S., L.R.C.P. Edin., has been re-appointed Medical Officer of Health for the Urban District of Whittington.

STARKIE, E. G. B., M.B., C.M. Edin., has been re-appointed Medical Officer of Health for Poulton-le-Fylde.

WILSON, W. CHEYNE, M.D., C.M. Edin., has been appointed Honorary Physician to the South Devon and East Cornwall Hospital, Plymouth.

## Vacancies.

*For further information regarding each vacancy reference should be made to the advertisement (see Index).*

BEDFORD COUNTY HOSPITAL.—Senior House Surgeon. Salary £100 a year, with apartments, board, and washing.

BRADFORD POOR-LAW UNION HOSPITAL AND WORKHOUSE.—First Resident Assistant Medical Officer, unmarried. Salary £125, with rations, apartments, and washing.

BRECON INFIRMARY.—Resident House Surgeon, unmarried. Salary £120 per annum, with apartments, board, attendance, fire, and gas.

BRENTFORD UNION INFIRMARY AND WORKHOUSE.—Assistant Medical Superintendent, unmarried. The person appointed will be required to devote his whole time to the service of the guardians. Salary £120 per annum, with apartments, rations, washing, &c.

BRIDGWATER INFIRMARY.—House Surgeon. Salary £80 a year, with board and residence.

BRIGHTON AND HOVE LYING-IN INSTITUTION AND HOSPITAL FOR WOMEN.—House Surgeon, unmarried. Salary £80 per annum, with apartments, board, gas, coals, and attendance.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Pathologist.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY.—Resident House Surgeon. Salary £120, with board, apartments, and laundress.

CORNWALL COUNTY ASYLUM, Bodmin.—Junior Assistant Medical Officer. Salary £120, rising to £150, with board, apartments, &c.

DURHAM COUNTY HOSPITAL.—House Surgeon, also Assistant House Surgeon. Salary of Senior £100, Junior £65, with board and lodging in each case.

GREY'S HOSPITAL, Pietermaritzburg, Natal, South Africa.—Resident Medical Superintendent. Salary, £350 first year, £400 second year, with board, lodging, and washing.

HANLEY, STOKE, AND FENTON JOINT HOSPITAL BOARD.—Lady Resident Assistant Medical Officer. Salary £60 per annum, with board, residence, and washing.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians for six months. Honorarium £25.

HOXTON HOUSE ASYLUM, London, N.—Resident Clinical Assistant. Salary £60 a year, with board, lodging, and washing.

LIVERPOOL DISPENSARIES.—Head Surgeon, unmarried. Salary £200 per annum, with board and apartments. Also two Assistant Surgeons, unmarried. Salary £100 per annum, with board and apartments.

NORFOLK AND NORWICH HOSPITAL.—House Surgeon, unmarried. Salary £80 per annum, with board, lodging, and washing.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, N.E.—House Physician for six months. Salary at rate of £80 per annum, with board, residence, and laundry.

NOTTINGHAM GENERAL INFIRMARY.—Assistant Resident Surgeon, unmarried. Salary £160 per annum, increasing by £10 every year, with apartments, attendance, light, and fuel.

PADDINGTON INFIRMARY.—Clinical Assistant; also Second Assistant to the Medical Superintendent. Both for six months. Honorarium of £36, with board, lodging, and washing.

PORTSMOUTH BOROUGH ASYLUM.—Assistant Medical Officer, unmarried. Salary £120 to £156 per annum, with board, lodging, &c.

ROYAL BERKSHIRE HOSPITAL.—House Surgeon. Also Assistant House Surgeon, both for six months. Salary £80 and £50 per annum respectively, with board, lodging, and washing.

ROYAL UNIVERSITY OF IRELAND.—Examiners in Surgery, salary £50; Midwifery, salary £35; Pathology, salary £25; and Ophthalmology, salary £20; in each case with travelling allowances.

SOUTHAMPTON INCORPORATION, NEW WORKHOUSE INFIRMARY, Shirley Warren.—Resident Assistant Medical Officer. Salary £100 per annum, with apartments, rations, washing, and attendance.

TEIGNMOUTH HOSPITAL, S. Devon.—House Surgeon. Salary £70 a year, with board, lodging, and washing.

TOTTENHAM HOSPITAL.—House Surgeon. Salary £50 per annum, with board, residence, and laundry.

TUNBRIDGE WELLS GENERAL HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board, apartments, gas, firing, and attendance.

VICTORIA HOSPITAL, Folkestone.—House Surgeon. Salary £100 per annum, with board, residence, and laundry.

VICTORIA HOSPITAL FOR CHILDREN, Queen's road, Chelsea, S.W.—House Physician for six months. Honorarium of £25, with board and lodging.

## Births, Marriages, and Deaths.

### BIRTHS.

BOWLES.—On March 13th, the wife of Alfred Bowles, M.R.C.S., L.R.C.P. Lond., of a son.

GILLBARD.—On March 13th, at St. Margarets, Purley, the wife of R. Gillbard, M.R.C.S., L.R.C.P. Lond., of a son.

### MARRIAGE.

HOLCROFT—RICHARDSON.—At St. Breoch Church, Wadebridge, Cornwall, on the 12th inst., W. F. Lucius Austen Holcroft, M.B., B.Ch. Edin., son of the late T. W. Holcroft of Sevenoaks, Kent, to Ruth Seymour, eldest daughter of J. B. Richardson, Esq., M.D., of Trevanion, Wadebridge, and Greenfield, Flintshire.

### DEATHS.

EATON.—On March 15th, at St. Bartolomeo, Spezia, Italy, Colonel Robert Coleman Eaton, Royal Army Medical Corps, aged 60.

HETLEY.—On March 13th, at Norbury Lodge, Upper Norwood, Frederic Hetley, M.D. St. And., in his 81st year.

JOHNSTONE.—On March 16th, at Brighton, Athol Archibald Wood Johnstone, F.R.C.S., in his 82nd year.

PRESTON.—On March 16th, in London, William John Preston, M.D. St. And., aged 82 years.

THEOBALDS.—On March 7th, at Cliffansty, Weston-super-Mare, John Robert Theobalds, Surgeon-General, late I.M.S. Madras, aged 79.

*N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

# Notes, Short Comments, and Answers to Correspondents.

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I am, Sirs, yours faithfully,
S. HENNING BELFRAGE.

## PROPOSED MEMORIAL TO THE LATE SURGEON-GENERAL W. NASH, A.M.S.

*To the Editors of* THE LANCET.

SIRS,—I beg to inclose a further list of subscribers to the memorial to Surgeon-General Nash, for favour of publication if you have space.

I am, Sirs, yours faithfully,
B. M. SKINNER, Major R.A.M.C.
(Secretary to the Fund).

18, Victoria-street, S.W., March 18th, 1902.

| | £ | *s.* | *d.* |
|---|---|---|---|
| Colonel W. F. Stevenson, C.B., R.A.M.C. ... ... | 0 | 10 | 0 |
| Colonel W. H. Charlton, R.A.M.C.... ... ... ... | 0 | 10 | 0 |
| Colonel McLeod, I.M.S. | 0 | 10 | 0 |
| Professor Wright ... ... | 0 | 10 | 0 |
| Lieutenant-Colonel Webb... ... ... ... ... | 0 | 10 | 0 |
| Lieutenant-Colonel W. L. Chester, R.A.M.C. | 0 | 10 | 0 |
| Lieutenant-Colonel Dick ... ... ... ... ... | 0 | 10 | 0 |
| Major R. H. Firth, R.A.M.C.... ... ... ... | 0 | 10 | 0 |
| Major W. H. Horrocks, R.A.M.C.... ... ... ... | 0 | 10 | 0 |
| Major Leishmann ... ... | 0 | 10 | 0 |
| Captain P. H. Whiston, R.A.M.C.... ... ... ... | 0 | 10 | 0 |
| Lieutenant E. B. Knox, R.A.M.C.... ... ... ... | 0 | 10 | 0 |
| Captain and Quarter-Master Johnson ... ... | 0 | 5 | 0 |
| Captain and Quarter-Master Lackey ... ... | 0 | 5 | 0 |
| Messrs. Holt and Co. ... | 1 | 1 | 0 |
| Lieutenant-Colonel Clements ... ... .. | 1 | 1 | 0 |
| Brigade-Surgeon J. Anderson ... .. ... | 1 | 1 | 0 |
| Surgeon-General T. W. Fox, A.M.S. (retired) . . | 1 | 1 | 0 |
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| Colonel McNamara ... ... | 1 | 0 | 0 |
| Captain H. Cotton, R.A.M.C.... ... ... ... | 1 | 0 | 0 |
| Announced in THE LANCET of March 15th | 5 | 14 | 0 |
| | £19 | 9 | 0 |

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Retford, March 17th, 1902. P. E. BEARBLOCK, M.R.C.S. Eng.

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# Notes, Short Comments, and Answers to Correspondents.

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### *TRUTH* AND AN EMINENT SURGEON'S FEE

THE following paragraph appeared in *Truth* of March 13th and requires a few words of comment —

> The desire to get all you can, and stick to it, is not, I imagine, confined to any one profession or trade A gentleman who did not —luckily for him—happen to know any London doctor, recently wrote, on the advice of a pharmaceutical chemist, to an eminent London surgeon asking for an appointment for his wife He stated at the same time that the lady was suffering from insomnia, kidney derangement and swelling of the feet The appointment was made, and the lady attended, but after a short consultation the surgeon said, as was to be expected, that the case was not one for him, but for a physician For this opinion he charged three guineas The husband then wrote explaining the circumstances under which he asked for the appointment, and that he was ignorant at the time that he was addressing a surgeon, not a physician. He pointed out that it must have been obvious from his first letter that the case was not one for a surgeon, he denied the right of the doctor to take a fee under such circumstances, and he demanded the return of the three guineas His demand was certainly made in a peremptory rather than a conciliatory tone, but the answer was still more peremptory —
>
> — Cavendish square, W ,
> February 13 1902.
>
> SIR —My solicitor's name and address are —. —— Esq , ——— street, E C
>
> I am yours faithfully,
>
> — ———

We do not understand why it was lucky that the husband 'did not happen to know any London doctor,' as the trouble seems to have arisen precisely from his ignorance in that direction Nor can we admit that it must have been obvious to the eminent London surgeon from the husband s first letter "that the case was not one for a surgeon," for nothing can ever be certainly deduced from a layman s letters Who diagnosed kidney derangement? Presumably the pharmaceutical chemist And obviously insomnia and swelled feet can each and both have a surgical cause The eminent London surgeon was perfectly right to see the patient If, as the story goes in *Truth*, after a short "consultation' (examination is probably meant) the eminent surgeon was able to say confidently that the case was not one which he could treat we do not think that he should have asked for, or retained, a fee But if the valuable time of the eminent surgeon was much taken up in finding out that the case was a medical case—not a point that it would be as easy for an eminent surgeon as for a pharmaceutical chemist to decide—and certainly if there was any consultation, he ought to be paid for his trouble If the husband had consulted his family medical man in the first instance he would not have made a mistake that has led to his wasting three guineas, but because he has not a family medical man and *is so unfortunate as not "to know any London doctor*, why should he waste an eminent surgeon s time with impunity? By the way, there are only four surgeons living in Cavendish square, but perhaps "Cavendish Square' is a sort of generic address for an eminent surgeon

### WANTED—A HOME

*To the Editors of* THE LANCET

SIRS,—Could any of your readers inform me if there are any homes, either seaside or country, where a weak minded boy could be taken care of and at the same time receive a little education? In this case the parents are not well off but could afford to pay a small amount a year

I am, Sirs, yours faithfully,

E CHAMBERS MUSPRATT

27, Darlington street, Wolverhampton

### THE "TRIUMPH' STOKER.

AGAIN and again have we urged that in the case of the furnaces of factories or of electric light generating stations or of mammoth hotels there can be no excuse for the production of filthy black smoke It is only deliberate negligence in regard to stoking which leads to the formation of smoke in these instances Our attention in this connexion has been drawn to a new mechanical stoker known as the "Triumph" stoker which gives most satisfactory results for not only is the production of smoke prevented, but, as is inevitable, an economy of fuel and a clear gain of heating efficiency result The "stoker" secures the sprinkling of the coal over the fire at intervals in such a way that two successive charges never fall in the same place In other words the fire is never choked by adding an excess of fuel and the furnace is thus cooled down as little as possible while air gains access to every particle of fuel The apparatus works quite automatically and with little attention and we could detect no smoke issuing from the chimney on the occasion of more than one surprise visit which we paid to a factory where the ' Triumph' stokers were at work There can be little doubt that if such an appliance could be universally adopted the evil of fog would be greatly minimised And there is no reason why it should not be so for the apparatus is quite simple and easily managed, while it leads to a great saving of fuel which would amply repay the manufacturer or others for the initial outlay incurred The "Triumph' stoker is manufactured by Messrs. Ransomes and Rapier, engineers, of London and Ipswich

### ' PUBLIC HEALTH IN ITALY

WE have received a copy of a little paper published in Rome entitled "Public Health in Italy Official Notes Probably some of our readers have seen the paper already, which has for its laudable object " the patriotic intention to remove all the Calumnies which foreign newspapers propagate respecting the sanitary state of Italy.' The programme of the paper is better than its English, judging by the specimen which has been sent to us The sanitary office of the Commune of Rome for example, states that —

> ' Last January we enjoyed a very good weather and it is well known that no infective disease passed through Rome On such a purpose we may add that Rome is not a fruitful ground for infective diseases so that in Rome it is very difficult to such disease to unfold themselves As to what regards the *malaria* there is no need to spend too many words to state that during these months there is no *malaria* in Rome '

This particular number includes an article on Rome as a health resort by Mr J. J. Eyre

### THE NASAL DOUCHE AS A PREVENTIVE

*To the Editors of* THE LANCET.

SIRS,—Now that we are in the midst of an epidemic of small pox I should like to call attention to the necessity for the proper sanitation of the nasal passages and would plead for a doctrine which I have preached to my patients for some years—viz , the thorough and regular washing out of the nose and naso pharynx We all know the condition of the inside of the nose with its happy family of microbes &c I am sure that if the organ was properly cleansed daily with a slightly astringent douche such as a weak solution of sea salt, we should hear much less of diseased condition and it would be much less likely to afford a channel for infectious germs The saline douche washes away the accumulation of dirt and acting also as a slight astringent keeps the mucous membrane healthy and renders it less likely to absorb poisonous germs Children should be taught to use the nasal douche when they are taught to use the tooth brush

I am, Sirs, yours faithfully,

Devonshire street, W March 11th 1902 W. R H STEWART.

### THE DIAGNOSIS OF SYPHILIS

*To the Editors of* THE LANCET.

SIRS —May I beg for an answer to the following questions through the medium of THE LANCET —(1) The possibility and reliability of the differential diagnosis of the hard and soft chancre by bacteriological methods, (2) the best method of demonstrating the bacillus of syphilis (Lustgarten) in films from hard chancre, (3) the bacillus of soft sore, how may it be demonstrated and distinguished from other organisms, and (4) literature on the above

I am, Sirs, yours faithfully,

March 17th, 1902 BACTERIOLOGIST.

*** Our correspondent s questions are by no means easy to answer Lustgarten's bacillus is only the most likely organism which has yet been described to prove the cause of syphilis It is very difficult to stain even in a section of a hard sore, and we doubt whether any trustworthy result could be got by staining films from the living sore. Ducrey s bacillus of soft chancre has been cultivated, though with difficulty. The evidence that it really is the cause of soft sore is fairly good A tolerably complete account of the subject with literature will be found in No 6 of the "Referate' of the *Centralblatt für Bakteriologie* for this year (This journal is now published in two parts, "Referate and "Originale') The article to which we refer is a "Zusammenfassendes Referat'—i e, a complete account of the knowledge of the subject up to date —ED L

### CLIMATE AND CHRONIC PULMONARY TROUBLE

*To the Editors of* THE LANCET

SIRS,—Can any of your readers kindly tell me why with some persons where there is a chronic tendency to torpidity (from heart dilatation) of the lungs, tending to slight congestion of the lungs a dry, cold air suits them and not a cold, damp air?

I am, Sirs, yours faithfully,

Bournemouth, March 18th, 1902 HENRY A HAMMOND.

### RECRUDESCENCE OF THE POCKS IN VACCINATION.

*To the Editors of* THE LANCET

SIRS,—Cases of revaccination with recrudescence of the pocks appear to be fairly common but receive no comment in the literature I have seen three cases lately in which from four to six weeks after the revaccination, the scabs having fallen off, a fresh pock has developed on one of the scars and after going through a normal or somewhat hurried cycle has scabbed over. What is the explanation? It is usually supposed, I believe, that fresh pocks cannot be produced after the areola are formed in existing pocks—i.e., until after some years, when the immunity disappears. In these cases, however, it appears as if some re-infection must occur or as if some organism had lain dormant for many weeks and then become active. I should be glad if any of your readers could offer a better explanation.

I am, Sirs, yours faithfully,
S. Henning Belfrage.

## PROPOSED MEMORIAL TO THE LATE SURGEON-GENERAL W. NASH, A.M.S.

*To the Editors of* The Lancet.

Sirs,—I beg to inclose a further list of subscribers to the memorial to Surgeon-General Nash, for favour of publication if you have space.

I am, Sirs, yours faithfully,
B. M. Skinner, Major R.A.M.C.
(Secretary to the Fund).

18, Victoria-street, S.W., March 18th, 1902.

| | £ | *s.* | *d.* |
|---|---|---|---|
| Colonel W. F. Stevenson, C.B., R.A.M.C. ... ... | 0 | 10 | 0 |
| Colonel W. H. Charlton, R.A.M.C.... ... ... ... | 0 | 10 | 0 |
| Colonel McLeod, I.M.S. | 0 | 10 | 0 |
| Professor Wright ... ... | 0 | 10 | 0 |
| Lieutenant-Colonel Webb... ... ... ... ... | 0 | 10 | 0 |
| Lieutenant-Colonel W. L. Chester, R.A.M.C. | 0 | 10 | 0 |
| Lieutenant-Colonel Dick ... ... ... ... ... | 0 | 10 | 0 |
| Major R. H. Firth, R.A.M.C.... .. ... ... | 0 | 10 | 0 |
| Major W. H. Horrocks, R.A.M.C.... ... ... ... | 0 | 10 | 0 |
| Major Leishmann ... ... | 0 | 10 | 0 |
| Captain P. H. Whiston, R.A.M.C.... ... ... ... | 0 | 10 | 0 |
| Lieutenant E. B. Knox, R.A.M.C.... ... ... ... | 0 | 10 | 0 |
| Captain and Quarter-Master Johnson ... ... | 0 | 5 | 0 |
| Captain and Quarter-Master Lackey ... ... | 0 | 5 | 0 |
| Messrs. Holt and Co. ... | 1 | 1 | 0 |
| Lieutenant-Colonel Clements ... ... ... | 1 | 1 | 0 |
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**WEDNESDAY** (26th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.).

**THURSDAY** (27th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

**FRIDAY** (28th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.). West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square, (9.30 A.M.), City Orthopædic (2.30 P.M.).

**SATURDAY** (29th).—Royal Free (9 A.M. and 2 P.M.), London (2 P.M.) Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9 15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.), Throat, Golden-square (9.30 A.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

## SOCIETIES.

**MONDAY** (24th).—MEDICAL SOCIETY OF LONDON (11, Chandos street, Cavendish-square, W.).—8.30 P.M. Discussion on the Treatment of Puerperal Eclampsia (opened by Dr. G. E. Herman). Council Meeting Night.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (20, Hanover square, W.).—7 P.M. Council. 8 P.M. Communications:—Mr. C. W. Glassington: A Composite Odontome.—Mr. E. B. Dowsett: Alveolar Abscess perforating the Palate.—Mr. A. Underwood: Two Cases in Practice.—Mr. D. Lloyd Williams: Fatal Case of Alveolar Abscess.

**TUESDAY** (25th).—CHELSEA CLINICAL SOCIETY (Jenner Institute of Preventive Medicine, Chelsea gardens, Grosvenor-road, S.W.).—8 30 P.M. Annual Clinical Debate:—Cancer, its Nature, Origin, and General Principles of Treatment. The following, among others, will take part in the discussion—Prof. Hewlett, Mr. D'Arcy Power, Dr. H. R. Gaylord (New York) (Communication on Cancer in Swine, with lantern slides), Prof. Adami (Montreal) (Communication), and Dr. J. F. Payne (who will deliver the closing address).

ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8 30 P.M. Mr A. W. Mayo Robson The Surgical Treatment of Obstruction in the Common Bile duct by Concretions, with especial reference to the Operation of Choledochotomy as modified by the author (illustrated by 60 cases).

## LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

**MONDAY** (24th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.).—4 P.M. Dr. T. Colcott Fox: Clinique. (Skin.)

**TUESDAY** (25th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.).—4 P.M. Dr. C. T. Williams: Clinique. (Medical.)

***WEDNESDAY** (26th).—MEDICAL GRADUATES' COLLEGE AND POLY*CLINIC (22, Chenies street, W.C.).—4 P.M. Mr. J. Clarke: Clinique. (Surgical.)

**THURSDAY** (27th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.).—4 P.M. Mr. J. Hutchinson, jun: Clinique. (Surgical.)

**FRIDAY** (28th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies street, W.C.).—4 P.M. Dr. StClair Thomson: Clinique. (Throat.)

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*Lectures, original articles, and reports should be written on one side of the paper only,* AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

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## MANAGER'S NOTICES.

### THE INDEX TO THE LANCET.

THE Index to Vol. II. of 1901, which was completed with the issue of Dec. 28th, and the Title-page to the Volume, were given in THE LANCET of Jan 4th.

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## METEOROLOGICAL READINGS.

*(Taken daily at 8 30 a.m. by Steward's Instruments)*

THE LANCET Office, March 20th, 1902.

| Date | Barometer reduced to Sea Level and 32° F | Direction of Wind | Rainfall | Solar Radia in Vacuo | Maximum Temp Shade. | Min. Temp | Wet Bulb | Dry Bulb | Remarks at 8.30 A.M. |
|---|---|---|---|---|---|---|---|---|---|
| Mar. 14 | 30 01 | S | | 98 | 57 | 42 | 44 | 45 | Fine |
| " 15 | 29 76 | WNW | 0 62 | 92 | 57 | 43 | 44 | 47 | Cloudy |
| " 16 | 30 05 | S.W. | . | 89 | 50 | 46 | 45 | 46 | Cloudy |
| " 17 | 30 21 | S W | ... | 85 | 61 | 46 | 48 | 49 | Overcast |
| " 18 | 30 10 | S W | ... | 66 | 52 | 47 | 46 | 48 | Overcast |
| " 19 | 29 93 | S W | ... | 104 | 60 | 46 | 45 | 49 | Cloudy |
| " 20 | 29 39 | S.W. | ... | 65 | 49 | 43 | 46 | 48 | Stormy |

**During the week marked copies of the following newspapers have been received:**—*Lancashire Daily Post, Barnet Press, Stom Observer, Dorset County Chronicle, Ipswich Times, Yorks Observer, Aberdeen Journal, Aberdeen Free Press (Weekly), Surrey Advertiser, Times of India, Morley Observer, City Press, South Wales Post, South Wales Daily News, Plymouth News, Irish Times, Banbury Guardian, Freeman's Journal (Dublin), Es County Chronicle, Glasgow Evening News, Glasgow Herald, Southport Guardian, East London Observer, Bulawayo Journal, St James's Gazette, Lancaster Post, Suffolk Chronicle, Standard, Manchester Courier, Newcastle Chronicle, Echo, Yorkshire Post, Belfast Newsletter, Nottingham Express, Cardiff Echo, Newcastle Leader, Darlington Echo, Star, Western Morning News, Cheltenham Examiner, &c.*

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# The Lumleian Lectures

ON

# THE COMPREHENSIVE STUDY OF THORACIC PHTHISIS.

*Delivered before the Royal College of Physicians of London on March 13th, 18th, and 20th, 1902,*

By F T ROBERTS, M D, F R C P Lond,

HOLME PROFESSOR OF CLINICAL MEDICINE AT UNIVERSITY COLLEGE, SENIOR PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL, CONSULTING PHYSICIAN TO BROMPTON CONSUMPTION HOSPITAL ETC

## LECTURE I

*Delivered on March 13th*

Mr President and Gentlemen,—The group of cases which are so sadly familiar under the terms "phthisis" and "consumption" have, for obvious reasons, always exerted a powerful attraction, not only for members of the medical faculty, but also for the laity While they have contributed enormously to the human death rate, and caused widespread and profound misery and distress amongst all classes of the community, high and low, rich and poor, they have been further surrounded with a halo of mystery in the past, which has attached to them a peculiar sentimental interest and dread Moreover, these cases have compelled the attention of many earnest investigators and seekers after truth, and one supreme object has been to endeavour to discover a "cure' for this strange and terrible disease Need it be wondered at that, from the very nature of the conditions, quacks of various kinds have found "consumption" a "happy hunting ground," and a source of considerable financial prosperity, each, of course, claiming to have discovered the long-looked-for "cure" This gold-mine shows no signs of being "worked out," even in this enlightened age

The scientific discoveries and practical advances in our knowledge in relation to tuberculosis and phthisis, which have been such a remarkable outcome of modern researches, have cleared away all mystery and sentiment, and things have now assumed a very commonplace aspect Nevertheless the subject has excited an ever-increasing, deeper, and more widespread interest, mainly on account of the ardent hopes which have been roused with regard to the effective treatment, prevention, and ultimate eradication of a malady which has hitherto been looked upon as a "hopeless scourge" In fact, "consumption" may now be described as being "in the air," I mean figuratively, as well as infectively In this country an "Association for the Prevention of Consumption and Other Forms of Tuberculosis" was established in 1898 and this was followed by the British Congress on Tuberculosis which took place in London last July This Congress was highly successful from a scientific, oratorical, social, and let us hope a practical point of view It was characterised by at least one dramatic incident, and by the enunciation of some strong statements of opinion which have since excited considerable discussion and opposition At its closing general meeting the members of the congress carried certain resolutions, well meaning enough but whether likely to lead to practical results commensurate with the occasion remains to be seen I note that, although the point was referred to by some speakers, the congress did not dare to incorporate in these resolutions any advice to ladies not to sweep up the filth of the streets and pavements, with the disease germs therein contained by means of their trailing dresses

Those who have followed the course of events during the last few months must have realised the fact that the Congress has not been an unmixed benefit Of course, on the one hand, it has been the starting-point of markedly increased activity and development in relation to the agencies and methods for the prevention and cure of consumption which have taken such a firm hold upon the imagination of the community at large, and which have appealed so strongly to the practical sympathy and benevolence of many who have the means to help Moreover, it has led to the discussion in the medical press of important questions which there is every reason to hope may lead to useful results So far good But, on the other hand, much of the correspondence, more particularly in the lay press cannot fail to have led to serious mischief Indeed, in a certain influential daily newspaper the heading "Congress on Tuberculosis" has been ever since until quite recently the introduction to very disagreeable and aggravating reading, the far-reaching injurious effects of which upon a credulous and easily gulled public it is impossible to estimate We can afford as a profession to ignore the insults which have been heaped upon us in this correspondence, and surely we ought to treat with the utmost ridicule and contempt the insolent and impudent suggestions made with regard to "testing" and "scientifically investigating" any supposed "cure for consumption" that is not perfectly open and above board Still, for the sake of humanity we cannot be altogether silent, and personally I feel bound to take this opportunity of protesting strongly against any member of our profession countenancing in the slightest degree such a proposal Of course, we cannot prevent any fussy and officious busybodies or so-called philanthropists from thrusting themselves to the front, giving dogmatic opinions about subjects of which they are absolutely ignorant and supporting any pretentious treatment they choose, but our plain duty is to leave them severely alone

Personally I did not take any active part in the Congress on Tuberculosis, as on these occasions I prefer to be a humble disciple This gathering is, however, somewhat directly responsible for the subject which I have selected for these lectures, for reasons with which I will not trouble you, but which may possibly be revealed in the course of my remarks I trust that my long connexion with the Brompton Hospital for Consumption gives me a certain claim to be heard with respect to thoracic phthisis, at any rate in its more practical and clinical aspects I do not for a moment pretend to bring before you anything original, novel, or startling, and can only hope to present facts or to offer suggestions in such a way as to be of some service to the profession in dealing with this still terrible scourge I fear that I did not realise at starting what an extensive and difficult task I had set myself within the limited time at my disposal, and in the actual delivery of these lectures, at any rate, I must omit the discussion of many points in detail, while, with regard to others, I can confidently rely on the general information and knowledge of my audience You may be glad to know that I have no intention of boring you with dull statistics or with lengthy descriptions of cases Nor do I propose to quote many authorities, though from no want of respect for their labours or teaching

Before proceeding to the actual discussion of my subject I feel bound to offer a mild protest against the modern tendency to regard all questions relating to phthisis too exclusively from the scientific side, and to accept no doctrine or opinion as reliable or authoritative unless it emanates from the pathological or bacteriological laboratory While expressing my profound admiration for, and appreciation of, the valuable work which has been, and is still being, done in these laboratories in relation to tuberculosis, I submit that this does not cover the whole field, and that phthisis, as it comes before us in actual life, must be dealt with and studied on a much broader basis and from other standpoints My friend and colleague, Dr G Vivian Poore, in a recent interesting address on "Milk and its Relation to Health and Disease," holds that the question of the relationship between bovine and human tuberculosis cannot be settled by laboratory experiments only, and that we must not set aside its practical, clinical, and epidemiological aspects This statement of opinion, with which I cordially agree, applies with equal force to many other questions bearing upon tuberculosis and phthisis

The title which I have given to these lectures indicates the intention and scope of my subject I have employed the expression "thoracic phthisis' advisedly, to emphasise what are, in my opinion, two most important practical facts—namely, first, that in the cases of chest disease usually and conveniently grouped as "consumption," the morbid changes are by no means limited to the lungs, but in the large majority of instances other thoracic structures are more or less affected as well, and the mischief may even originate in certain of these structures; and secondly, that, even assuming the disease to be essentially a manifestation of tuberculosis, other lesions and pathological changes may be associated with the tuberculous mischief from the first or from an early period; while they are certain to develop or supervene in various combinations and degrees during the progress of cases which are at all prolonged, and especially in those of a markedly chronic type. Ultimately the conditions not uncommonly become extremely complicated. In other words, "thoracic phthisis" and "pulmonary tuberculosis or consumption" are by no means synonymous terms, a fact which is but too often entirely ignored or forgotten. Recognising these fundamental facts, it is obviously most desirable that thoracic phthisis should be studied, both scientifically and practically, on a comprehensive basis, on certain lines which it will be my business to endeavour to elucidate in these lectures. Having thus adequately mastered the subject in the abstract, and gained a fairly intelligent and definite knowledge of facts, and not of mere theories, assumptions, or doctrines, and having acquired adequate skill in clinical investigation, the trained practitioner must then regard it as his imperative and unfailing duty to deal with every individual case which comes under his care from this comprehensive standpoint, to study it systematically and thoughtfully, so as to be in a position to give rational and reliable advice, to do the best that is possible for this unfortunate class of patients, and to take suitable and adequate measures of a prophylactic or preventive nature, so far as circumstances permit.

The several points which it is my purpose to discuss in these lectures in relation to the comprehensive study of thoracic phthisis come conveniently and naturally under the following familiar general headings: I.—Pathology and Etiology; II.—Morbid Anatomy or Pathological Changes; and III.—Clinical History and Investigation. An intelligent and practical knowledge and appreciation of the facts which we learn from these aspects is absolutely essential as a rational basis for IV.—Treatment and Prevention. A friend said to me when he heard of my choice of a subject for these lectures, "Now be sure to tell us all about the treatment of consumption" Well, Sir, I am sorry to disappoint him, for I do not propose to deal with this branch at all, except, it may be, to make an incidental allusion to particular points, and for the following reasons. In the first place, it hardly comes within the scope of my subject as defined by the title which I have adopted. Secondly, the other divisions include much more than I can possibly discuss satisfactorily within the time at my disposal, and it would be quite absurd and hopeless to attempt to deal with the treatment and prevention of consumption at the fag end in any way commensurate with its immense importance. Thirdly, there is so much written on the subject at the present time, so many "cures" advocated, and such an amount of discussion on various matters of detail, that I feel sure that you must be all pretty well bewildered; if I ventured to say anything I should probably only add to the general confusion and chaos. Personally I really feel so dazed with what I have read and with the statements made that I have almost come to the conclusion that neither I nor anyone else knows much about the matter. And having no "cure." or even "cut-and-dried method of treatment" for thoracic phthisis, I have no special reason for inflicting my views and opinions upon you.

## I.—PATHOLOGY AND ETIOLOGY.

I presume that few, if any, would question for a moment at the present day the essential relationship between tubercle and thoracic phthisis, or would deny that this morbid product takes a most prominent and active part in the pathological manifestations of the disease. Moreover, its direct connexion with the *tubercle bacillus* and its consequent infective nature are almost universally recognised and acknowledged, though there are some who are still unconvinced I read the other day a review of a work dealing with pulmonary consumption in which it is maintained that the disease is not contagious, and that in the large majority of cases it is primarily a neurosis, the pulmonary disintegration being secondary. As a protest against such absurd and mischievous teaching I take the earliest opportunity of emphasising the importance of always bearing in mind infection as a common and dangerous factor in the causation of thoracic phthisis. And in this connexion it would ill become me if I did not pause, to pay my tribute of profound respect and admiration to that greatest of bacteriologists—Koch, whose scientific investigations, culminating in the discovery of the tubercle bacillus, and the complete demonstration of its relation to tuberculous lesions, has been well described as "a classical masterpiece of bacteriological research."

But while fully appreciating and endorsing the infective aspect of the pathology and etiology of thoracic phthisis, on the other hand, it cannot be too strongly enforced at the present day that this does not cover the entire ground. Public attention is now so concentrated upon the "contagiousness of consumption," and the idea of infection is so absorbing and so overshadows all else, that other practical factors in originating or developing the complaint are either entirely lost sight of, or at any rate are not insisted upon or brought into such prominence as they ought to be. Moreover, statements are made bearing upon its causation which in my opinion are not in accordance with fact, and to some of these I shall have to refer in the course of my remarks.

I do not propose to trouble you with any discussion of the different points bearing upon the bacteriology of thoracic phthisis, which at present seems to be in a somewhat unsettled state, including the question of so-called "pseudotuberculosis." I will merely draw attention to the fact that there are other well-known pathogenic organisms besides the tubercle bacillus which are as a rule concerned, more or less, in what I may call the phthisical process, regarding it comprehensively, especially the pneumococcus and the pyogenic microbes with which you are all familiar, and which I need not enumerate. In short, "mixed or combined," as well as "secondary" infections are undoubtedly common, and are especially prominent in many of the more acute cases. Experimental investigations have shown that pyogenic organisms have in all probability an important effect in hastening necrosis and softening of tuberculous consolidation, while later their influence becomes obvious enough in connexion with phthisical lesions. The organisms which occasionally are found in the walls of cavities, including amongst them certain moulds and fungi, may be of some importance as destructive agents, but nothing definite can be stated on this point, so far as I am aware.

I now desire to offer a few remarks on the question of the contagiousness or infectivity of thoracic phthisis, as it comes before us in actual practice. I presume that there are but few, if any, members of the medical profession who regard consumption as contagious in the ordinary and popular acceptance of the term, that is, as being conveyed from one individual to another in the same way as measles or smallpox. But undoubtedly this is the idea which is very prevalent amongst the laity, and I have met with not a few instances in which it has proved a serious inconvenience, difficulty, or hardship. The fact cannot be ignored that the modern prominence given to the contagiousness of consumption has created quite a scare amongst large numbers of people which materially interferes with commercial, professional, social, and practical life. I believe that certain places which actually owe their prosperity to the fact that they claimed special advantages as health-resorts for consumptive patients, now repudiate the attachment altogether and do their utmost to boycott such patients, and to prevent them from coming there, as it is found that they keep other people away whose patronage is now far more lucrative. Some places absolutely refuse all consumptives; and things have gone so far in the United States that the Government has recently issued an order excluding all tuberculous immigrants from that country, which has elicited an emphatic protest from the New York Academy of Medicine. It is our business as a profession at once to endeavour to allay this excessive and unreasoning alarm, and to make the laity understand that, with very simple precautions, there need be little or no fear of infection in this way. The actual experience in health-resorts for consumptives in the higher altitudes does not favour the idea of infection when due care is taken. Nor do I think that we are called upon to warn people, as has been lately suggested, against going themselves or taking their children to the Zoological Gardens lest they should "catch consumption" from our kinsfolk—the monkeys.

But unfortunately there is another side to the case. I suppose we are all pretty well agreed that the main source of infection is the dried sputum, which contains the tubercle bacilli in countless millions, and these are deposited and carried about attached to fine particles of dust, being thus always liable to be inhaled from the atmosphere. There is another view—that infection is chiefly conveyed by the free, finely divided particles of sputum ejected in the act of coughing, which are suspended in the atmosphere and then inhaled. This mode of conveyance ought certainly not to be ignored. It is usually dogmatically stated that the breath of a consumptive patient is not infectious, as tubercle

# The Lumleian Lectures

ON

# THE COMPREHENSIVE STUDY OF THORACIC PHTHISIS.

*Delivered before the Royal College of Physicians of London on March 13th, 18th, and 20th, 1902,*

By F. T. ROBERTS, M.D., F.R.C.P. Lond.,

HOLME PROFESSOR OF CLINICAL MEDICINE AT UNIVERSITY COLLEGE; SENIOR PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL, CONSULTING PHYSICIAN TO BROMPTON CONSUMPTION HOSPITAL, ETC.

## LECTURE I.

*Delivered on March 13th*

Mr. President and Gentlemen,—The group of cases which are so sadly familiar under the terms "phthisis" and "consumption" have, for obvious reasons, always exerted a powerful attraction, not only for members of the medical faculty, but also for the laity. While they have contributed enormously to the human death-rate, and caused widespread and profound misery and distress amongst all classes of the community, high and low, rich and poor, they have been further surrounded with a halo of mystery in the past, which has attached to them a peculiar sentimental interest and dread. Moreover, these cases have compelled the attention of many earnest investigators and seekers after truth; and one supreme object has been to endeavour to discover a "cure" for this strange and terrible disease. Need it be wondered at that, from the very nature of the conditions, quacks of various kinds have found "consumption" a "happy hunting ground," and a source of considerable financial prosperity, each, of course, claiming to have discovered the long-looked-for "cure." This gold-mine shows no signs of being "worked out," even in this enlightened age.

The scientific discoveries and practical advances in our knowledge in relation to tuberculosis and phthisis, which have been such a remarkable outcome of modern researches, have cleared away all mystery and sentiment, and things have now assumed a very commonplace aspect. Nevertheless the subject has excited an ever-increasing, deeper, and more widespread interest, mainly on account of the ardent hopes which have been roused with regard to the effective treatment, prevention, and ultimate eradication of a malady which has hitherto been looked upon as a "hopeless scourge." In fact, "consumption" may now be described as being "in the air," I mean figuratively, as well as infectively. In this country an "Association for the Prevention of Consumption and Other Forms of Tuberculosis" was established in 1898 and this was followed by the British Congress on Tuberculosis which took place in London last July. This Congress was highly successful from a scientific, oratorical, social, and let us hope a practical point of view. It was characterised by at least one dramatic incident, and by the enunciation of some strong statements of opinion which have since excited considerable discussion and opposition. At its closing general meeting the members of the congress carried certain resolutions, well-meaning enough, but whether likely to lead to practical results commensurate with the occasion remains to be seen. I note that, although the point was referred to by some speakers, the congress did not dare to incorporate in these resolutions any advice to ladies not to sweep up the filth of the streets and pavements, with the disease-germs therein contained, by means of their trailing dresses.

Those who have followed the course of events during the last few months must have realised the fact that the Congress has not been an unmixed benefit. Of course, on the one hand, it has been the starting-point of markedly increased activity and development in relation to the agencies and methods for the prevention and cure of consumption which have taken such a firm hold upon the imagination of the community at large, and which have appealed so strongly to the practical sympathy and benevolence of many who have the means to help. Moreover, it has led to the discussion in the medical press of important questions which there is every reason to hope may lead to useful results. So far good. But, on the other hand, much of the correspondence, more particularly in the lay press, cannot fail to have led to serious mischief. Indeed, in a certain influential daily newspaper the heading "Congress on Tuberculosis" has been ever since until quite recently the introduction to very disagreeable and aggravating reading, the far-reaching injurious effects of which upon a credulous and easily-gulled public it is impossible to estimate. We can afford as a profession to ignore the insults which have been heaped upon us in this correspondence, and surely we ought to treat with the utmost ridicule and contempt the insolent and impudent suggestions made with regard to "testing" and "scientifically investigating" any supposed "cure for consumption" that is not perfectly open and above-board. Still, for the sake of humanity we cannot be altogether silent, and personally I feel bound to take this opportunity of protesting strongly against any member of our profession countenancing in the slightest degree such a proposal. Of course, we cannot prevent any fussy and officious busybodies or so-called philanthropists from thrusting themselves to the front, giving dogmatic opinions about subjects of which they are absolutely ignorant and supporting any pretentious treatment they choose; but our plain duty is to leave them severely alone.

Personally I did not take any active part in the Congress on Tuberculosis, as on these occasions I prefer to be a humble disciple. This gathering is, however, somewhat directly responsible for the subject which I have selected for these lectures, for reasons with which I will not trouble you, but which may possibly be revealed in the course of my remarks. I trust that my long connexion with the Brompton Hospital for Consumption gives me a certain claim to be heard with respect to thoracic phthisis, at any rate in its more practical and clinical aspects. I do not for a moment pretend to bring before you anything original, novel, or startling, and can only hope to present facts or to offer suggestions in such a way as to be of some service to the profession in dealing with this still terrible scourge. I fear that I did not realise at starting what an extensive and difficult task I had set myself within the limited time at my disposal, and in the actual delivery of these lectures, at any rate, I must omit the discussion of many points in detail; while, with regard to others, I can confidently rely on the general information and knowledge of my audience. You may be glad to know that I have no intention of boring you with dull statistics or with lengthy descriptions of cases. Nor do I propose to quote many authorities, though from no want of respect for their labours or teaching

Before proceeding to the actual discussion of my subject I feel bound to offer a mild protest against the modern tendency to regard all questions relating to phthisis too exclusively from the scientific side, and to accept no doctrine or opinion as reliable or authoritative unless it emanates from the pathological or bacteriological laboratory. While expressing my profound admiration for, and appreciation of, the valuable work which has been, and is still being, done in these laboratories in relation to tuberculosis, I submit that this does not cover the whole field, and that phthisis, as it comes before us in actual life, must be dealt with and studied on a much broader basis and from other standpoints. My friend and colleague, Dr. G Vivian Poore, in a recent interesting address on "Milk and its Relation to Health and Disease," holds that the question of the relationship between bovine and human tuberculosis cannot be settled by laboratory experiments only, and that we must not set aside its practical, clinical, and epidemiological aspects. This statement of opinion, with which I cordially agree, applies with equal force to many other questions bearing upon tuberculosis and phthisis

The title which I have given to these lectures indicates the intention and scope of my subject. I have employed the expression "thoracic phthisis" advisedly, to emphasise what are, in my opinion, two most important practical facts—namely, first, that in the cases of chest disease usually and conveniently grouped as "consumption," the morbid changes are by no means limited to the lungs, but in the large majority of instances other thoracic structures are more or less affected as well, and the mischief may even originate in certain of these structures; and secondly, that, even assuming the disease to be essentially a manifestation of tuberculosis, other lesions and pathological changes may be associated with the tuberculous mischief from the first

3 *Those in which tubercle bacilli are inhaled in a room*, office, workshop, or other place where due care has not been taken with regard to phthisical expectoration, or where proper disinfection after occupation by phthisical patients has not been carried out. How far thoracic phthisis may arise independently and directly in this way must be a matter of speculation, but certainly this mode of infection ought never to be made light of or disregarded. As an illustrative case I may mention that of a young man who was brought to me suffering from pronounced consumption which was attributed to the fact that he had worked at a desk where a clerk had previously worked who died from rapid phthisis. He came from a sound stock, had enjoyed excellent health, had led an active and vigorous life, was quite satisfactory as regards habits in every way, and there appeared no reason whatever why he should have become phthisical, except from this direct infection.

I have seen it stated that no arrangements are made in post-offices in this country as regards expectoration, while in addition their want of ventilation and other sanitary defects are but too evident. Consequently phthisis from direct infection is highly probable under such circumstances, and the mortality from this disease amongst the employés in these offices is stated to be decidedly high, to say nothing of dangers to the public.

### *B.—Infection from Within—Auto-Infection.*

That thoracic phthisis may be secondary to a tuberculous lesion in some other part of the body is well known and acknowledged in a general kind of way, but my belief is that the actual facts bearing upon auto-infection are by no means adequately recognised or appreciated. It has appeared to me that in some instances of this kind tubercle bacilli are not the only infective agents, but that pyogenic organisms have also to be taken into account. *This auto-infection may* apparently be quite independent or accidental; but in other cases it is started or brought out by some more or less definite cause, it may be very slight or quite trivial, or by operative procedures for the cure or removal of tuberculous lesions or their effects. And here it may be noted that the question of infection by food may, from this aspect, have a practical though indirect bearing upon the development of thoracic phthisis, inasmuch as the primary mischief may [illegible] n originated. Direct local infection through [illegible] stem has also to be borne in mind. In other [illegible] mischief may not have been primarily tuber[illegible] has been the result of injury or of inflammatory [illegible] low or suppurative type, the tuberculous infection [illegible] ndary.

[illegible] to the sources of auto-infection in the causation of [illegible] phthisis, I should very much have liked if I could [illegible] cussed at some length this aspect of my subject. [illegible] e present occasion, however, I can only enumerate the [illegible] mary lesions which I *have found to be practically* worthy of consideration, excluding the possible manifestation of active thoracic tuberculosis as a development under favourable conditions of latent congenital *infection* by tubercle bacilli, through the medium of the blood-current or in other ways, which in my opinion is highly probable within certain limits. These lesions are:—1 Affections of the absorbent glands in the vicinity of the chest, especially in the neck and axilla, the thoracic disease being due either to direct extension or to infection through the lymphatic vessels 2 Diseases of bones or joints, often of traumatic origin, and the suppurative or ulcerative lesions associated therewith. In this connexion I must particularly mention disease of the lower jaw, sometimes following injury from tooth extraction, of which I have met with some very definite examples. More commonly, however, the mischief is quite remote. 3 Affections of the throat, tonsils, naso-pharynx, or nasal cavities. I feel that I am trenching here on difficult ground, but there can be *no doubt as to the presence, not uncommonly*, of tubercle bacilli, or organisms resembling them, in these parts, as well as of non-tuberculous lesions of a possibly infective character, and experience has taught me to be on my guard against them in relation to thoracic phthisis, especially if there are chronic so-called scrofulous conditions. 4. Ischio-rectal abscess and subsequent fistula in ano. I regard these conditions as most important foci of auto-infection in relation to thoracic phthisis, of which I have met with many conspicuous examples, and anything of this nature ought to be always regarded as a source of serious danger in individual cases, which calls for efficient operative treatment as a *preventive measure*. 5. Other more definite tuberculous lesions affecting structures outside the chest, especially abdominal. Thus thoracic phthisis may follow such disease of the intestines, not forgetting the appendix vermiformis; the peritoneum (no doubt in some cases by direct extension through the diaphragm); the lacteal glands; the urinary system; the prostate gland; the sexual or generative apparatus in males or females; and the suprarenal capsules. Tuberculous affections of the skin may also be noticed here. As regards the intestines, I have been much surprised at the statement of Koch and others that *primary implication of these structures is rare*, as I have met with several very definite cases of this nature. 6. Latent foci of infection within the chest. Cases originating from such foci may be fairly recognised as a definite group due to auto-infection. It is a well-known fact that the quiescent remains of a former limited phthisical lesion are often found post mortem, of which there is no history whatever, or it has only been suspected, or if detected has been arrested and cured. Again, there may be the remnants of a pleurisy, or the mediastinal glands may be infected with tubercle bacilli or be the seat of definite tubercle or its products, of which we know nothing. Under these circumstances some cause, it may be a very slight and inadequate one, such as a chill, starts an active process, which may end in very rapid and grave tuberculosis, involving different structures within the chest.

### *C.—Personal Inherent Predisposition.*

It requires some courage nowadays even to hint that consumption is not altogether a matter of organisms and infection, and especially that there is any inherent personal tendency to the complaint. I congratulate Sir Dyce Duckworth on the admirable address which he delivered before the Liverpool Medical Institution on Oct. 24th, 1901, on "The Personal Factor in Tuberculosis," in which he stuck up manfully for the "host," and on the discussion which it elicited. I desire to support him in a mild and humble sort of way, and to bring before you prominently what experience has taught me with regard to personal *intrinsic conditions as predisposing to thoracic phthisis*. It is not necessary to refer particularly to race, sex, or age, except to observe that thoracic phthisis may be met with in very young subjects, as well as in old people.

1. *Heredity.*—It must be well known to you all that for a considerable time the idea has been gaining ground that the old notion of the hereditary character of consumption was entirely wrong, and not a few in our profession support this idea in the most aggressive and dogmatic fashion, looking almost with contempt upon anyone who is in any degree of the contrary opinion. The late Sir Richard Thorne, shortly before his lamented death, in an address on "The Prevention of Consumption," which contained much valuable advice, if it could only be carried out, used very strong language on this point, urging his hearers not to "go on believing the lie that consumption ran in families." Koch, at the Congress on Tuberculosis, made this statement: "It has been demonstrated by thorough investigation that, though hereditary tuberculosis was not absolutely non-existent, it was, nevertheless, extremely rare, and we were at liberty in considering our practical measures to leave that form of origination entirely out of account." When an overwhelming authority speaks thus, *ex cathedrâ*, what can one say? And yet I venture to affirm that it is a most dangerous doctrine. Of course, the influence of heredity has been greatly exaggerated in times past, and a large proportion of cases attributed to this cause were merely the result of infection associated with family life. But I have seen too much of hereditary tuberculosis and phthisis under a variety of circumstances where the patients were not exposed to any possible infection beyond what falls to the common lot to allow myself to shut my eyes to the fact that it is an etiological factor which ought never to be disregarded or made light of, from different points of view. I do not mean to say that the occurrence of a single case of consumption in a family, or still more in some collateral relative, implies heredity, but the probability of the transmission of the complaint in this way is increased in proportion as it seems to run in a family, particularly through succeeding generations, or if the predisposition exists on both sides.

Now I do not wish to make too much of this question of heredity, and it is decidedly necessary to warn people, on the other hand, against supposing that, because they come bacilli cannot be detected in the expired air, but personally I do not feel altogether satisfied on this point; at any rate, it is well to err on the safe side. One most disagreeable, not to say disgusting, possible mode of infection by tubercle bacilli has been suggested—namely, the imperfect washing of glasses in public-houses and restaurants into which consumptive patients have coughed, the expectoration being thus left in the glass or clinging to its edge.

It would be an impertinence on my part if I were even to mention the measures which must be familiar to all, and which are now carried out on such an extensive scale, for dealing with the expectoration of phthisical patients on preventive lines. But there comes the serious question—How far are they successful? In institutions and amongst communities where they can be effectually practised of course incalculable good is being done in this direction, and it would to-day be a disgrace to any fairly educated and respectable individual, or to a household where phthisis existed, if the instructions at command for dealing with the sputum were not thoroughly attended to. But unfortunately there are many obvious reasons which must render our utmost efforts for exterminating the tubercle bacillus only partially successful At present things are certainly anything but satisfactory. In our open streets, even in those inhabited by the "upper classes," as well as by "fashionable physicians" and "specialists on consumption," to say nothing of the main highways of commerce or of side streets or "slums," one may still see at any time on the pavement or the roadway enough phthisical sputum to infect a whole district or city, having regard to the enormous number of organisms which it contains, and their distribution *is abundantly promoted and aided by the ordinary* methods of sweeping pavements and streets, the hoisting of all kinds of filth and débris into dust-carts, and various other performances, not forgetting the "trailing dresses," by which the air we breathe is polluted and poisoned. What the state of things is in the large majority of houses or rooms where phthisis exists it is not pleasant to contemplate; while often no effort whatever is made subsequently to get rid of the infectious elements, to disinfect rooms, or to deal with contaminated fomites. Then bacilli are also thrown at you in countless abundance by the shaking of mats and carpets in your very face. And, notwithstanding polite requests, stringent regulations, by-laws, and penalties, the filthy habit of spitting is *still* quite common in places of general resort and in public vehicles. Things are little or no better in the smaller towns and villages or hamlets

There are two other points which more immediately concern the medical profession and the nursing department to which I must allude in this connexion. I have a strong impression that much phthisical sputum, even in hospitals, is often only very imperfectly disinfected, and is then disposed of in a casual manner down a water-closet or in some other way. What happens afterwards depends upon circumstances, but it is not unreasonable to suppose that *infection may thus* be carried far and wide. Another point of importance is that other discharges besides expectoration, coming from tuberculous lesions, as well as tainted urine or fæces, contain tubercle bacilli, it may be in large numbers, and if neglected, as they often are, may become a prolific source of infection.

Now, the picture which I have drawn of the existing state of things, though there is, I hope, the promise of progressive improvement as education advances, is rather alarming, and seems *to indicate considerable* risk of infection in various directions to all members of the community who are obliged to go out into the world, and to take part in its active life or work, while thousands upon thousands, from the unavoidable conditions of their normal existence, are necessarily and inevitably exposed more or less constantly to the possible injurious effects of tubercle bacilli in a pronounced and concentrated form. And the danger is increased from the fact that these organisms possess such a remarkable tenacity of life and resisting powers, so that they can live for a long time after their discharge in all kinds of places, and may thus set up disease at a remote period The only natural agent that seems to *destroy them speedily* and efficiently is the powerful light of the sun, but, unfortunately, that does not help us much in this country as a rule. Undoubtedly, too, tubercle bacilli retain their virulence for an indefinite period in connexion with stained handkerchiefs, bed-clothes, under-garments or other articles of clothing, and various other materials which may act as fomites. In one part of the correspondence in the lay press elicited by the British Congress on *Tuberculosis*, to which I have before referred, an attempt was made to fix grave suspicion as a possible source of phthisical infection upon a material much used for the external protection and decoration of humanity named "Harris tweed." I know nothing about the matter personally, but I believe that the defenders of the "tweed" came off victorious, so that any of us who have been accustomed to wear it under any circumstances may "breathe again." The stuffing of dolls was also vigorously attacked from this point of view, but I think this is rather a "straining at gnats." I have not dealt with the question of tuberculous infection by milk or other kinds of food, as it does not apply directly to thoracic phthisis, and is still unsettled and *sub judice*.

While thus placing the contagious aspect of thoracic phthisis in the forefront, things are not nearly so formidable from this point of view as they appear to be at first sight, and it cannot be too strongly insisted upon that it depends in very large measure upon individuals and communities how far the disease shall prevail, and what ravages it shall make The fact must never be ignored or made light of that there are numerous causes and conditions, call them "predisposing," "favouring infection," or what you will, which hold an important, it may be an essential, relation to the complaint, as etiological factors under various circumstances, and many of which are to a great extent under our control.

I now submit in tabular form a comprehensive arrangement or classification of cases of thoracic phthisis, from a pathological and etiological point of view, which may afford a convenient basis for further discussion.

TABLE I.—*Etiological Classification of Thoracic Phthisis.*

A.—Definite infection from without.
B.—Infection from within—Auto-infection.
C.—Personal inherent predisposition.
D.—Causes acting on general system—Acquired personal predisposition.
E.—External conditions and environment.
F.—Special causes
G.—*Local causes, acting more or less directly on respiratory apparatus.*
H.—Local predisposing morbid conditions.
I.—General or remote predisposing diseases.

I propose to discuss briefly each of the etiological groups mentioned in the foregoing table.

### *A.—Definite Infection from Without.*

The cases which I would place in this group are those in which thoracic phthisis can be distinctly traced to some definite source of infection, there being no personal predisposition or other cause at all noteworthy or evident, and the patient having been previously in sound health. Of these directly infective cases I have met with some striking instances, and they belong to one or other of the following categories.

1. Those originated in the post-mortem room or in the pathological or bacteriological laboratory. Apart from accidental inoculation, I believe that phthisis may possibly arise from inhalation of tubercle bacilli in the course of experimental *investigations or researches*, and I feel sure that it is well to exercise due care when carrying out such investigations in connexion with tuberculous lesions or their organisms.

2. Those in which the infective agent passes directly from individual to individual. Some authorities would place a large proportion of cases in this division, especially as they occur in conjugal and family life. Of course, under such circumstances there would always appear, *à priori*, to be more or less danger of this mode of transmission, but there are generally other factors to be taken into account. My own opinion is that an exaggerated idea of this uncomplicated direct infection is often entertained, and this opinion is supported by the oft-quoted experience of the Brompton Hospital, in relation to the medical staff, residents, and nurses Still, I have met with some very remarkable instances in which it has taken place. It can then be as a rule readily explained by prolonged, intimate, and more or less constant companionship in a small and close room; personal devotion in nursing; and, not uncommonly, frequent kissing Thus phthisis may be conveyed, not only from one member of the family to another, but *from a patient to an individual in no* way related Of this I had a striking example in the case of a young man who was engaged *to* be married, but his intended bride developed consumption. He was in her company a great deal during her illness, and was a "devoted lover" until her death Soon after he was brought to me suffering from rapid and extensive pulmonary tuberculosis.

3. Those in which tubercle bacilli are inhaled in a room, office, workshop, or other place where due care has not been taken with regard to phthisical expectoration, or where proper disinfection after occupation by phthisical patients has not been carried out. How far thoracic phthisis may arise independently and directly in this way must be a matter of speculation, but certainly this mode of infection ought never to be made light of or disregarded. As an illustrative case I may mention that of a young man who was brought to me suffering from pronounced consumption which was attributed to the fact that he had worked at a desk where a clerk had previously worked who died from rapid phthisis. He came from a sound stock, had enjoyed excellent health, had led an active and vigorous life, was quite satisfactory as regards habits in every way, and there appeared no reason whatever why he should have become phthisical, except from this direct infection.

I have seen it stated that no arrangements are made in post-offices in this country as regards expectoration, while in addition their want of ventilation and other sanitary defects are but too evident. Consequently phthisis from direct infection is highly probable under such circumstances, and the mortality from this disease amongst the employés in these offices is stated to be decidedly high, to say nothing of dangers to the public.

### *B.—Infection from Within—Auto-Infection.*

That thoracic phthisis may be secondary to a tuberculous lesion in some other part of the body is well known and acknowledged in a general kind of way, but my belief is that the actual facts bearing upon auto-infection are by no means adequately recognised or appreciated. It has appeared to me that in some instances of this kind tubercle bacilli are not the only infective agents, but that pyogenic organisms have also to be taken into account. This auto-infection may apparently be quite independent or accidental; but in other cases it is started or brought out by some more or less definite cause, it may be very slight or quite trivial, or by operative procedures for the cure or removal of tuberculous lesions or their effects. And here it may be noted that the question of infection by food may, from this aspect, have a practical though indirect bearing upon the development of thoracic phthisis, inasmuch as the primary mischief may have thus been originated. Direct local infection through the genital system has also to be borne in mind. In other cases such mischief may not have been primarily tuberculous, but has been the result of injury or of inflammatory changes of low or suppurative type, the tuberculous infection being secondary.

Coming to the sources of auto-infection in the causation of thoracic phthisis, I should very much have liked if I could have discussed at some length this aspect of my subject. On the present occasion, however, I can only enumerate the primary lesions which I have found to be practically worthy of consideration, excluding the possible manifestation of active thoracic tuberculosis as a development under favourable conditions of latent congenital infection by tubercle bacilli, through the medium of the blood-current or in other ways, which in my opinion is highly probable within certain limits. These lesions are:—1. Affections of the absorbent glands in the vicinity of the chest, especially in the neck and axilla, the thoracic disease being due either to direct extension or to infection through the lymphatic vessels. 2. Diseases of bones or joints, often of traumatic origin, and the suppurative or ulcerative lesions associated therewith. In this connexion I must particularly mention disease of the lower jaw, sometimes following injury from tooth extraction, of which I have met with some very definite examples. More commonly, however, the mischief is quite remote. 3. Affections of the throat, tonsils, naso-pharynx, or nasal cavities. I feel that I am trenching here on difficult ground, but there can be no doubt as to the presence, not uncommonly, of tubercle bacilli, or organisms resembling them, in these parts, as well as of non-tuberculous lesions of a possibly infective character, and experience has taught me to be on my guard against them in relation to thoracic phthisis, especially if there are chronic so-called scrofulous conditions. 4. Ischio-rectal abscess and subsequent fistula in ano. I regard these conditions as most important foci of auto-infection in relation to thoracic phthisis, of which I have met with many conspicuous examples, and anything of this nature ought to be always regarded as a source of serious danger in individual cases, which calls for efficient operative treatment as a preventive measure. 5. Other more definite tuberculous lesions affecting structures outside the chest, especially abdominal. Thus thoracic phthisis may follow such disease of the intestines, not forgetting the appendix vermiformis; the peritoneum (no doubt in some cases by direct extension through the diaphragm); the lacteal glands; the urinary system; the prostate gland; the sexual or generative apparatus in males or females; and the suprarenal capsules. Tuberculous affections of the skin may also be noticed here. As regards the intestines, I have been much surprised at the statement of Koch and others that primary implication of these structures is rare, as I have met with several very definite cases of this nature. 6. Latent foci of infection within the chest. Cases originating from such foci may be fairly recognised as a definite group due to auto-infection. It is a well-known fact that the quiescent remains of a former limited phthisical lesion are often found post mortem, of which there is no history whatever, or it has only been suspected, or if detected has been arrested and cured. Again, there may be the remnants of a pleurisy, or the mediastinal glands may be infected with tubercle bacilli or be the seat of definite tubercle or its products, of which we know nothing. Under these circumstances some cause, it may be a very slight and inadequate one, such as a chill, starts an active process, which may end in very rapid and grave tuberculosis, involving different structures within the chest.

### *C.—Personal Inherent Predisposition.*

It requires some courage nowadays even to hint that consumption is not altogether a matter of organisms and infection, and especially that there is any inherent personal tendency to the complaint. I congratulate Sir Dyce Duckworth on the admirable address which he delivered before the Liverpool Medical Institution on Oct. 24th, 1901, on "The Personal Factor in Tuberculosis," in which he stuck up manfully for the "host," and on the discussion which it elicited. I desire to support him in a mild and humble sort of way, and to bring before you prominently what experience has taught me with regard to personal intrinsic conditions as predisposing to thoracic phthisis. It is not necessary to refer particularly to race, sex, or age, except to observe that thoracic phthisis may be met with in very young subjects, as well as in old people.

1. *Heredity.*—It must be well known to you all that for a considerable time the idea has been gaining ground that the old notion of the hereditary character of consumption was entirely wrong, and not a few in our profession support this idea in the most aggressive and dogmatic fashion, looking almost with contempt upon anyone who is in any degree of the contrary opinion. The late Sir Richard Thorne, shortly before his lamented death, in an address on "The Prevention of Consumption," which contained much valuable advice, if it could only be carried out, used very strong language on this point, urging his hearers not to "go on believing the lie that consumption ran in families." Koch, at the Congress on Tuberculosis, made this statement: "It has been demonstrated by thorough investigation that, though hereditary tuberculosis was not absolutely non-existent, it was, nevertheless, extremely rare, and we were at liberty in considering our practical measures to leave that form of origination entirely out of account." When an overwhelming authority speaks thus, *ex cathedrâ*, what can one say? And yet I venture to affirm that it is a most dangerous doctrine. Of course, the influence of heredity has been greatly exaggerated in times past, and a large proportion of cases attributed to this cause were merely the result of infection associated with family life. But I have seen too much of hereditary tuberculosis and phthisis under a variety of circumstances where the patients were not exposed to any possible infection beyond what falls to the common lot to allow myself to shut my eyes to the fact that it is an etiological factor which ought never to be disregarded or made light of, from different points of view. I do not mean to say that the occurrence of a single case of consumption in a family, or still more in some collateral relative, implies heredity, but the probability of the transmission of the complaint in this way is increased in proportion as it seems to run in a family, particularly through succeeding generations, or if the predisposition exists on both sides.

Now I do not wish to make too much of this question of heredity, and it is decidedly necessary to warn people, on the other hand, against supposing that, because they come from a sound stock they are therefore in little or no danger of becoming phthisical, and can take any liberties they please with their health It is a well known fact that a considerable proportion of individuals who suffer from consumption have no hereditary tendency to the complaint whatever, so far as can be ascertained, though I have reason to know that statistics and statements on this point cannot be implicitly relied upon

There are several interesting practical questions relating to the hereditary aspect of phthisis but I cannot discuss them on the present occasion, and I will only mention the fact that often there is nothing in the general appearance, physiognomy, or conformation of the individual, or any obvious structural or other peculiarities, which indicate such predisposition Indeed, what has struck me is the number of instances in which before the development of the complaint the patient has been healthy in all respects, well nourished, or even strong and robust, while he may have been active, perhaps too active in games, athletics, sports and the like, and yet without any special exposure to infection he becomes consumptive It may also be noted on the other hand, that young subjects with a strong hereditary taint, and obviously delicate, may, by proper management develop into healthy individuals, and never have any tuberculous mischief

2 *Diathesis and temperament* —I take it for granted that you are all familiar with the characters which have been attributed to the "tubercular' and 'scrofulous or strumous" diathesis respectively, and to which at one time, considerable importance was attached In my experience it certainly has not been common to find persons not actually suffering from tuberculosis in some form who correspond in any marked degree with the classical description of the tuberculous diathesis, but, still, it is sometimes observed in a pronounced form

The scrofulous diathesis is much more frequently met with, but Sir Dyce Duckworth, in the address to which I have already referred strenuously opposed the modern doctrine that "scrofula is tuberculosis," and maintained that it was possible to be scrofulous throughout life without becoming tuberculous I am inclined to agree with him, but on the other hand, those persons whom we are accustomed to describe as "strumous or 'scrofulous' are certainly predisposed in a marked degree to tuberculosis and to thoracic phthisis for reasons which can be easily explained In my experience temperament has not appeared to have much if any, influence in relation to the disease, nor have I been able to associate with it any particular facial physiognomy

3 *Bodily conformation and general condition* —The majority of persons who become phthisical are of a very ordinary type and many are in every way quite up to the average standard as regards conformation and general condition Not a few, indeed are models of health and it is an important practical point that no individual is safe however robust he may be, and however free from any hereditary taint At the same time the predisposition to the disease is decidedly increased in subjects who are naturally "delicate of slender build and feeble constitution with signs of textural frailty quite apart from heredity, and one always feels anxious about young persons who are pale thin, and anæmic and especially if they grow rapidly to an unusual height without corresponding development of the bodily frame My experience is quite in accord with that of Dr James E Pollock as to the comparative infrequency of phthisis among chlorotic females though of course it is dangerous to assume such immunity in any individual case

### *D —Causes Acting on the General System—Acquired, Personal Predisposition*

Now we come to one of the most formidable and often sad aspects of the etiology of thoracic phthisis and that is to consider the causes or conditions more immediately associated with the individual and his mode of life which are such potent factors in producing what may be termed an "acquired predisposition' They not only lower or depress the system generally but render the local structures much less able to resist the pathogenic action of the invading organisms The causes are but too well known and they make one almost despair of producing any marked or lasting effect upon the prevalence of consumption There are certain special factors belonging to this category which have however, a wider influence and to these more particular reference will be made later Although they are quite familiar it may be well to mention prominently, without entering into any details the general nature of the causes which come under this head and they may be grouped as follows —

1 Insanitary conditions and surroundings, as regards overcrowding habitual want of ventilation entire absence of sunlight close confinement in a used up or even foul atmosphere want of cleanliness both personal and domestic, and in short often an entire neglect of all recognised sanitary or hygienic regulations which affect the general health This is further frequently associated with cold, damp insufficient clothing and other distressing accompaniments of poverty

2 Deficiency of proper nutriment either as regards quantity or quality of food, or both, from an inability to obtain it—in a word from various degrees of starvation—especially in young and growing subjects or because the individual is unable or unwilling to take sufficient or suitable diet, or from neglect of proper meals Phthisis may supervene in cases of so called "anorexia nervosa", and I have certainly known the disease to be promoted by religious fasting The want of good milk is in my opinion, notwithstanding the dread of infection a powerful cause of the tendency to tuberculosis in children

3 Intemperance, and various other injurious habits, as well as faulty modes of living Among these may be mentioned want of exercise or of any active out door life, or on the other hand, frequent excessive exertion and fatigue, late hours, with their almost inevitable accompaniments which are such a common feature in modern social life, sexual excesses or masturbation, and in not a few instances an utter disregard of all "rules of health," culminating in what I may term "general debauchery," the effects of which in helping to develop thoracic phthisis are but too manifest Alcohol will be separately considered.

4 Occupation, which is another of the causes to be referred to separately

5 Conditions which occasion a frequent or more or less constant drain upon the system often accompanied with want of adequate or proper nourishment, and other factors detrimental to health, especially rapid child bearing and prolonged lactation and probably menorrhagia in some cases A chronic non tuberculous diarrhœa may be followed by phthisis

6 Mental depressing causes of various kinds I feel sure that causes coming under this category do not always receive the attention they deserve as factors predisposing to tuberculosis Undoubtedly excessive mental work or study may have more or less influence, especially when associated with other causes Other depressing factors associated with the nervous system are prolonged worry or anxiety, profound and lasting grief pronounced and persistent lowness of spirits or melancholia the shock and depression or other effects produced by sudden and unexpected loss of fortune or other social reverse and now and then disappointed affection or ambition The frequent occurrence of phthisis amongst those mentally affected is well known but here various causes are usually at work.

### *F —External Conditions and Environment*

Under this head come the questions relating to climate, season temperature meteorological changes, soil, altitude, locality residence and its surroundings and allied conditions as predisposing to thoracic phthisis That these factors have considerable and widespread influence cannot be doubted and it is well to recognise them to the fullest extent though of course being prepared to meet with the disease under all possible circumstances even in the higher altitude which ought to be exempt This aspect of the subject is well understood and it is adequately dealt with in text-books and special works on consumption though I have noted in some quarters a tendency to throw doubt upon certain views commonly entertained In this country we are all but too familiar with the meteorological conditions and changes and other factors which depress the general system and at the same time tend to damage our respiratory structures We have one advantage over some of the warmer and drier climates in that the tubercle bacilli in sputum have as a rule not such a chance of drying rapidly and becoming diffused through the atmosphere and to a certain extent therefore we may be in less danger of infection, though on the other hand we have during the greatest part of the year no powerful sunshine to destroy them The question of soil is an important one not only in its more or less wide scope but also in relation to particular residences

The late Sir Richard Thorne, in the address to which I have before referred, affirmed in regard to the prevention of phthisis that nothing would do good unless people refused to live on a damp sub-soil. The beneficial effects of efficient drainage as a preventive measure have been demonstrated in several instances and are always worthy of attention, though they have not proved so permanently useful in some localities as was anticipated at first.

### *F.—Special Causes.*

There are three factors which stand out so prominently in their etiological relation to thoracic phthisis, while often acting more or less together, and which are so much under our control, that they demand special notice—namely, *air*, *alcohol*, and *occupation*. An entire lecture might easily be devoted to these factors, but I can only refer to them very briefly.

*Air.*—The injurious effects upon the respiratory organs which the air we breathe is capable of producing are obvious enough, and, theoretically at least, they appear at the present day to be widely, if not almost universally, recognised and appreciated. Indeed, fresh air and plenty of it is now the popular cry everywhere. and the "open-air" treatment holds the field, and. as one authority says, "has come to stay." The idea is by no means new or of modern growth, as many seem to imagine, for writers have insisted upon it long ago. Amongst others the late Dr. MacCormac of Belfast, the illustrious father of an illustrious son, strenuously insisted upon the dangers of "re-breathed" air in relation to consumption. The New Sydenham Society has recently republished a remarkable essay on "The Treatment and Cure of Pulmonary Consumption" by Dr. George Bodington, a general practitioner at Sutton Coldfield, who died on Feb. 5th, 1882, in his eighty-third year. This essay was first published in 1840. Dr. Bodington certainly appears to have been the originator of the modern "open-air treatment" in its main essentials, and he particularly advocated the advantages of pure, dry, "frosty" air. He earnestly protested against keeping consumptives closely and carefully confined, as was then the practice, as "forcing them to breathe over and over again the same foul air contaminated with diseased effluvia of their own persons."

The ways in which the inspired air may be injurious are various, such as by conveying infection, lowering the general tone and resisting power of the individual, irritating the respiratory passages, and so on, but I cannot enter into details on this point. But coming to the practical aspect of the matter, what is the actual state of things even now with regard to the air we are obliged to breathe under various circumstances? Well, I think it is about as bad as it can be, not only in our large cities and towns but everywhere To say nothing of the conditions under which the working classes, and especially the poorer members of the community, are compelled to live and work, the idea of the necessity of fresh air and good ventilation is by no means carried out in practice in the homes of the so-called "middle" and "upper" classes in anything like the degree in which it ought to be, and I really think that medical men are sometimes the worst offenders in this respect. Then go into almost any shop or office, and you can seldom fail to be oppressed with the feeling of "stuffiness" and "used-up air." I have already alluded to post-offices, and amongst other really dangerous places may be mentioned courts of justice, where recently some of our judges have been seriously affected by the vitiated air; places of public entertainment, in some of which things are made far worse by the modern practice of permitting smoking, the atmosphere being often thus rendered absolutely irrespirable; churches and chapels; restaurants or dining-saloons; and railway-carriages or other public vehicles When you are half stifled with the foul atmosphere, try to open a window, and you will soon find what people think of fresh air and ventilation. But bad as things are in this country my experience is that they are far worse on the continent, where everybody is supposed to be so advanced in all kinds of scientific knowledge and practice, and where the "open-air" treatment is so flourishing In short, while there is so much talk about the imperative necessity of proper ventilation, fresh air, open air, and the like, as a matter of fact the large majority of people are still living more or less constantly in an impure or foul atmosphere, often from choice, which cannot but have a widespread and powerful influence in the production and propagation of thoracic phthisis.

*Alcohol.*—The evil effects of intemperance in the use of alcohol in relation to thoracic phthisis are appalling and incalculable. Not only does this factor act as a powerful predisposing cause in starting the disease in different ways, but it is often continued during its progress, thus helping seriously to promote its activity and to hasten its course. In his address at the Congress on Tuberculosis on "The Prevention of Consumption," Brouardel said that "alcoholism is the most potent factor in propagating tuberculosis," and "any measures, state or individual, tending to limit the ravages of alcoholism, will be our most precious auxiliaries in the crusade against tuberculosis." Dr. J. F. W. Tatham has shown by his statistics the connexion between occupation as affording temptations or opportunities for indulgence in drink, and the mortality from phthisis. Indeed, its effects are but too evident on all hands, and create a feeling almost of despair.

*Occupation.*—This etiological factor also accounts for an enormous number of cases of thoracic phthisis, directly or indirectly, and it acts as a rule in more ways than one. Indoor occupations often expose individuals to almost every possible anti-hygienic condition that can be imagined, including the habitual inhalation of a close, used-up, or foul atmosphere for long hours, and frequently accompanied with bad living. Then the dangers of infection are commonly very considerable, even when precautions are taken, which, however, are still much neglected. On the whole, outdoor occupations are much more favourable, except in so far as they entail exposure to cold and wet, to marked changes of temperature, or to the vicissitudes of weather, which tend to affect the respiratory organs. No doubt, however, individuals can efficiently harden themselves in a rational way against such causes. Other injurious aspects of occupation are that it frequently involves the direct inhalation of irritant particles; hard physical work, or working in certain postures, which tends to damage the thoracic structures; mental strain or anxiety, or worry; or the dangers of alcoholism already referred to.

### *G.—Local Causes.*

The injurious effects of different causes connected more immediately with the chest or respiratory organs, as factors in the development of thoracic phthisis, do not, judging by my own observation, as a rule receive the consideration which they deserve, and I desire to draw special attention to the following points.

1. Although a large proportion of phthisical patients start with a chest quite up to the average in conformation and capacity, still it is obvious that the more contracted and ill-developed this region is, the worse must it be for the lungs, and the more likely are they to become damaged. The different forms of so-called "phthinoid" chest are well known. I cannot doubt for a moment, further, that habitual imperfect use of these organs, or compression of the thorax by belts, tight-lacing, unyielding corsets, and the like, are more or less conducive to phthisis. It may also be associated with various chest-deformities, especially when these are pronounced, though certainly it is remarkable how often persons who present even extreme deformities of this region escape. On the other hand, I have met with a considerable number of cases, particularly among soldiers, where over-training and undue distension of the chest and lungs in subjects unfitted for such development has appeared to me to be a predisposing factor in relation to consumption.

2. Traumatic causes may certainly lead, directly or indirectly, to the development of thoracic phthisis. The lodgment of a foreign body in a bronchus or lung, which cannot be removed by operation, accounts for one very definite class of cases. Blows on the chest, without any obvious injury to the solid framework, and with or without hæmoptysis, may also start the trouble, or render it active in chronic and quiescent cases. A patient of mine, an amateur boxer, who suffered from very chronic phthisis, was struck over the seat of disease in a friendly encounter, which caused profuse hæmoptysis, and from that moment he went rapidly down hill. Traumatic lesions of the thoracic walls, of a more definite and serious nature, such as fractures or gun-shot wounds, may also be followed by consumption. I have seen a remarkable case from time to time during recent years, in which the chest was run over, and whatever actual damage was done at the time, the condition is now one of very definite phthisis affecting the upper part of both lungs.

3. The effects of local irritants, of various kinds and degrees, which are inhaled and thus come into direct contact

with the air-passages or pulmonary structures, are obviously of much moment in relation to the etiology of phthisis. Though some people seem to think that these organs can resist anything except the tubercle bacillus, we cannot ignore the directly injurious effects of very cold or cold and damp air, as well as of an impure atmosphere or one laden with dust, soot, fog, smoke, or what not, with which we are all but too familiar. Dare I venture to hint that even excessive tobacco-smoking is not free from danger from this aspect? The most pronounced and definite causes coming under this category, however, are the easily recognised irritants, either of a chemical nature, or in the form of minute solid particles, the latter being chiefly inhaled in connexion with different occupations, giving rise to the various forms of *pneumoconiosis* or so-called "mechanical phthisis." I have known some very definite cases of thoracic phthisis to originate from inhaling irritant gases in chemical laboratories. The interesting and important fact may be noted here that typical tubercles can be produced even in man by mechanical particles.

4. Another factor which I feel sure is not uncommonly important in relation to the etiology of phthisis, but which is much disregarded, is the act of coughing, especially when severe and persistent, which I believe has a damaging effect upon the apices of the lungs, as well as being injurious in other ways. Such cough is frequently quite independent of pulmonary trouble, being more particularly associated with the throat and main air-passage. In relation to the throat an elongated uvula has to be specially borne in mind, and I have met with very definite cases of irrepressible cough due to this cause, in which well-marked physical signs appeared at one or both apices, but these cleared up completely after removal of the uvula and consequent cessation of the cough. While referring to the throat, it may be also noted that great enlargement of the tonsils as well as adenoids may cause further trouble by obstructing the breathing, thus interfering with the proper use of the lungs and the development of the chest. With regard to the larynx and trachea, apart from actual tuberculous disease, chronic or recurring affections of these parts may certainly promote the development of thoracic phthisis, and even huskiness or hoarseness, and still more cough originating here, should never be neglected. From this point of view, excessive use or straining of the voice, in preaching, public speaking, teaching in schools, singing, or shouting in the streets, as in the case of costermongers, hawkers, cheap-jacks, &c., may indirectly predispose to phthisis.

5. The relation of pulmonary hæmorrhage to thoracic phthisis as an etiological factor cannot, in my opinion, be questioned for a moment, and I fail to see why there should be any difficulty in acknowledging it. We meet with cases of blood-spitting, even in considerable amount, the source of which cannot be located, and in which complete recovery follows with no after ill-effects. When, however, hæmorrhage takes place from some part of a lung, or blood finds its way there from the air-passages, it is very liable to originate further trouble, forming a suitable medium for the growth and multiplication of tubercle bacilli. It is generally assumed that such hæmorrhage always implies previous tuberculous mischief but this is by no means proved. I have met with cases where hæmoptysis resulted from a definite and powerful strain, in connexion with running, swimming, cycling, and different kinds of athletics, or from a blow on the chest, in persons apparently perfectly healthy, and this was followed by acute phthisis, with rapid formation of cavities, or a progressive but slower type of the disease. But even where there has been previous trouble in the lung, which is often evident enough, the occurrence of considerable or continuous hæmoptysis often seems to give it a fresh start, and to make it advance with increasing severity and rapidity.

### *H.—Local Predisposing Morbid Conditions.*

It cannot be too strongly insisted upon that thoracic phthisis is by no means always a primary and independent disease, but is in a fair proportion of cases added to or grafted upon, so to speak, some preceding definite morbid condition within the chest. This fact does not in any way invalidate the tuberculosis theory, or call in question the influence of tubercle bacilli. Indeed, it is generally believed that these organisms cannot do harm unless there has been some lesion which enables them to gain a footing, be it only a slight erosion of the mucous surface or removal of the ciliated epithelium from any cause. The more obvious conditions which from this point of view may help in the development of phthisis may be thus indicated:—

1. Persistent or repeated catarrh of the throat, main air-passages, or larger bronchi.

2. Pronounced chronic bronchitis, usually associated with more or less emphysema. The danger of the supervention of tuberculosis in cases of this kind should always be borne in mind; and I emphatically affirm, from much personal observation, that phthisis is not uncommon in cases of extensive or even extreme emphysema. It may also follow bronchiectasis. Not a few "asthmatic" cases become phthisical sooner or later.

3. Pneumonia of different kinds. The general view is that any case of pneumonia which, either speedily or gradually, turns out to be phthisical, is really tuberculous from the outset. While, no doubt, this is true as a rule, I can see no reason why a pneumonic condition not originally tuberculous may not become infected, especially if the morbid products remain long unabsorbed. In certain cases of so-called "fibroid phthisis" there is unquestionably no tubercle at first, though this may develop subsequently.

4. Pleuritic conditions. The relation of pleurisy to thoracic phthisis is a very important and interesting problem, to which I shall again have to refer in another connexion. I do not at all agree with the opinion now very widely entertained that the large majority, or as some think, practically all cases, of pleurisy with effusion are essentially tuberculous. That phthisis often develops in course of time in such cases is another matter, though the statistics on this point differ considerably. I have followed a large number of cases for many years where there have been no after-effects of this kind and the patients still enjoy excellent health. My explanation of the frequent occurrence of phthisis after pleurisy, sooner or later, is that no proper care has been taken to prevent the formation of firm and thick adhesions or to expand the lung properly, and in this view I believe that I am supported by Koch. Similar adhesions form occasionally after dry pleurisy, and they are also often left after pneumonia. Of course, if unabsorbed morbid products remain in the pleural cavity the danger is still greater. Remarkable extensive adhesions sometimes form very slowly and insidiously, even on both sides, and I have known phthisis to develop in such cases. However we look upon this question, there can be no doubt as to the practical relation of pleurisy and its effects to thoracic phthisis as etiological or pathological factors of considerable importance, favouring the action of tubercle bacilli or other organisms.

There is another class of cases to which I must allude here, for I feel sure that the condition does not uncommonly lay the foundation for apical phthisis, but is seldom recognised—namely, those in which there is a firm adhesion at the apex of the lung, binding it down, usually on the right side, due to hard manual work or other causes producing local irritation. I have a strong impression that many of the cases of "cured" phthisis at an apex are of this nature originally, the condition favouring the invasion of organisms.

Phthisis may follow non-tuberculous empyema, especially if it bursts into the lung or is not efficiently treated by operation. This mode of origin of the complaint is, however, comparatively exceptional in proportion to the number of cases of empyema which are met with in practice.

5. Pressure upon or other obstruction of the trachea or of a main bronchus. The pulmonary changes which are likely to follow difficulties of this nature may certainly lay the foundation for phthisis and are very favourable to infection. In this way the complaint may complicate aneurysm, mediastinal tumour, enlargement of the bronchial glands, not necessarily tuberculous, syphilitic changes involving the air-passages, and other conditions. Aneurysm has also been supposed to help in the development of phthisis by reducing the activity of the pulmonary circulation.

6. Miscellaneous conditions. Under this head it will suffice to note that thoracic phthisis, of a tuberculous nature, may supervene upon syphilitic lesions in the lung, pulmonary abscess or growth, abscess opening into the lung from the abdomen, hydatids, congenital disease of the pulmonary artery, and possibly actinomycosis.

### *I.—General or Remote Predisposing Diseases.*

An important group of cases of thoracic phthisis is that in which the complaint is set up in connexion with certain acute diseases, usually as a sequel; or which supervene in the course of chronic general morbid conditions or particular complaints, having nothing whatever to do directly with tuberculosis or with the chest. Its well-known relation to measles, whooping-cough, and influenza is readily explained; and it also occasionally follows enteric fever or other acute specific diseases. I feel sure that the constitutional condition produced by congenital syphilis sometimes predisposes to thoracic phthisis, of a pronounced tuberculous type. Amongst other diseases with which it may be associated as a secondary event it will suffice to mention diabetes, prolonged indigestion or definite affections of the alimentary canal interfering with the consumption or assimilation of food, gastric ulcer, hepatic cirrhosis, chronic Bright's disease, arterio-sclerosis, chronic cardiac disease, and various nervous diseases, especially the different forms of sclerosis of the nerve centres.

On the other hand, certain conditions are believed to be antagonistic to tuberculosis, but to these time forbids me to refer, except to say that I by no means agree with all that is stated on this point. Sir Dyce Duckworth is strongly of opinion that persons of gouty predisposition are largely immunised against tuberculosis; and that when this lesion occurs in the gouty its course is much modified, as it makes but little progress as a rule, tends to obsolescence, and fibrotic changes are prominent. I believe that there is a sound foundation for these statements.

*Combination of causes.*—I have endeavoured in the preceding discussion to indicate in a practical manner what I believe to be the important individual factors in originating and promoting the development of thoracic phthisis. In the large majority of cases, however, these are combined in various ways, and unfortunately we often have to deal with numerous and diverse causes, acting in concert. Hence it is easy to understand why the complaint is so much more prevalent in large cities and towns, especially in their more crowded and poorer districts; in localities where there are numerous and extensive manufactories of different kinds; and among communities gathered together in large numbers in various institutions, which I need not enumerate. Phthisis is, however, but too prevalent in the smaller towns and villages, as well as in country districts, where tiological conditions are much less complicated. ver. it is *not uncommon* even in houses and homes may be quite isolated, and to all appearance under favourable circumstances from a sanitary point of view. course, climate and season have often considerable luence in such cases; but we have also to bear in mind rticularly the dangers of preventable infection, hereditary endency, and acquired predisposition, which is unfortunately ut too frequently due to habits.

As a rule, it is not possible to refer the onset of thoracic phthisis to any distinct and recognisable *exciting cause.* Reference has been made to certain modes of origin of the disease which might come under this category, such as when it follows an acute illness, or results from injury or accidental hæmorrhage. I would here, however, warn against the modern tendency to ignore altogether the old-fashioned ideas as to the danger, from the aspect of exciting causes, of getting wet through and remaining in wet clothes; chill of any kind, but especially when perspiring, even in the summer; exposure to cold and damp air, or to certain winds; inclement seasons; defective clothing, and the like. These may set up an acute affection of some part of the respiratory apparatus, which, if not phthisical from the first, becomes so later. Nor is it safe to make light of even a "slight cold," which, if neglected, may undoubtedly lay the foundation for this complaint.

The preventive treatment of thoracic phthisis can only be rationally founded on a full and comprehensive knowledge and appreciation of its pathology and etiology in all its details. The tendency nowadays is unquestionably to take a narrow, incomplete, often entirely one-sided view of this aspect of the subject, and to lose sight of many important causes or conditions which ought never to be forgotten or overlooked. Unfortunately, when we come face to face with the problems we have to grapple with, our difficulties begin, and I must honestly say that, humanity and the inevitable conditions of life and of so-called civilisation being what they are, I cannot share in the extraordinarily hopeful views now so widely entertained and so freely expressed as to the final eradication and extermination of this "terrible scourge." Still, we can do a great deal as a profession, if we work on intelligent and practical lines. Obviously the prevention of infection is of first importance, and in relation to this question I will only say on the present occasion that I should like to see far more stringent measures taken with regard to the disgusting habit of spitting in public places; that I consider it much safer to destroy by fire all phthisical sputum, when this is practicable, rather than merely to disinfect it; and that I am strongly in favour of voluntary notification of cases of phthisis.

# NOTES ON THE TREATMENT OF FURUNCULOSIS, SYCOSIS, AND ACNE BY THE INOCULATION OF A STAPHYLOCOCCUS VACCINE,

## AND GENERALLY ON THE TREATMENT OF LOCALISED BACTERIAL INVASIONS BY THERAPEUTIC INOCULATIONS OF THE CORRESPONDING BACTERIAL VACCINES.

BY A. E. WRIGHT, M.D. DUB.,
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THE circumstance that inoculation against pyogenic bacteria has not, up to the present, been resorted to would seem to be due to the fact that our range of thought is in this, as in every other direction, limited by pre-suppositions. The following are among the pre-suppositions which are current in connexion with inoculation. 1. Since methods of inoculation find their special sphere of application in connexion with septicæmic diseases there would be little prospect of a useful application of such methods in connexion with any local invasion of the tissues by pyogenic bacteria. 2. Since pyogenic micro-organisms can always be held off from operation wounds by a rigid observance of aseptic precautions there would be no prospect of a useful application of inoculations such as we have here in view in connexion with operative procedures. 3. Since bacterial invasions of the skin and mucous membranes can be dealt with by the application of chemical antiseptics a resort to inoculations directed against the invading bacteria would here also be out of place. 4. Inoculations with vaccines can be of avail only when they forestall infection. 5. Where a vaccine containing toxic bacterial products is introduced into the organism of a patient who is already infected this must inevitably be followed by an aggravation of that patient's condition.

Let us take the above assumptions in order and see how far each of them is justified.—The first assumption can be disposed of in a few words. It is in point of fact merely the expression of the belief of a period when inoculation—using the term in its widest sense—had as yet been applied only in connexion with the prophylaxis of small-pox. Since the period in question methods of inoculation have, as reflection will show, been successfully applied in connexion with almost every form of bacterial invasion.—In connexion with the second assumption it will suffice to remark that even assuming that inoculations against pyogenic bacteria would fail to find any useful application in connexion with operative procedures, such inoculations might conceivably render service in connexion with bacterial invasions of the skin and mucous membranes.—The next assumption—to wit the assumption that bacterial invasions of the skin and mucous membranes can be dealt with by the application of chemical antiseptics—altogether ignores the defects and limitations of this method of treatment. These defects and limitations—already fully realised in connexion with the treatment of operation wounds—are, (*a*) the injury to the tissues inflicted by the antiseptic; (*b*) the difficulty of destroying bacteria which have penetrated below the surface; (*c*) the difficulty of applying the antiseptic over the whole affected area in such a manner as to make an end once for all of the invading bacteria; and (*d*) the difficulty of preventing the re-invasion of the disinfected from the neighbouring still infected areas. Let us note that, assuming that it were found possible to inoculate in such a manner as to call into action the defensive powers of the organism, all these difficulties would have been effectually overcome.—We next pass on to consider how far we can uphold the assumption that inoculations with bacterial vaccines must be unavailing unless where they forestall infection, and the further assumption that inoculations of sterilised bacterial cultures—i.e., inoculations which involve the introduction of toxic bacterial substances into the organism—are necessarily with the air-passages or pulmonary structures, are obviously of much moment in relation to the etiology of phthisis. Though some people seem to think that these organs can resist anything except the tubercle bacillus, we cannot ignore the directly injurious effects of very cold or cold and damp air, as well as of an impure atmosphere or one laden with dust, soot, fog, smoke, or what not, with which we are all but too familiar. Dare I venture to hint that even excessive tobacco-smoking is not free from danger from this aspect? The most pronounced and definite causes coming under this category, however, are the easily recognised irritants, either of a chemical nature, or in the form of minute solid particles, the latter being chiefly inhaled in connexion with different occupations, giving rise to the various forms of *pneumoconiosis* or so-called "mechanical phthisis." I have known some very definite cases of thoracic phthisis to originate from inhaling irritant gases in chemical laboratories. The interesting and important fact may be noted here that typical tubercles can be produced even in man by mechanical particles.

4. Another factor which I feel sure is not uncommonly important in relation to the etiology of phthisis, but which is much disregarded, is the act of coughing, especially when severe and persistent, which I believe has a damaging effect upon the apices of the lungs, as well as being injurious in other ways. Such cough is frequently quite independent of pulmonary trouble, being more particularly associated with the throat and main air-passage. In relation to the throat an elongated uvula has to be specially borne in mind, and I have met with very definite cases of irrepressible cough due to this cause, in which well marked physical signs appeared at one or both apices, but these cleared up completely after removal of the uvula and consequent cessation of the cough. While referring to the throat, it may be also noted that great enlargement of the tonsils as well as adenoids may cause further trouble by obstructing the breathing, thus *interfering with the proper use of the lungs and the development of the chest.* With regard to the larynx and trachea, apart from actual tuberculous disease, chronic or recurring affections of these parts may certainly promote the development of thoracic phthisis, and even huskiness or hoarseness, and still more cough originating here, should never be neglected. From this point of view, excessive use or straining of the voice, in preaching, public speaking, teaching in schools, singing, or shouting in the streets, as in the case of costermongers, hawkers, cheap-jacks, &c., may indirectly predispose to phthisis.

5 The relation of pulmonary hæmorrhage to thoracic phthisis as an etiological factor cannot, in my opinion, be questioned for a moment, and I fail to see why there should be any difficulty in acknowledging it. We meet with cases of blood-spitting, even in considerable amount, the source of which cannot be located, and in which complete recovery follows with no after ill effects. When, however, hæmorrhage takes place from some part of a lung, or blood finds its way there from the air-passages, it is very liable to originate further trouble, forming a suitable medium for the growth and multiplication of tubercle bacilli. It is generally assumed that such hæmorrhage always implies previous tuberculous mischief but this is by no means proved I have met with cases where hæmoptysis resulted from a definite and powerful strain, in connexion with running, swimming, cycling, and different kinds of athletics, or from a blow on the chest, in persons apparently perfectly healthy, and this was followed by acute phthisis, with rapid formation of cavities, or a progressive but slower type of the disease. But even where there has been previous trouble in the lung, *which is often evident enough, the occurrence of considerable* or continuous hæmoptysis often seems to give it a fresh start, and to make it advance with increasing severity and rapidity.

### II.—*Local Predisposing Morbid Conditions.*

It cannot be too strongly insisted upon that thoracic phthisis is by no means always a primary and independent disease, but is in a fair proportion of cases added to or grafted upon, so to speak, some preceding definite morbid condition within the chest. This fact does not in any way invalidate the tuberculosis theory, or call in question the influence of tubercle bacilli. Indeed, it is generally believed that these organisms cannot do harm unless there has been some lesion which enables them to gain a footing, be it only a slight erosion of the mucous surface or removal of the ciliated epithelium from any cause. The more obvious conditions which from this point of view may help in the development of phthisis may be thus indicated:—

1. Persistent or repeated catarrh of the throat, main air-passages, or larger bronchi.

2. Pronounced chronic bronchitis, usually associated with more or less emphysema. The danger of the supervention of tuberculosis in cases of this kind should always be borne in mind; and I emphatically affirm, from much personal observation, that phthisis is not uncommon in cases of extensive or even extreme emphysema. It may also follow bronchiectasis. Not a few "asthmatic" cases become phthisical sooner or later.

3. Pneumonia of different kinds. The general view is that any case of pneumonia which, either speedily or gradually, turns out to be phthisical, is really tuberculous from the outset. While, no doubt, this is true as a rule, I can see no reason why a pneumonic condition not originally tuberculous may not become infected, especially if the morbid products remain long unabsorbed. In certain cases of so-called "fibroid phthisis" there is unquestionably no tubercle at first, *though this may develop subsequently.*

4. Pleuritic conditions. The relation of pleurisy to thoracic phthisis is a very important and interesting problem, to which I shall again have to refer in another connexion. I do not at all agree with the opinion now very widely entertained that the large majority, or as some think, practically all cases, of pleurisy with effusion are essentially tuberculous. That phthisis often develops in course of time in such cases is another matter, though the statistics on this point differ considerably. I have followed a large number of cases for many years where there have been no after-effects of this kind and the patients still enjoy excellent health. My explanation of the frequent occurrence of phthisis after pleurisy, sooner or later, is that no proper care has been taken to prevent the formation of firm and thick adhesions or to expand the lung properly, and in this view I believe that I am supported by Koch. Similar adhesions form occasionally after dry pleurisy, and they are also often left after pneumonia. Of course, if unabsorbed morbid products remain in the pleural cavity the danger is still greater. Remarkable extensive adhesions sometimes form very slowly and insidiously, even on both sides, and I have known phthisis to develop in such cases. However we look upon this question, there can be no doubt as to the practical relation of pleurisy and its effects to thoracic phthisis as etiological or pathological factors of considerable importance, favouring the action of tubercle bacilli or other organisms.

There is another class of cases to which I must allude here, for I feel sure that the condition does not uncommonly lay the foundation for apical phthisis, but is seldom recognised—namely, those in which there is a firm adhesion *at the apex of the lung, binding it down, usually on the* right side, due to hard manual work or other causes producing local irritation. I have a strong impression that many of the cases of "cured" phthisis at an apex are of this nature originally, the condition favouring the invasion of organisms.

Phthisis may follow non-tuberculous empyema, especially if it bursts into the lung or is not efficiently treated by operation. This mode of origin of the complaint is, however, comparatively exceptional in proportion to the number of cases of empyema which are met with in practice.

5 Pressure upon or other obstruction of the trachea or of a main bronchus The pulmonary changes which are likely to follow difficulties of this nature may certainly lay the foundation for phthisis and are very favourable to infection. In this way the complaint may complicate aneurysm, mediastinal tumour, enlargement of the bronchial glands, not necessarily tuberculous, syphilitic changes involving the air-passages, and other conditions Aneurysm has also been supposed to help in the development of phthisis by reducing the activity of the pulmonary circulation

6 Miscellaneous conditions. Under this head it will suffice to note that thoracic phthisis, of a tuberculous nature, may supervene upon syphilitic lesions in the lung, pulmonary abscess or growth, abscess opening into the lung from the abdomen, hydatids, congenital disease of the pulmonary artery, and possibly actinomycosis.

### I.—*General or Remote Predisposing Diseases.*

An important group of cases of thoracic phthisis is that in which the complaint is set up in connexion with certain acute diseases, usually as a sequel; or which supervene in

In a somewhat extensive series of observations—carried out on three samples of the patient's blood and upon 13 control samples of normal blood drawn off from six normal persons—only inconstant and very inconsiderable differences were found between the number of colonies developing in the tubes filled in with three different admixtures particularised above. We are thus entitled to conclude that neither the serum of the patient nor any of the control sera exerted any inhibitory effect upon the growth of the staphylococcus.

*Investigation of the agglutinating power exerted by the serum upon the staphylococcus.*—This was undertaken by mixing together in capillary tubes equal volumes of a suspension of an agar culture of staphylococcus and serum in various dilutions. The observations were undertaken on three different samples of the patient's blood On one occasion only was a sedimentation obtained, and this was obtained only in the two-fold dilution of the serum The sera of four normal men were at the same time examined by the same method. Two of these showed an agglutination reaction in all dilutions up to a 16-fold dilution. The two others showed the reaction only in the two-, four-, and eight-fold dilutions.

*Preparation of the staphylococcus vaccine which was employed in the treatment of the patient.*—Nutrient broth was inoculated with a staphylococcus aureus which had been subcultured from one of the original cultures obtained from the patient. After cultivation for three weeks at a temperature of 37° C. the culture was sterilised by exposure for 20 minutes to a temperature of 65° C. An addition of 0·5 per cent. lysol was made to the sterilised culture. The toxicity of the vaccine was then tested on guinea-pigs. It was found that when the quantum of the vaccine inoculated corresponded to 2 per cent. of their body-weight a moderate amount of œdema and a certain amount of constitutional disturbance were produced.

*Details of the inoculations carried out upon the patient and resulting clinical symptoms.*—On Oct. 25th, 1900, the patient was inoculated subcutaneously in the flank with one cubic centimetre of the above vaccine. Twelve hours afterwards there was considerable headache, the patient's temperature stood at 100·6° F., and considerable redness and tenderness had developed at the site of inoculation. The symptoms had entirely passed off after the expiration of 36 hours. On Nov. 1st 1·5 cubic centimetres of the same vaccine were inoculated. The inoculation was followed by similar but somewhat less severe local and constitutional symptoms. On the 13th 1·5 cubic centimetres of the same vaccine were inoculated. Both the local reaction and the general reaction were very slight, the temperature not rising above 99 4° F.

### DATA OF BLOOD EXAMINATIONS INSTITUTED IN THE PERIOD SUPERVENING UPON INOCULATION.

*Investigation of the agglutinating power exerted by the serum upon the staphylococcus*—A determination of the agglutinating power instituted subsequently to the second inoculation showed that the serum now agglutinated the staphylococcus in all dilutions up to a 16-fold dilution

*Investigation of the growth-inhibiting power exerted upon the staphylococcus.*—An estimation carried out in the interval between the first and second inoculations showed that the serum had not acquired any power of inhibiting the growth of the staphylococcus.

The results of two successive estimations of the growth-inhibiting power instituted soon after the dates of the third inoculation are subjoined in tabular form (Table I ).

TABLE I.—*Estimation of the Growth-inhibiting Power exerted upon the Staphylococcus Aureus by the Blood of Patient 1 soon after his Third Inoculation.*

| Date on which the blood was examined. | Number of colonies of staphylococcus which developed in the capillary tubes filled in each case with 5 c.mm. of a gelatin culture of staphylococcus (previously diluted 100,000 fold and 1,000,000-fold respectively with nutrient gelatin) and | | | | Number of colonies of staphylococcus which developed in control tubes filled in each case with 5 c.mm. of same dilution of gelatin culture and 5 c mm. of sterile broth. | | |
|---|---|---|---|---|---|---|---|
| | 5 c.mm. of patient's serum. | 5 c mm. of a 2-fold dilution of patient's serum. | 5 c mm. of a 4-fold dilution of patient's serum. | 5 c.mm. of an 8-fold dilution of patient's serum | Tube 1. | Tube 2. | Tube 3. |
| Nov 14th, 1900. | 0 | 2 | 5 | 10 | 57 | 22 | 50 |
| ,, 19th ,, | 8 | 7 | 7 | 10 | 29 | 36 | 23 |
| Average ... ... | 4 | 4·5 | 6 | 10 | 36·1 | | |

The results of the estimations set forth above would seem to indicate that the blood of a patient in the period immediately subsequent to inoculation constituted a somewhat unfavourable medium for the development of the staphylococcus. The question as to whether any actual bactericidal action was exerted was unfortunately not determined.

*Clinical history of the patient subsequently to inoculation.*—From the date of the first inoculation in October, 1900, the patient's condition began to improve. With the exception of two small superficial boils which developed between the dates of the second and third inoculations and two further similar small boils which developed in the earlier part of 1901 the patient has been absolutely free from furunculosis. The sycosis, eczema, and the affection of the eyelids also began to mend from the date of the first inoculation; the two former had practically disappeared within a month from the beginning of the treatment. The ophthalmia tarsi lasted a little longer. His face is now, and has for a period of over 12 months been, absolutely clean and free from eruption.

*Data of blood examinations instituted more than a year after the date of the original inoculation.*—Recently the patient's blood has been examined by the method devised by my colleague, Major W. B. Leishman,[8] for measuring the phagocytic power of the blood in vitro. The results of these estimations are subjoined in tabular form (Table II.):—

TABLE II.—*Results of the Estimations of the Phagocytic Power of the Blood of Patient 1 instituted more than 12 Months after the Date of Inoculation.*

| Date on which the blood was tested. | Source and variety of staphylococcus employed. | Average number of staphylococci ingested by each polynuclear white blood corpuscle of the *control* blood. | Average number of staphylococci ingested by each polynuclear white blood corpuscle of the *patient's* blood. | Phagocytic ratio—i.e., the proportion in which the number of staphylococci ingested by polynuclear white blood corpuscles of the *control* blood stood to the number ingested by polynuclear white blood corpuscles of the *patient's* blood. |
|---|---|---|---|---|
| 1901.<br>Dec. 2nd. | Staphylococcus aureus subcultured from Patient 1. | 9·3 | 21·7 | 1 : 2·3̄ |
| ,, 15th. | Ditto. | 6·5 | 9·5 | 1 : 1·45 |
| ,, ,, | Staphylococcus albus subcultured from Patient 3. | 12·2 | 12·9 | 1 : 1·07 |
| 1902.<br>Jan. 23rd. | Ditto. | 32·8 | 35·7 | 1 : 1·07 |

The control blood employed in the three first-recorded estimations was derived from W. B. L.; in the last estimation it was derived from A. E. W.

It will be manifest that the capacity of the patients' white blood corpuscles for ingesting staphylococci—and more particularly for ingesting the variety of staphylococcus with which he had been inoculated—was in each case found to be greater than that of the white blood corpuscles of the normal blood used as a control. These observations—more especially when taken in association with the observations made in connexion with the cases recorded below—lend probability to the assumption that the patient's continued freedom from staphylococcus invasion is the result of the inoculations undertaken

CASE 2.—The patient, an elderly maiden lady, presented associated with risk when undertaken upon patients who are already the subject of the corresponding bacterial infections. Consideration shows that these assumptions express the results of experience derived from an observation of the effect of inoculations undertaken in the case of animals and men when already affected with septicæmic diseases. Confining ourselves to the case of man and to the case of inoculations undertaken with sterilised bacterial cultures, there would, indeed, seem grounds for believing that an aggravation of the patient's condition has in some instances followed in the case where the patient has been inoculated with anti-typhoid[1] and anti-plague[2] vaccine respectively while in the incubation stage of these diseases. But we cannot generalise from such instances. For I have in a previous communication[3] dealing with the changes effected in the blood by anti-typhoid inoculation pointed out that there is an all-important difference between the effects produced respectively by large and small doses of vaccine. It was shown in the paper just referred to (1) that where the dose of bacterial vaccine employed was sufficient to produce marked constitutional symptoms inoculation was followed, first, by a negative phase of diminished bactericidal power—corresponding, it may be presumed, to a phase of diminished resistance—and, then, after an interval of a few days by a positive phase of increased bactericidal power—corresponding, it may be presumed, to a phase of increased resistance; (2) that where the dose of vaccine was such as to produce only very slight constitutional disturbance the negative phase was suppressed, the positive phase being already distinctly marked within 24 hours after inoculation; and (3) that where the dose of vaccine was such as to produce very considerable constitutional disturbance the negative phase was exaggerated and prolonged, while the positive phase was considerably, possibly indefinitely, postponed.

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[8] Brit. Med. Jour., Jan. 11th, 1902.

Since an essentially similar succession of a negative and a positive phase manifests itself after the inoculation of the toxins of both tetanus and diphtheria and, as we shall see below, also in connexion with the inoculation of staphylococcus vaccine, and since the extent and duration of the phase of diminished resistance are in each case a simple function of the dose administered, it would seem clear that the doctrine of the necessary inefficacy and invariable risk of inoculations undertaken upon patients already infected must be abandoned. Manifestly, inoculation will be associated with risk only where the dose of vaccine employed is such as seriously to diminish the patient's resisting power.

It may be noted here that Mr. Haffkine has from the outset contended that his anti-plague vaccine possesses a power of aborting and diminishing the severity of an attack of plague in the case of any patient who may have been inoculated in the incubation stage of the disease. Mr. Haffkine is entitled to the fullest recognition of the fact that in certain of the cases recently recorded by Miss Corthorn[4] and, it may be presumed, in other cases included in the statistical table published by Major W. B. Bannerman, I.M.S.,[5] the event would appear to have been quite in accordance with Mr. Haffkine's anticipations.

Leaving out of consideration all incidental issues, such as that of the expediency of inoculating in the incubation stage of any septicæmic disease unless with duly reduced doses of a standardised vaccine, let us here concentrate our attention upon the fact that it would seem possible—given the employment of the appropriate dose of a vaccine and given also certain other conditions presently to be considered—to obtain benefit from bacterial inoculations even in the case where the patient is already the subject of bacterial infection. If it holds true that inoculations with bacterial vaccines may upon occasion have a therapeutic value in the incipient stages of bacterial invasions which may afterwards assume a septicæmic form, it must *a fortiori* hold true that inoculations conducted with appropriate doses of bacterial vaccines may render useful services in the case of bacterial invasions which manifest themselves from first to last only in the form of localised inflammatory processes. For—and this is clearly brought out by a comparative study of bacterial disease in animals, as well as by the study of any series of cases of one and the same bacterial infection in man—the localisation and restriction of a bacterial invasion may always be taken as an indication of a relatively high grade of resistance on the part of the infected organism.

If we consider the matter rightly we shall see that the process of bacterial inoculation as applied to a patient who is the subject of a bacterial invasion is, in reality, a process of temporarily taking away from a patient's power of resistance with a view to his receiving back that power with usury. It is, in short, a process of trading upon the patient's balance of resistance. When exploiting the method it will, then, be wise to inform ourselves beforehand concerning the resisting power of the patient. It will be wise, also, before adventuring, to learn what we can about the demands which will be made upon the patient's resisting power by the inoculation of that definite quantum of the bacterial vaccine which we propose to employ.

Having now, so far as I can, made clear the situation, I pass on to set forth the results of some preliminary work recently undertaken in connexion with the therapeutic application of anti-staphylococcus inoculations in the treatment of localised staphylococcus invasions. The vaccines employed consisted in each case of staphylococcus cultures which had been sterilised by heating. The cases, six in number, which are reported below include all that I have treated by this method.

CASE 1.—The patient, a man, 40 years of age, consulted me in September, 1900, with a view to seeing whether anything could be done for him. He had suffered from furunculosis complicated by sycosis and eczema of the face since 1893. In that year, while engaged in clearing out a tracheotomy tube which had been removed from a patient who had been operated upon for acute laryngitis, he accidentally inoculated himself in the forefinger with some of the septic material. In spite of three deep incisions made successively into the finger and the palm of the hand infection spread upwards to the axilla (giving origin there to a bubo) and thence onwards into the blood-stream, setting up high fever and septic peritonitis Since that time the patient, who had not previously suffered in this way, had been afflicted with the disorders referred to above. During the seven years which had elapsed since the onset the patient declared that he had never been free from boils for more than three months consecutively Change of climate, every form of medicinal treatment, and local applications of the most varied description had all failed to afford any permanent relief The patient was now suffering from an exacerbation of his symptoms. Recently he had hardly ever been quite free from styes on the eye and boils. These last apparently occurred in two varieties—small superficial boils taking their origin in the skin on the neck and face, and larger deep-seated boils occurring in the subcutaneous tissue in any and every region of the body. The condition of sycosis was associated with weeping eczema and was best marked on the region of the chin. The infiltration of the deeper layers of the skin was even there relatively inconsiderable. The hair follicles of the eyelashes and eyebrows were affected by an inflammatory process similar to that which was affecting the hair follicles of the beard.

*Data of the bacteriological examination of the contents of the boils.*—A cultivation, made on Sept. 16th, 1900, from a small superficial boil on the face yielded a pure cultivation of the staphylococcus albus. A cultivation made on Sept. 19th from a larger and more deep-seated boil on the forehead yielded a pure cultivation of the staphylococcus aureus. A cultivation made on the 24th from a large boil on the forearm yielded a pure cultivation of the staphylococcus aureus.

*Data of the blood examinations instituted before inoculation.*—A count of the different varieties of white corpuscles showed these to be present in the blood in normal proportions. A measurement[6] of the alkalinity of the serum showed a normal degree of alkalinity : $\frac{N}{35}$.

*Estimation of the inhibitory power exerted by the serum on the growth of the staphylococcus.*—Comparative counts[7] were made of the number of staphylococcus colonies which developed in a series of measured volumes of gelatin culture mixed (*a*) with sterile broth, (*b*) with serum derived from normal men, and (*c*) with serum derived from the patient.

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[1] THE LANCET, Sept. 14th, 1901, p. 715.

[2] Report of the Indian Plague Commission, Chapter IV., p. 195.

[3] THE LANCET, Sept. 14th, 1901, p. 715.

[4] Brit. Med Jour., Jan 25th, 1902.

[5] Ibid., Sept. 14th, 1901.

[6] The technique employed was that described by me in THE LANCET of Sept. 18th, 1897, p 719

[7] The technique employed was that described by me in THE LANCET of Dec. 1st, 1900, p 1556.

and the ear. The general health also is said to have markedly improved and the patient was able to go about and to enjoy life. Two months from the date of the first inoculation the patient presented herself for examination. She had not had any recurrence of the boils but had been troubled by a few irritable pimples on the hands. A sample of blood having been withdrawn from the finger an estimation of the phagocytic power of the blood was undertaken. The results of the estimation are subjoined (Table V.).

In view of the result of this estimation the patient was warned that a recurrence of the boils must probably be anticipated. After a free interval of three and a half months the patient early in January, 1902, developed a deep-seated boil. This last ran a similar course and was attended by as much pain as the deep-seated boils which had occurred before the date of inoculation. The patient was seen again on Jan. 28th, 1902 Her condition was then quite satisfactory, but she still suffered from occasional irritable pimples. An estimation of the phagocytic power of the blood carried out at room temperature gave the following results: average number of staphylococci ingested by a white blood corpuscle of a normal blood,[13] 4 6; average number ingested by a white blood corpuscle of the patient's blood, 3 5. The proportion of staphylococci ingested by normal blood to staphylococci ingested by patient's blood was thus 1 : 0 75

On March 17th the patient reported that she had no recurrence of the boils and that she was no longer troubled with pimples.

CASE 3.—The patient, a medical man, about 30 years of age, presented himself for treatment on Dec. 6th, 1901. He had suffered continuously for the previous 12 months from small but very irritable pustular pimples and superficial boils on the back of the neck. He was still suffering in this way. A cultivation made from one of his boils yielded a pure cultivation of staphylococcus albus.

### DATA OF BLOOD EXAMINATIONS INSTITUTED BEFORE INOCULATION.

A count of the different varieties of white blood corpuscles showed that the relative numbers were as follows: eosinophil, 1 per cent.; polynuclear, 53 per cent.; basophile, 1 per cent.; and large mononuclear and lymphocytes, 45 per cent. In an estimation of the phagocytic power of the blood the following results were obtained:—

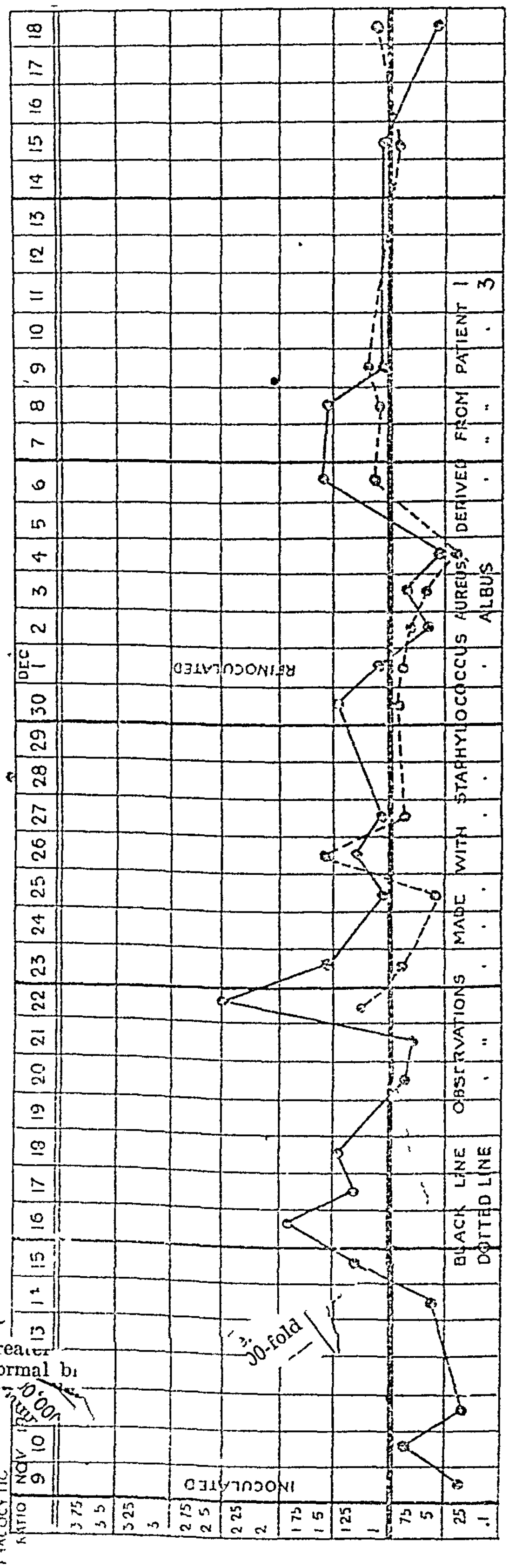
TABLE VI.—*Estimation of the Phagocytic Power of the Blood of the Patient in Case 3 anterior to Inoculation*

| — | Average number of staphylococci ingested by each polynuclear white blood corpuscle of the *control* blood. | Average number of staphylococci ingested by each polynuclear white blood corpuscle of the *patient's* blood. | Phagocytic ratio—i.e., the proportion in which the number of staphylococci ingested by each white blood corpuscle of *normal* blood stood to the number of staphylococci ingested by each white blood corpuscle of the *patient's* blood. |
|---|---|---|---|
| First estimation . | 16 6 | 6 5 | 1 . 0 39 |
| Second estimation .. | 21 0 | 8 0 | 1 . |

It will be seen that the phagocytic power of the pa[illegible] white blood corpuscles was between two and three times [illegible] than the phagocytic power of the white blood corpuscles of a normal blood.

*Particulars of the inoculations which were carried out and the clinical symptoms resulting from these.*—On Nov. 11th 1901, the patient was inoculated with one cubic centime[illegible] of the same staphylococcus vaccine which was employed [illegible] Case 2 (*supra*). The symptoms at the site of inoculation were comparatively trifling; the patient, however, felt a little out of sorts for two days. On Dec. 1st the patient was inoculated with 0 75 cubic centimetres of a staphylococcus vaccine prepared from agar cultures of the staphylococcus albus subcultured from himself. This quantum of vaccine represented the quantum of culture which developed on 1·5 square centimetres of agar surface. Marked local reaction was produced at the site of inoculation. The constitutional reaction was only very slight

*Particulars with regard to the effects produced upon the blood and upon the localised staphylococcus invasion.*—The effects exerted upon the condition of the neck and the concurrent changes in the blood are set forth below with some detail in parallel columns (Table VII.). The results of the blood examination are also presented in a synoptical manner in the form of a graphic curve (Curve 1).



CURVE 1 (relating to Patient 3).

The curve expresses the phagocytic ratio of the patient's blood (as estimated by Leishman's method), the phagocytic power of the control blood being everywhere taken as 1.

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[13] This blood was derived from A. E. W.

herself for treatment on Sept. 28th, 1901. She stated that she had undergone a somewhat serious operation some 21 months previously. Since the date of that operation she had suffered from a succession of very painful deep-seated boils (a reference to her diary showed that the exact number of these had been 25). In addition she had constantly suffered from superficial boils and pimples which had made sitting uncomfortable. She complained also of a pustular discharge occurring intermittently from her nose and ears. The patient was for the moment free from deep-seated boils. A sample of blood was withdrawn for examination and the patient was inoculated with 0 75 cubic centimetre of staphylococcus vaccine.[9]

### DATA OF THE BLOOD EXAMINATIONS UNDERTAKEN BEFORE INOCULATION.

*Estimation of the inhibitory power exerted by the serum on the growth of staphylococcus.*—For the purposes of this estimation a 24 hour old broth cultivation of the staphylococcus aureus was diluted[10] with liquefied nutrient gelatin until a dilution of 1 in 1,000,000 had been arrived at. To a five-cubic-millimetre volume of this dilution was then added in each case an equal volume of (*a*) the patient's serum, (*b*) the patient's serum after this had been heated for 10 minutes to 60° C, (*c*) serum from a normal person, and (*d*) sterile nutrient broth. After these admixtures had been made the diluted culture was in each case drawn up into a capillary tube Three such tubes were being filled in with each variety of admixture. The following table shows the numbers of colonies[11] which developed:—

TABLE III.—*Showing the Number of Staphylococcus Colonies which Developed in Capillary Tubes filled in with Five Cubic Millimetres of the Diluted Gelatin Culture of Staphylococcus mixed with Five Cubic Millimetres of Serum or Broth as Particularised in Column 1 below*

| Admixtures which were made to the 1,000,000-fold dilution of staphylococcus culture. | Number of staphylococcus colonies which developed in each capillary tube | | | |
|---|---|---|---|---|
| | Tube 1. | Tube 2. | Tube 3. | Average of three tubes. |
| Patient's serum ... ... | 10 | 15 | 10 | 11·2 |
| Patient's serum previously heated to 60°C. for 10 minutes . . | 9 | 6 | 20 | 11·2 |
| Normal serum . . . | 11 | 13 | 11 | 11 1 |
| Sterile broth . . . . . | 18 | 9 | 16 | 14 0 |

Here manifestly the same results are obtained as in the case of the estimations undertaken before inoculation in connexion with Patient 1 (*vide supra*). In other words, no indication was obtained of anything in the nature of an inhibitory effect being exerted upon the staphylococcus by either the control blood or the patient's blood. We shall see in connexion with the next cases that the difference between the blood of patients suffering from staphylococcus invasions and the blood of normal persons is to be sought elsewhere.

*Particulars with regard to the subsequent inoculations and resulting clinical symptoms.*—The first inoculation was followed by very little in the way of either local or constitutional symptoms. Two further inoculations, in each case with one cubic centimetre of the same vaccine, were undertaken within the next three weeks. As in the case of the first inoculation the symptoms were very slight.

### DATA OF BLOOD EXAMINATIONS UNDERTAKEN A WEEK AFTER THE THIRD INOCULATION.

*Estimation of the agglutination power exerted by the blood upon the staphylococcus.*—The patient's blood now gives complete sedimentation in an eight-fold dilution The res[illegible] obtained with the control blood are, however, indef[illegible]

*Estimation of the bactericidal power.*—A 1,[illegible] dilution of a 24-hour old broth culture of the staphylococcus having been made, six measured volumes of this were transferred to the surface of agar. In the first of the six agar tubes (inoculated with 25 cubic millimetres of the diluted culture) nine colonies of staphylococcus made their appearance. In the second and third tubes (inoculated in each case with 15 cubic millimetres) the number of colonies which developed were in each case six. In the fourth tube (inoculated with 10 cubic millimetres) two colonies made their appearance. The fifth and sixth tubes (inoculated in each case with five cubic millimetres) remained sterile This gives an average of 3 07 colonies to each 10 cubic millimetres of the 1 in 1,000,000 dilution employed. Figuring this out we arrive at 307,000,000 as the number of staphylococci contained in a cubic centimetre of the undiluted culture.

The procedures connected with the enumeration of the culture having been completed, graduated dilutions of the original staphylococcus culture were made and were mixed in capillary tubes with the patient's serum and a normal serum respectively. In each case about five cubic millimetres of serum and diluted culture were employed. After an interval of 24 hours, during which the tubes were digested at 37° C, the capillary tubes were filled in[12] with sterile broth with a view of determining whether any bactericidal effect had been exerted. The results are subjoined:—

TABLE IV.—*Showing the Absence of Bactericidal Power in the Patient's Blood after these Inoculations.*

| Dilutions of the staphylococcus culture which were digested with the serum. | Results obtained on incubating the tubes after filling in with sterile broth. | |
|---|---|---|
| | Tubes containing the patient's serum, | Tubes containing normal serum. |
| 100-fold dilution. | Growth of staphylococcus. | Growth of staphylococcus. |
| 1000- „ „ | „ „ | „ „ |
| 10,000- „ „ | „ „ | „ „ |
| 100,000- „ „ | „ „ | „ „ |
| 1,000,000- „ „ | „ „ | „ „ |
| 10,000,000 „ „ | Tube remains sterile. | Tube accidentally contaminated. |

It will be manifest from these results set forth above that neither the normal serum nor the patient's serum exerted any bactericidal action upon the growth of the staphylococcus. Comparison with the result of the enumeration shows that five cubic millimetres of either serum failed to kill 1·5 staphylococci.

*Particulars with regard to the patient's condition after inoculation and estimations of the phagocytic power of the blood.*—The patient recorded that she felt herself better within 24 hours after the first inoculation. For the first time for months she could sit with ease. There was also a complete cessation of the purulent discharge from the nose

TABLE V.—*Showing the Phagocytic Power of Patient Two Months after Inoculation.*

| [illegible]ety of [illegible]lococcus [illegible]ich was employed | Average number of staphylococci ingested by each polynuclear white-blood corpuscle of *normal* blood. | Average number of staphylococci ingested by each polynuclear white blood corpuscle of the *patient's* blood. | Phagocytic ratio—i.e., the proportion in which the number of staphylococci ingested by *normal* blood stands to the number of staphylococci ingested by the polynuclear white-blood corpuscles of the *patient's* blood. |
|---|---|---|---|
| [illegible]aphylococcus aureus subcultured from Patient 1 ... .. | 25 7 | 10 6 | 1 : 0·41 |
| Staphylococcus albus subcultured from Patient 3 ... ... | 39 3 | 21·6 | 1 : 0 55 |

---

[9] This vaccine was a suspension in normal salt solution of a 24-hour-old culture of the staphylococcus aureus subcultured from Patient 1. The suspension was sterilised at 65° C. The quantum injected corresponded to the quantum of culture which was obtained from 0 75 square centimetre of agar surface.

[10] The dilutions were made with the diluting pipette figured by me in THE LANCET of June 1st, 1901, p 1532.

[11] The colonies were counted under the microscope by the technique described in THE LANCET of Dec. 1st, 1900, p. 1556.

[12] The technique that was employed was that described by me in THE LANCET of June 1st, 1901, p. 1532.

Three important points are clearly brought out by the observations made upon the patient. 1. The first of these points is that changes in the phagocytic power of the blood in the form of a negative phase of diminished phagocytic power succeeded by a positive phase of increased phagocytic power follow upon a staphylococcus inoculation. The negative and positive phases here obtained are plainly precisely analogous to the negative and positive phases of bactericidal power which I have shown to supervene upon an anti-typhoid inoculation. They are analogous also to the negative and positive phases which Ehrlich and Madsen have shown to supervene upon the inoculation of tetanus and diphtheria toxin respectively. 2. The second and equally important point which is brought out by the comparison of the clinical record with the results of the blood examination is that the negative and positive phases of phagocytic power stand in the very closest relation to the resisting power of the organism. So close and intimate does that association appear to be that it was, in this and the subsequent cases, always easy from the consideration of the local appearances to anticipate the results of the phagocytic estimation. 3. The general result of the blood examinations is in entire accordance with the theory of immunity put forward by Metchnikoff.

Case 4.—The patient, aged 21 years, a medical student, presented himself for treatment on Dec 20th, 1901. For the previous two months he had been suffering from boils chiefly on the nape of the neck, but also on the shoulder and forearm. Immediately anterior to the commencement of the boils the patient had suffered from an attack of influenza. The nape of the neck was seen to be the seat of a localised inflammatory process, the surface being occupied by three or four angry pimply boils, while the deeper tissues were considerably infiltrated and tumefied. The glands on both sides of the neck were somewhat swollen. On the cheek, in the neighbourhood of the nose, there were a certain number of very prominent spots of pustular acne. A cultivation made from one of the pustular pimples on the back of the neck yielded a pure cultivation of the staphylococcus aureus.

*Particulars of the inoculations undertaken, of the resulting symptoms and blood changes, and of the effect produced on the localised staphylococcus invasion.*—The course of treatment pursued and the effects which resulted from that treatment will perhaps be best gathered from a consideration of the subjoined tabular statement (Table VIII.).

The general deductions which can be drawn from a consideration of this case are precisely the same as those drawn from a consideration of Case 3. The absence of a negative phase in this particular case is no doubt to be imputed to the fact that very small doses of staphylococcus vaccine were employed. Interesting as bearing on the association between the changes in the phagocytic power of the blood and the changes in the condition of the patient are (1) the rapidity with which the therapeutic result was achieved taken in connexion with the rapid increase in the phagocytic power of the blood, and (2) the coincidence of the development of the pustular pimple on Jan. 3rd with the result of the blood examination instituted on that day. A further and very interesting feature which arrests attention in connexion with this case is the fact that the first inoculation was followed by considerable inflammatory swelling at the seat of infection. This phenomenon, which, as we shall see, made its appearance again in a very marked manner in connexion with Case 5, is a phenomenon which would seem to be precisely analogous to the local inflammatory reaction which is obtained after the injection of tubercle vaccine (Koch's tuberculin). It will be noticed in this connexion that no inflammatory reaction supervened upon the second inoculation, and generally that nothing of this kind has come under notice in connexion with inoculations undertaken upon patients whose tissues were presumably at the date of inoculation free, or comparatively free, from staphylococcus.

Case 5.—The patient, a private soldier, invalided home from Rawal Pindi for intractable sycosis, was first seen on Dec. 24th, 1901. The patient gave the following history. In 1893 he developed a little sore on the scalp which was followed by a general eruption all over the scalp and face. He was admitted to, and remained under

Table VIII.—Setting forth in Connexion with Case 4 (*a*) the Phagocytic Power of the Patient's Blood; (*b*) the Details of the Treatment Adopted; and (*c*) Particulars with regard to the Clinical Condition of the Patient.

| Date. | Variety of staphylococcus employed in the test. | Phagocytic ratio—i.e., the proportion which the number of staphylococci ingested by white blood corpuscles of *control* blood bore to number of staphylococci ingested by *patient's* blood. | Brief notes regarding the conditions of the localised staphylococcus invasion and the general condition of the patient. |
|---|---|---|---|
| 1901.<br>Dec. 20th | Staphylococcus albus from the patient in Case 3. | 1* . 0·78 | Condition as described in the text (*supra*). |

Inoculated with 0·3 cubic centimetre of a staphylococcus vaccine prepared from agar cultures of staphylococcus albus subcultured from the patient in Case 3. The quantum inoculated corresponds to the quantum of culture which developed on 0 6 square centimetre of agar surface.

| Date. | Variety of staphylococcus employed in the test. | Phagocytic ratio. | Brief notes. |
|---|---|---|---|
| Dec. 21st | Staphylococcus albus from the patient in Case 3<br>Staphylococcus aureus derived from the patient himself. | 1 . 2<br>1 : 3 8 | There has been very little local reaction at the site of inoculation and only slight constitutional disturbance. Considerable swelling has, however, developed in the neck. Signs of improvement in the fact that the superficial boils have lost their angry look. There is considerable polynuclear leucocytosis. |
| ,, 24th | Staphylococcus aureus from the patient himself. | 1† : 6·48 | The patient reports that there has been very considerable inflammatory swelling of the neck and of the lymphatic glands. The swelling has now almost subsided. The boils have entirely disappeared and the leucocytosis has passed off. |

Inoculated with 0 5 cubic centimetre of a vaccine prepared from agar culture of the patient's own staphylococcus aureus. The quantum inoculated corresponds to the quantum of culture which developed in 0 5 square centimetre of agar surface.

| Date. | Variety of staphylococcus employed in the test. | Phagocytic ratio. | Brief notes. |
|---|---|---|---|
| Dec. 27th | Staphylococcus aureus from the patient himself. | 1 · 2 | No constitutional reaction. Congestion and tenderness for 48 hours at the seat of inoculation. No further swelling of the glands or inflammatory reaction in the neck. The patient is quite free from boils and acne. There is some leucocytosis. |
| 1902.<br>Jan. 3rd | ,, | 1 : 1 | One small inflamed pimple has developed on the neck. The patient otherwise is quite well and there is no leucocytosis. |
| ,, 10th | Staphylococcus albus from the patient in Case 3. | 1‡ : 0 95 | The neck is perfectly well. No trace remains of boils, acne, or swollen glands. |
| ,, 17th | — | — | The patient, who is leaving the neighbourhood, reports himself as being perfectly well. A similar report was received on March 15th, 1902. |

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* The control blood employed in this and the five following estimations was derived from A. E W.

† This result may conceivably have been due to some error of technique or to some incidental lowering of the phagocytic power of the control blood. Vide in this connexion the remarks appended to Table IX. and Curve 2.

‡ The control blood here employed was derived from W. B. L. The phagocytic power of this blood has invariably been found to be higher than that of A. E. W.'s blood.

TABLE VII.—SETTING FORTH IN CONNEXION WITH CASE 3 (*a*) THE PHAGOCYTIC POWER OF THE PATIENT'S BLOOD; (*b*) THE DETAILS OF THE TREATMENT ADOPTED; AND (*c*) PARTICULARS WITH REGARD TO THE PATIENT'S CLINICAL CONDITION.

| Date | Variety of staphylococcus employed in testing the blood | Phagocytic ratio—i.e., the proportion in which the number of staphylococci ingested by each polynuclear leucocyte of the *control* blood stood to the number of staphylococci ingested by each of the *patient's* polynuclear leucocytes | Brief notes regarding the localised staphylococcus invasion and the general condition of the patient |
|---|---|---|---|
| 1901. Nov. 9th | Staphylococcus aureus from the patient in Case 1 | 1* 0·39 | For description of clinical condition *vide* text (*supra*) |
| Inoculated in the flank with 1 c.c. of staphylococcus vaccine prepared with staphylococcus aureus subcultured from the patient in Case 1. | | | |
| Nov. 10th. | Staphylococcus aureus from the patient in Case 1 | 1† 0·92 | Very slight local or constitutional disturbance. Condition of the neck unaltered. |
| „ 11th | „ | 1† 0·3 | Marked improvement in the pustular pimples on the neck |
| „ 14th | „ | 1† 0·6 | The boils practically gone. The patient felt better |
| „ 15th | „ | 1† 1·35 | No return of the boils |
| „ 16th. | „ | 1† 1·95 | „ „ „ „ |
| „ 17th. | „ | 1‡ 1·25 | „ „ „ „ |
| „ 18th | „ | 1† 1·45 | „ „ „ „ |
| „ 20th | „ | 1† 0·88 | A fresh development of small boils on the neck |
| „ 21st | „ | 1 0·85 | The boils are drying up. |
| „ 22nd | „ | 1 . 25 | One small fresh boil, the others improving. |
| | Staphylococcus albus from the patient in Case 3 | 1 1·35 | |
| „ 23rd | Staphylococcus aureus from the patient in Case 1. | 1 1·6 | No new boils, all the old ones have dried up |
| | Staphylococcus albus from the patient in Case 3. | 1 0·9 | |
| „ 25th | Staphylococcus aureus from the patient in Case 1. | 1 1·1 | No return of the boils. |
| | Staphylococcus albus from the patient in Case 3 | 1 0·52 | |
| „ 26th | Staphylococcus aureus from the patient in Case 1 | 1 1·3 | No new boils, but some irritation round one of the old ones. |
| | Staphylococcus albus from the patient in Case 3 | 1 1·6 | |
| „ 27th | Staphylococcus aureus from the patient in Case 1. | 1 1·05 | No fresh boils |
| | Staphylococcus albus from the patient in Case 3 | 1 : 1 | |
| „ 30th. | Staphylococcus aureus from the patient in Case 1. | 1 1·5 | No fresh boils, but there is still some infiltration of the neck. |
| | Staphylococcus albus from the patient in Case 3 | 1 1 | |
| Dec. 1st | Staphylococcus aureus from the patient in Case 1 | 1 1·5 | A small boil has developed on the right side of the neck. |
| | Staphylococcus albus from the patient in Case 3 | 1 0·97 | |
| Inoculated in the flank with 0·75 cubic centimetre of a vaccine prepared from his own staphylococcus albus. The quantity inoculated represents the quantum of culture obtained from 1·5 square centimetres of agar surface. | | | |
| Dec. 2nd | Staphylococcus aureus from the patient in Case 1. | 1 : 0·67 | Marked local reaction at the site of inoculation. Slight constitutional disturbance. |
| | Staphylococcus albus from the patient in Case 3. | 1 0·75 | |
| „ 3rd. | Staphylococcus aureus from the patient in Case 1. | 1 0·94 | Local reaction at site of inoculation subsiding. |
| | Staphylococcus albus from the patient in Case 3. | 1 0·66 | |
| „ 4th. | Staphylococcus aureus from the patient in Case 1. | 1 : 0·53 | Still some pain at site of inoculation. A painful boil has developed on the neck. This is the first painful boil since the patient came under treatment. |
| | Staphylococcus albus from the patient in Case 3 | 1 0·47 | |
| „ 6th. | Staphylococcus aureus from the patient in Case 1. | 1 1·65 | The boil which developed on Dec. 4th is much better |
| | Staphylococcus albus from the patient in Case 3 | 1 1·1 | |
| „ 8th | Staphylococcus aureus from the patient in Case 1. | 1 1·52 | Two or three small but somewhat pustular pimples have developed. |
| | Staphylococcus albus from the patient in Case 3 | 1 1 | |
| „ 9th. | Staphylococcus aureus from the patient in Case 1 | 1 1·1 | A few fresh small pimples on the neck. |
| | Staphylococcus albus from the patient in Case 3 | 1 1·15 | |
| „ 15th. | Staphylococcus aureus from the patient in Case 1 | 1 1·05 | The patient has been free from boils for some days past. Infiltration of the neck has been steadily diminishing. |
| | Staphylococcus albus from the patient in Case 3 | 1 1·05 | |
| „ 18th. | Staphylococcus aureus from the patient in Case 1. | 1 0·54 | Some fresh pimples have developed |
| | Staphylococcus albus from the patient in Case 3 | 1 1·1 | |
| „ 27th. | Staphylococcus aureus from the patient in Case 4 | 1§ 3·9 | All infiltration has disappeared. Except for the presence of slight congestion the skin is absolutely normal |
| 1902 Jan. 3rd. | Staphylococcus albus from the patient in Case 3 | 1 1·2 | The patient has been free from boils for some little time. His neck is perfectly smooth and clean. The patient is now proceeding to South Africa |

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* In this and all subsequent estimations unless where otherwise specified the control blood employed was derived from W. B. L.

† The control blood used in this estimation was derived from F. N. W.

‡ Three normal bloods, those of W. B. L., F. N. W., and A. A., were here employed as controls. The results obtained in the case of these bloods were in the closest agreement.

§ The blood here employed was derived from A. E. W. It is a blood which possesses a low phagocytic power.

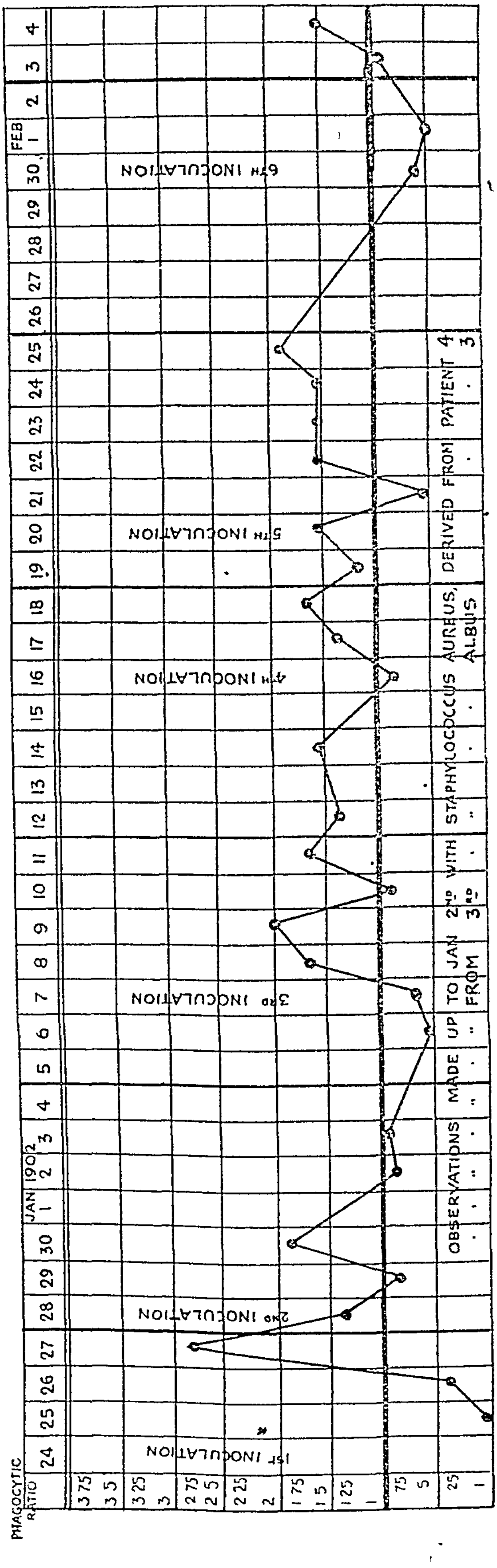
treatment in, the Camberwell Infirmary for six weeks and was then discharged "cured." When he enlisted in 1897 he had, however, still a minute patch of eruption in front of his left ear. After serving for six months he was admitted to hospital for a deep-seated boil in the left parotid region which developed in connexion with the uncured patch of eruption just spoken of. He remained under treatment for about a fortnight. In the same year he proceeded to India and remained well for a time. In 1899 he attended hospital for three months for sycosis and eczema of the face. He relapsed again in 1900 and spent nine weeks in hospital, afterwards attending as an out-patient. He was readmitted in 1901 and was invalided home after spending six or seven months in hospital under energetic treatment. The patient, whose face and head were entirely swathed in dressings, was suffering from a very aggravated form of sycosis complicated by eczema. The whole area of the chin, the cheeks, and the under surface of the jaw was extensively infiltrated and was thickly covered in places with moist scabs. A number of pustular points were interspersed between the prominences corresponding to the inflamed hair follicles. The bony contours of the jaw were almost obliterated by dense masses of infiltrated tissue. The scalp and in particular that portion of it overlying the squamous portion of the left temporal bone was the seat of a scabby sero-pustular affection corresponding to that described under the name of acne varioliformis. The eyebrows and the margins of the eyelids were the seat of a chronic pustular inflammation.

*Data of the microscopical and bacteriological examinations which were instituted.*—A careful examination of the hairs of the beard showed that these were not invaded by any parasitic mycelium. Cultivations made from the pustular points on the face yielded pure cultivations of the staphylococcus aureus.

*Details of the inoculations undertaken and of the effects of these upon the blood and the localised staphylococcus invasion.*—The particulars of the inoculation undertaken and of the effects produced on the blood and on the area invaded by the staphylococcus are subjoined with some detail in tabular form (Table IX.). The results of the blood examinations are given also in the form of a curve (Curve 2).

Attention may be drawn to the following points in connexion with the table and the curve. 1. The high expression obtained for the phagocytic power of the patient's blood in the case of the first estimation recorded in the table would seem to have been due either to an under estimation of the phagocytic power of the control blood due to an error in the technique or to some incidental lowering of the phagocytic power of that blood. There are thus in this case no trustworthy data relating to the phagocytic power of the patient's blood before inoculation. 2 It will be observed that, as in the cases already considered, an increase of phagocytic power was registered after each inoculation. 3 In the case of the first and second and again in the case of the fifth and sixth inoculations undertaken respectively with a double and a treble dose of the vaccine the positive phase was preceded by a negative phase of diminished phagocytic power. 4 The clinical record shows that a condition of diminished phagocytic power, whether produced by inoculation or occurring spontaneously, was in each case associated with aggravation of the local affection. 5. The clinical record further shows that a condition of increased phagocytic power was invariably associated with an inflammatory (phagocytic) reaction in the area invaded by the staphylococcus and with a subsequent improvement in the form of a restriction of the invaded area 6. It would appear from the consideration of the present case, taken in association with the cases already considered, that where the scale is turned against the invading staphylococci, it is turned not by a change produced in the blood-fluids, but by a succession of immunising impulses, each such impulse expressing itself in an inflammatory (phagocytic) reaction localised in the invaded tissues.

The results of the continuation of the treatment up to March 15th have confirmed the premonitions of a proneness to relapse which may be gathered from the previous history as well as from the results of the blood examinations and clinical data incorporated in the table and curve. In each case, after an improvement extending over three or four days subsequently to inoculation, symptoms of a certain amount of relapse have manifested themselves both in the condition of the local infection and in the results of the blood examinations. At present, after 10 further staphylococcus inoculations which have been timed, and varied with respect to dose, in accordance with the results of the daily blood examinations, the patient's condition is still that of a chronic staphylococcus invasion associated in places with a certain amount of scabbing and infiltration. There would thus appear to be a very definite limit to the defensive reaction of the organism, a limit which comes into consideration also in the case of other inoculations.



CURVE 2 (relating to Patient 5).

The curve expresses the phagocytic ratio of the patient's blood, the phagocytic power of the control blood being everywhere taken as 1.

TABLE IX.—SETTING FORTH IN CONNEXION WITH CASE 5 (*a*) THE PHAGOCYTIC POWER OF THE BLOOD, (*b*) DETAILS WITH REGARD TO THE TREATMENT ADOPTED, AND (*c*) PARTICULARS WITH REGARD TO THE CLINICAL CONDITION.

<table>
<tr><th>Date</th><th>Variety of staphylococcus employed in testing the blood</th><th>Phagocytic ratio—i.e., proportion which the number of staphylococci ingested by the white blood corpuscles of the <i>control</i> blood bore to the number of staphylococci ingested by the white corpuscles of the <i>patient's</i> blood</th><th>Brief notes regarding the condition of the localised staphylococcus invasion and the general condition of the patient</th></tr>
<tr><td>1901<br>Dec. 24th</td><td>Staphylococcus aureus from the patient in Case 4</td><td>1* : 3·3</td><td>For description of condition see text <i>supra</i>.</td></tr>
<tr><td colspan="4">Inoculated in the flank with 0·5 cubic centimetre of vaccine prepared from agar cultivations of staphylococcus aureus subcultured from the patient in Case 4. The quantum inoculated <i>corresponded to the amount of culture which developed in 0·5 square centimetre of agar surface.</i></td></tr>
<tr><td>„ 25th</td><td>Staphylococcus aureus from the patient in Case 4</td><td>1* : 0·16</td><td>Great swelling and inflammatory congestion over the whole affected area of the face, the neck, and the scalp. Considerable leucocytosis.</td></tr>
<tr><td>„ 26th</td><td>„</td><td>1* : 0·34</td><td>Still some swelling. A sensible decrease in the pustular points and on the cheeks and the chin.</td></tr>
<tr><td>„ 27th</td><td>„</td><td>1* : 2·7</td><td>The inflammatory reaction has subsided. All the pustular points have disappeared. Polynuclears 50 per cent.</td></tr>
<tr><td>„ 28th</td><td>„</td><td>1* : 1·3</td><td>The face is much better. The eyelids are no longer red. No further development of the pustular points.</td></tr>
<tr><td colspan="4">Inoculated in the flank with 0·5 cubic centimetre of the same staphylococcus vaccine.</td></tr>
<tr><td>„ 29th</td><td>Staphylococcus aureus from the patient in Case 4</td><td>1* : 0·88</td><td>Renewed swelling and congestion of the face. A few pustular points on the chin. Marked improvement everywhere.</td></tr>
<tr><td>„ 30th</td><td>„</td><td>1* : 1·94</td><td>Congestion less. Four or five pustular points on the chin.</td></tr>
<tr><td>1902<br><i>Jan.</i> 2nd</td><td>„</td><td>1* : 0·94</td><td>Complains of more soreness and swelling. The face more congested and a new crop of pustular points and more serous weeping.</td></tr>
<tr><td>„ 3rd</td><td>Staphylococcus albus from the patient in Case 3</td><td>1* : 1·0</td><td>No change noted except a slight diminution in the swelling.</td></tr>
<tr><td>„ 6th</td><td>„</td><td>1† : 0·55</td><td>The chin is very angry looking; more pustular points and weeping.</td></tr>
<tr><td>„ 7th</td><td>„</td><td>1† : 0·61</td><td>The face is less angry.</td></tr>
<tr><td colspan="4">Inoculated with 0·5 cubic centimetre of vaccine prepared from agar cultivations of the patient's staphylococcus aureus.</td></tr>
<tr><td>„ 8th</td><td>Staphylococcus albus from the patient in Case 3</td><td>1† : 1·66</td><td>Considerable inflammatory congestion of the chin, subparotid region, eyelids, and temples. The general appearance is almost erysipelatous.</td></tr>
<tr><td>„ 9th</td><td>„</td><td>1* : 2·0</td><td>Swelling and infiltration much diminished. The bony contours of the chin and the angle of the jaw have become clearly visible.</td></tr>
<tr><td>„ 10th</td><td>„</td><td>1† : 0·86</td><td>The face and the chin are rather more inflamed. Had a bad night. Swelling round the glands below the angle of the chin.</td></tr>
<tr><td>„ 11th</td><td></td><td>1† : 1·74</td><td>Marked improvement everywhere. The swathings and moist boric dressings are now discarded, and the face is powdered with chalk.</td></tr>
<tr><td>„ 12th</td><td></td><td>1† : 1·46</td><td>Infiltration everywhere much diminished.</td></tr>
<tr><td>„ 14th</td><td></td><td>1† : 1·55</td><td>No change. The crusts which still cover the chin are removed by steeping in normal salt solution.</td></tr>
<tr><td>„ 16th</td><td>„</td><td>1† : 0·8</td><td>Increased congestion with weeping and scabbing. No pustulation.</td></tr>
<tr><td colspan="4">Inoculated with one cubic centimetre of the same staphylococcus vaccine.</td></tr>
<tr><td>„ 17th</td><td>Staphylococcus albus from the patient in Case 3</td><td>1† : 1·35</td><td>A red blush has appeared over the whole of the affected area. There is no noticeable swelling. The chin is thickly encrusted with scabs.</td></tr>
<tr><td>„ 18th</td><td></td><td>1† : 1·73</td><td>No change. The crusts were removed by steeping in normal salt solution.</td></tr>
<tr><td>„ 19th</td><td>„</td><td>1† : 1·18</td><td>Great improvement; appearance of healthy cicatrisation over the area of the chin.</td></tr>
<tr><td>„ 20th</td><td>„</td><td>1† : 1·6</td><td>The cheeks are better, but there is an increased serous discharge on the skin.</td></tr>
<tr><td colspan="4">Inoculated with two cubic centimetres of the same staphylococcus vaccine.</td></tr>
<tr><td>„ 21st</td><td>Staphylococcus albus from the patient in Case 3</td><td>1† : 0·6</td><td>Inflammatory reaction, swelling, and increased serous exudation. These symptoms are confined to the region of the chin.</td></tr>
<tr><td>„ 22nd</td><td>„</td><td>1† : 1·3</td><td>The face and the chin are very much better. Infiltration has largely disappeared and the skin looks delicate and soft. It is of a pink colour over the whole of the previously affected area. A single small gland can be felt under the angle of the left jaw. There is still a little weeping over the surface of the chin and there are some crusts in the scalp above and behind the ear.</td></tr>
<tr><td>„ 23rd</td><td>„</td><td>1† : 1·3</td><td>The improvement is maintained.</td></tr>
<tr><td>„ 24th</td><td></td><td>1† : 1·3</td><td>The surface of the chin is becoming normal.</td></tr>
<tr><td>„ 25th</td><td>A mixture of staphylococcus aureus and albus</td><td>1† : 1·85</td><td>The patient is improving rapidly; the skin is everywhere soft and pliable and is less flushed.</td></tr>
<tr><td>„ 30th</td><td></td><td>1† : 0·61</td><td>About 10 new superficial pustular points have appeared on the chin; the pustular eruption over the temporal area is drying off.</td></tr>
<tr><td colspan="4">Inoculated with three cubic centimetres of staphylococcus vaccine.</td></tr>
</table>

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* The control blood employed in these estimations was derived from A. E. W.

† The control blood employed in these estimations was derived from W. B. L. It is a blood which possesses a high phagocytic power.

Vide in connexion with results of phagocytic estimation on Dec. 24th, 1901, note † appended to Table VIII.

### CONCLUDING REMARKS.

*Possibility of a still wider extension of the treatment of localised inflammatory conditions by inoculation.*—We may inquire, in conclusion, into the prospects of successfully exploiting bacterial vaccines in the treatment of localised inflammatory processes produced by pathogenic micro-organisms other than the staphylococcus. Much that is of value can be learned upon this subject by a careful consideration of Koch's tuberculin inoculations and by a comparison of these with the inoculations of staphylococcus vaccine with which we have been dealing above. In each case a bacterial vaccine is, for therapeutic purposes, inoculated into patients already the subject of a corresponding infection. In each case, as the result of the inoculation, an acute inflammatory reaction is set up at the seat of infection. In each case, again as a result of the inflammatory reaction in question, the nidus in which the bacteria are lodged is broken up.

At this point an all-important difference emerges. In the case where the localised inflammation process is due to a staphylococcus infection the breaking up of the nidus has involved, so far as has hitherto appeared, a destruction of the bacteria which have been fluttered. In the case of a tubercle infection the destruction of the nidus has, on the other hand, been shown to be compatible with the continued survival of the tubercle bacilli. Judging by the event recorded in connexion with many tuberculin inoculations, the tubercle bacilli when set free by the inflammatory reaction would appear to have been merely carried away by the white blood corpuscles or lymph current to give origin to new localised foci of infection, or, in exceptional cases, to a generalised form of tuberculosis.

When we consider what may be the reason of this difference in the event which has followed the inoculation of these two different bacterial vaccines we realise that it must be attributed primarily to the fact that the tubercle bacillus possesses, as compared with the staphylococcus, an infinitely greater capacity for maintaining its vitality in the interior of the organism.

A further reason for the difference in event we may perhaps find in the fact that while it was possible in the case of the staphylococcus inoculations described above to graduate the doses and time the injections in accordance with the data supplied by the measurement of the patient's resistance (as judged by his phagocytic reaction and by the condition of the invaded tissues) it was impracticable to do this—although it was infinitely more important to do so—in the case of Koch's inoculations of tubercle vaccine. We are thus by a comparison of the inoculations undertaken with staphylococcus vaccine with those undertaken with Koch's tuberculin again led back to the cardinal principle that we must, in connexion with every therapeutic application of a bacterial vaccine, consider, on the one hand, the capacity of resistance with which the particular species of invading micro-organism is endowed, and, on the other hand, the capacity of resistance possessed by the particular patient at the time of inoculation.

The ideal to be kept in view must everywhere be so to graduate the doses of the bacterial vaccine and so to time the injections as to leave to the infected patient in any negative phase which may supervene after inoculation a sufficient margin of resistance to safeguard him against any generalisation of his infection.

In connexion with the possibility of a wider extension of the principle of therapeutic inoculation we may with advantage keep in view (1) the consideration that patients who have been suffering from long-continued localised inflammation processes would seem, so far as can be judged from clinical experience, to have acquired a defensive power such as suffices to ward off the more generalised forms of their particular infections; and (2) the consideration that where bacterial invasions manifest themselves only under the form of "surface-invasions" the conditions in the interior of the organism must be assumed to be *ab initio* hostile to the growth of the invading micro-organisms.

These considerations would seem to point to the desirability of testing the effect of therapeutic inoculations of sterilised streptococcus cultures in the case of patients who are the subject of indolent and relapsing forms of erysipelas. In applying an inoculation treatment to the forms of erysipelas referred to it would of course be necessary to keep in view the fact that the streptococcus possesses, as compared with the staphylococcus, a much greater capacity for generalising itself in the organism.

The above considerations would also seem to point to the desirability of determining whether any therapeutic advantage could be derived from the inoculation of the appropriate bacterial vaccines into patients suffering from chronic "surface-invasions." There would be opportunity of applying such inoculations in connexion with the treatment of bronchitis, ozæna, gleet, leucorrhœa, and those forms of the bacteriuria[14] which depend upon a bacterial invasion of the mucous membranes of the genito-urinary tract. It would of course be necessary in each case, after determining the particular species of invading micro-organism which was giving rise to trouble, to consider (1) the question of technique in connexion with the preparation of the vaccines; (2) the question as to whether the particular invading micro-organism possessed any power of generalising itself in the system; and (3) the question of the resisting and reacting power of the particular patient. In connexion with the estimation of these last, the methods of estimating the bactericidal power of the blood which have been described by myself[15] and the method of estimating the phagocytic power of the blood which has been described by Major Leishman[16] are, I think, capable of rendering services.

In bringing this communication to a close I desire to express my acknowledgements to Captain G. McIver C. Smith, I.M.S., for helpful collaboration in connexion with the study of Case 1. To my colleague, Major Leishman, R.A.M.C., I am indebted for manifold and unwearying assistance and valuable criticism throughout the whole course of this investigation.

Netley.

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# THE SURGERY OF NON-MALIGNANT GASTRIC ULCER AND PERFORATION.

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THE following notes are rather detailed. Experience of detail is exactly what I have felt the need of when commencing non-malignant gastric surgery. Some of the cases are of exceptional interest, otherwise they would not have come under the surgeon's notice, as they are derived from sources most of which had not at the time realised how much surgery can do for commonplace cases of obstinate gastric trouble. The cases here reported are not selected, but with those of "severe gastric hæmorrhage" reported in THE LANCET in June last year,[1] with three cases of ulceration of the stomach and œsophagus from hydrochloric acid poisoning, which form the subject of a paper read before the Royal Medical and Chirurgical Society,[2] and with a case of tetany of gastric origin briefly noticed in THE LANCET,[3] they form a complete though small series of 22 non-malignant gastric cases. Most were operated on—a few were not. Remarks are appended to some of the cases individually. A few general observations may be divided into (1) those on perforation cases; and (2) those in which evidence of perforation was wanting or very inconclusive.

### PERFORATION.

Precision or certainty in diagnosis is, in most cases of gastric perforation, not possible, even to experienced persons. *But it is not necessary.* The medical man who waits for a case in which the peritoneal cavity is obviously distended with gas, obliterating the liver dulness, while the vomit contains blood, while excruciating pain and tenderness are localised in the stomach region, and there is a known previous history of gastric ulcer, with hyperacidity, hæmatemesis, epigastric tenderness, pain after meals, and dilatation

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[14] Experiments in connexion with the application of inoculation in connexion with the last of these disorders are now in progress.

[15] Loc. cit.

[16] Loc. cit.

[1] THE LANCET, June 8th, 1901, p. 1597.

[2] THE LANCET, Nov. 17th, 1901, p 1328.

[3] THE LANCET, Jan. 22nd, 1901, p. 1788.

CASE 6.—The patient, a man, about 40 years of age, was first seen on Feb 18th, 1902. A fortnight previously he began to suffer from an acute inflammation of the hair follicles associated with a considerable amount of serous discharge and itching. The inflammatory process now occupies the whole area of the beard and hairy portion of the cheeks, and it has spread backwards and has affected the nape of the neck and the lower portion of the back of the scalp. The whole of the affected area is thickly occupied by discrete, for the most part dry, scabs conforming to the type of acne varioliformis Associated with these there is in places a certain amount of serous discharge. The scalp generally is extremely scurfy. Cultivations made from the surfaces exposed by removal of the scabs yielded a pure cultivation of staphylococcus aureus. The particulars of the treatment and details as to the result obtained are subjoined in Table X.

TABLE X.—SETTING FORTH IN CONNEXION WITH CASE 6 (*a*) THE PHAGOCYTIC POWER OF THE PATIENT'S BLOOD; (*b*) THE DETAILS OF THE TREATMENT ADOPTED; AND (*c*) PARTICULARS WITH REGARD TO THE PATIENT'S CLINICAL CONDITION.

<table>
<tr><th>Date.</th><th>Variety of staphylococcus employed in testing the blood.</th><th>Phagocytic ratio—i e, the proportion which the number of staphylococci ingested by the leucocytes of the <i>control</i> blood bore to the number of staphylococci ingested by leucocytes of the <i>patient's</i> blood</th><th>Brief notes regarding the conditions of the localised staphylococcus invasion and the general condition of the patient.</th></tr>
<tr><td>1902.<br>Feb. 18th.</td><td>Staphylococcus albus subcultured from the patient in Case 3.</td><td>1* : 0·74</td><td>Condition as described in the text (<i>supra</i>).</td></tr>
<tr><td>" 19th.</td><td>"</td><td>1* : 0·7</td><td>Condition unchanged.</td></tr>
<tr><td colspan="4">Inoculated in the flank with one cubic-centimetre of a mixed staphylococcus vaccine The quantum inoculated corresponds to the quantum of albus and aureus culture which developed on one square centimetre of agar surface</td></tr>
<tr><td>Feb. 20th.</td><td>Staphylococcus albus as above.</td><td>1* : 1·24</td><td>The patient had a mild general and local reaction. The condition of the chin and the cheeks is greatly improved, there being much less congestion and a small amount of discharge.</td></tr>
<tr><td>" 21st.</td><td>—</td><td>—</td><td>The condition of the chin, the face, and the scalp is very considerably improved.</td></tr>
<tr><td>" 22nd.</td><td>Staphylococcus albus as above</td><td>1† : 0·87</td><td>Further marked improvement, the back of the head and of the chin having become practically clear. Small moist patches still to be seen in front of the ear and at the angle of the mouth.</td></tr>
<tr><td colspan="4">Re-inoculated with one cubic centimetre of the same vaccine.</td></tr>
<tr><td>Feb. 23rd.</td><td>Staphylococcus albus as before.</td><td>1† : 0·36</td><td>The moist patch in front of the ear has dried up. The patient is quite well with the exception of a small patch at the angle of the mouth.</td></tr>
<tr><td>" 24th.</td><td>"</td><td>1† : 0·36</td><td>Practically well.</td></tr>
<tr><td>" 25th</td><td>"</td><td>1* : 0·7</td><td>Discharged.</td></tr>
</table>

* The control blood employed was that of W. B L

† The control blood employed was that of W. G. L.

It will be noted on study of the above table that there was a marked increase in the phagocytic power of the patient's blood on the day succeeding the inoculation. On this and the next two days the clinical condition improved in an astonishing manner. The phenomena which succeeded upon reinoculation are of less conspicuous interest. It will be seen that after the second inoculation, which was resorted to with a view to checking the falling away of the phagocytic power which manifested itself on the third day after the first inoculation, a pronounced negative phase of diminished phagocytic power came under observation. This negative phase, presumably owing to the fact that the invading bacteria had already been disposed of, was unaccompanied by anything in the nature of an aggravation of the patient's symptoms At the date of the patient's discharge the negative phase was apparently giving place to a positive phase of increased phagocytic power.

### CONSIDERATIONS IN CONNEXION WITH THE POSSIBLE PROPHYLACTIC AND THERAPEUTIC APPLICATIONS OF ANTI-STAPHYLOCOCCUS VACCINE.

Having in the foregoing considered the results obtained by the inoculation of staphylococcus vaccine into patients affected with furunculosis, sycosis, and acne, we may naturally be led on to inquire whether there are any other forms of staphylococcus invasion in connexion with which these inoculations *might perhaps find a useful application.*

*Possible prophylactic applications.*—Dealing first with the question of a possible application of these vaccines in connexion with *the prophylaxis of septic invasion*, it would seem that advantage might possibly be derived from their application in connexion with compound fractures and further in connexion with operative procedures, such as those associated with the upper jaw and air passages, where it is impossible to secure the asepticity of the wound. It is, perhaps, venturesome to suggest that there might also be other cases where the surgeon might be willing in his operative procedures to avail himself of the increased resistance to staphylococcus invasion which would, it can hardly be doubted, be obtained by a prophylactic inoculation of staphylococcus vaccine. I would urge in defence of this suggestion that the adoption of measures designed to increase the resistance of the organism to septic invasion would seem to be only a legitimate development of the accepted practice of relying upon the protective agencies of the organism instead of upon the application of antiseptics for the destruction *of such septic bacteria as may upon* occasion in spite of aseptic precautions obtain access to wounds

*Apart from* actual surgical procedures it would seem possible that prophylactic inoculation of staphylococcus vaccine might find a scientifically interesting and conceivably a practically useful application in connexion with anti-small-pox vaccination. In view of the apparently septic character of the inflammation which is frequently associated with vaccination wounds and the fact that staphylococci are constantly present in vaccine lymph even in glycerinised lymph I take it that it would be desirable to determine how far the staphylococcus is responsible for the *symptoms which have done so much to discredit vaccination* in the popular mind The information which is required could probably be obtained by noting the effects produced by the inoculation of one and the same variety of vaccine lymph into persons or animals immunised against the staphylococcus and into persons or animals not so protected I shall be glad to place a supply of staphylococcus vaccine at the disposal of any medical man possessing facilities for undertaking such inquiry.

Comparatively little remains to be added to what has already come *under consideration in connexion with the* therapeutic employment of staphylococcus vaccine. It is possible that the vaccine might find a useful application, not only in connexion with the treatment of furunculosis, acne, and sycosis, but also in connexion with the treatment of Veldt sores, old ulcers, sinuses, and septic vaccination wounds.

other similar cases in the practice of surgeons who suture the mucous edges together. When suppuration threatens beneath the skin we can often prevent it by removing sutures, but an analogous practice is impossible in the stomach. This Case 8 is interesting as having been apparently one of capillary hæmorrhage, as no ulceration was discovered even post mortem. The patient in one case had in the course of five years been twice "cured" by rest in bed and a milk diet, the cure once lasting for a whole year. In connexion with this case a few words may be said about Murphy's button.

*Murphy's button.*—Gastro-enterostomy by this means is, as von Miculicz and others point out, singularly free from the risk of the "circulus vitiosus" or persistent regurgitation into the wrong arm of the jejunal loop and so back into the stomach and round and round. Murphy's button seems to me to have other advantages. It keeps together broad surfaces of the two parts to be united. It keeps them uniformly together if carefully applied. It runs no risk of a weak point where one suture has not been put in so carefully as its neighbours or where one suture is exposed to undue strain. It is an obvious protection against recurrent hæmorrhage, a real danger in gastric operations. Further, it protects the parts of both stomach and intestine beyond its circumference from septic infection, just as a ligature round a finger would keep snake venom out of the general circulation. The speed with which it can be applied is a secondary consideration; indeed, I suspect that it tends to discredit the button, because it leads to its being selected for specially bad cases, and also leads to its being put in hurriedly. No hurry should be used; on the contrary, great care and precision are indicated in (1) adjusting the cut edges of the inner serous aperture to the central cylinder of the button, turning in all mucous membrane; (2) in putting in and tying the two or three silk sutures which finally reduce the size of the aperture; and (3) in bringing the two parts of the button correctly together and gradually closing them until the two serous surfaces are in absolutely close contact *all round* the button and slightly compressed together.

The chief drawback to the use of the button is its liability in gastric cases to fall back into the stomach, or even, it is said, into the wrong part of the jejunal loop. The former accident has happened to me twice, and once also the button remained for several weeks fixed in the gastro-enterostomy opening (in a case of hydrochloric acid poisoning not in this series). In the latter case I had not pressed the halves of the button tightly enough together. In these cases the button was easily localised with the x rays and as easily removed. Even before the advent of antiseptics and long before surgeons were as accustomed as they now are to gastric surgery gastrotomy for the removal of a foreign body was a very safe operation.

It has recently been said that "it is difficult to imagine anything more likely to irritate the ulcer than a Murphy's button being continually churned against it." The question is not one of imagination at all but of experience, which shows that the use of the button permits the ulcer to heal rapidly. And, why not? Murphy's button is not a solid chunk of cast iron, rough and angular, but is a hollow, light, rounded and polished ring of thin sheet metal. With regard to "churning," the stomach is a muscular organ, and when, thanks to a successful gastro-enterostomy, it has acquired the power of emptying itself with ease it grasps its contents and moves them on in an orderly and quiet manner. I am reminded of an objection urged by the late Mr. Adams of Bungay against lithotrity—that it "turned a man's bladder into a gravel pit."

The knob of each half of the button can be introduced through a surprisingly small cut in either the stomach or the intestine, a cut shorter than the diameter of the knob. An assistant should hold two points of the cut edge with catch forceps; the surgeon should then seize another point with dissecting forceps. The opening thus becomes triangular and through it the button knob, gripped by the edge with a pair of catch forceps, should be gently rotated and persuaded to pass in. The forceps which grips the button edge should then be handed to the assistant, while the surgeon puts in a couple of fine silk sutures through the "sero-muscularis" to tighten up. The substitution of these interrupted sutures for a running suture all round the button is, so far as I know, due to Carle and Fantino. Each button should be examined, tested, and found in good order as regards the spring and catches. But for this precaution I should on one occasion have used a defective button. In searching for a retained button with the x rays it is necessary to turn such patients as are not very thin on their faces. The button then falls forward close to the anterior abdominal wall, against which the screen should be placed.

*A Table by which this Small Series of 22 Cases may be Analysed into 11 Distinct Varieties.*

| Variety and No. of case. | — | Operated on or not. | Recovered or died. | — |
|---|---|---|---|---|
| I. 1 | Perforation operated on as such (Cases 1, 2, 3, and 4). | Operation. | Recovered. | Case 1 was a "spontaneous" rupture of the stomach. |
| 2 | | ,, | ,, | Each operated on from 24 to 30 hours after the perforation. |
| 3 | | ,, | ,, | |
| 4 | | ,, | ,, | |
| II. 5 | Perforations operated on as cases of general septic peritonitis two cases, each at least four days after perforation (Cases 5 and 6). | ,, | Died. | — |
| 6 | | ,, | ,, | Death partly due to a second perforation after operation on the first. |
| III. 7 | Perforations not operated on (Cases 7 and 8). | No operation. | ,, | — |
| 8 | | ,, | ,, | |
| IV. 9 | First seen as subphrenic abscess (Cases 9 and 10). | Operation. | Recovered. | — |
| 10 | | No operation. | ,, | Still imperfectly recovered. |
| V. 11 | Revolver shot wound of the stomach and the liver with extrusion of omentum (Case 11). | Operation. | Died. | — |
| VI. 12 | Persistent capillary (?) hæmatemesis (Case 12). | ,, | ,, | — |
| VII. 13 | Acute severe hæmorrhage (Case 13). | ,, | Recovered. | — |
| VIII. 14 | Old history of ulcer and very severe hæmorrhage, gastric dilatation. Tetany; death before there was time to summon a surgeon (Case 14). | No operation. | Died. | — |
| IX. 15 | Ulcer several times relapsed after dietetic treatment in hospital (Case 15). | Operation. | Recovered. | — |
| X. 16 | The three cases of hydrochloric acid poisoning. | Operation. | Recovered. | — |
| 17 | | ,, | ,, | Much better for gastrostomy, but died nearly two months afterwards from progressive ulceration of the œsophagus and direct infection of the lung. |
| 18 | | No operation. | Died. | — |
| XI. 19 | The four severe hæmorrhage cases.* | Operation | Recovered. | |
| 20 | | ,, | ,, | — |
| 21 | | No operation. | Died. | — |
| 22 | | ,, | ,, | — |

* See THE LANCET, June 8th, 1901, p. 1597.

Thus of the 15 cases operated on 11 patients recovered and four died. Of the seven cases not operated on, six patients died, and the sole survivor is still more or less an invalid. Of the four fatal operated cases, two were of general septic peritonitis operated on four days after perforation; one was that of the infant shot through the liver and of the stomach, may expect to become responsible for such melancholy cases as Case 3 and Case 4 detailed hereafter.

Quite a small number of the above symptoms should suffice to excite grave suspicions if they come on suddenly, and they need not be at all well-marked. If, then, the physician or practitioner cannot make up his mind as to what has happened, that uncertainty is not an indication for waiting but for immediately calling in the surgeon. The surgeon then shares the responsibility, and a grave and difficult one it often must be, especially if the case is far away in the country and "now or never" is the time for decision. The cases here recorded tend to show that it is best to settle the question of diagnosis by an immediate exploratory operation Compare, for example, the results in Cases 1, 2, 3, and 4 with the results in Cases 5 and 6.

Sudden and severe abdominal pain with faintness and with or without vomiting are ominous symptoms in either women or men, especially if there is anæmia and a history suggestive of chronic indigestion. Note that in Case 2 there was absolutely no abdominal tenderness, no vomiting, and little pain or distension. Yet there was a gastric perforation, while the pus and lymph in the pelvis and elsewhere showed that the case was fully started on the course which led the patients in Cases 5, 6, and 8 to the grave and the subject of Case 9 into a condition of chronic invalidism.

With due care, gentleness, and experience an exploratory laparotomy becomes a simple and safe affair. If a large hole be made in the abdomen, the arm thrust in half way up to the elbow, and the hand carried round and round all over the viscera from the diaphragm to Douglas's pouch, a patient may be made alarmingly ill by it, especially if strict asepsis is not secured. But any procedure so rough as this is very rarely, if ever, necessary. Almost always a shrewd guess at localisation can be made before incision, and generally the pylorus or the cæcum, or whatever has to be dealt with, can easily be drawn outside and the neighbourhood explored with two or three fingers.

One of the first rules in all doubtful cases is, "Do not feed by the mouth." And do not be in a hurry to leave off rectal feeding. In Case 8 the patient who refused to be operated on was at first in a favourable position because so many hours had elapsed between the time of the perforation and of the last meal, but three or four days afterwards, when she had ceased to be under my care, oral feeding was recommenced. This may have contributed to bring about the fatal termination.

After operation, especially if Murphy's button be used and the patient be very low and not vomiting, liquid food may be allowed by the mouth very early, or even immediately. As vomiting would prevent this, very little general anæsthetic should be given, and that only during the really painful part of the operation. If ether or chloroform is being given the mask or other appliance should be taken off the mouth as soon as the stomach is brought out and not reapplied till the need for it is apparent. The surgeon ought to be allowed to *see* that the anæsthetic is not being given. Even if the patient soon vomits a little no great inconvenience is caused to the operator who has a reasonably good assistant. In the value of ether or any other drug "as a stimulant" during operation I do not myself believe. Let the patient be kept warm, the blood-vessels full, and the breathing free, and no stimulant will be needed If these are neglected no stimulant is any good. After operation for perforation it is better to give only hot water, in half-ounce doses hourly by the mouth for several days and peptonised milk enemata, four ounces every four hours, with occasionally a 10- or 20-ounce enema of hot water to relieve the thirst or to strengthen the pulse. Plasmon is useful (one drachm to four ounces of milk). Opium is a great reliever of pain, but even as an anodyne it is a good deal less effective than correct surgical treatment, which it often fatally obstructs and hampers. I rarely give it. Large doses are bad and small ones are generally either ineffective or not necessary. Both large and small doses are apt to lull into a false feeling of security. This fault was conspicuous in several of these cases.

The precise nature of the illness of the patient in Case 7 was never determined. There may have been even at first hæmorrhage, but, in spite of her sex, I think that it was more probably perforation of a duodenal ulcer, localised peritonitis, improvement for 10 days, and finally severe hæmorrhage due to erosion or sloughing of some considerable vessel and death. It shows how insufficient even strict rectal feeding and rest may prove even in a most favourable case. Perhaps a timely gastro-enterostomy would have saved this patient.

One of the dangers of delay and of not applying surgery until a case is in a depressed and bad condition is that operation is then liable to be hurried and essentials may be thus overlooked. The pelvis was not explored and cleansed in Case 5. The pelvic peritoneum should always be examined, and, if necessary, cleansed, even when the peritonitis or perforation is in the upper half of the abdomen. The converse is not absolutely true. I mean it is not always desirable to examine the perihepatic peritoneal spaces when peritonitis has begun in the pelvis or about the appendix, but some lives are lost even through this not being done. Case 6 was in too desperate a condition for much surgery, and the fact that the prime focus of mischief was behind the stomach, through the foramen of Winslow, was not discovered till after death. I think it would have been quickly found at the operation had the surgeon been called in before the suppurative peritonitis was universal.[4]

Just as several of these cases show clearly the evil of delay and of waiting for death and a diagnosis to arrive together, sometimes treading close on the heels of surgery applied too late, so clearly is great credit due to the promptitude, knowledge, and acumen of Dr. A. H. W. Clemow, Dr. Otto Grunbaum, Dr. D. Fairweather, and Dr. H. Lawson, to which the patients in Cases 1, 2, 3, and 4 owe their lives.

As in Case 1 the rupture did not take place through an ulcer, but only in, or close to, a cicatrix, and as it was not the result of external violence I think it comes under the classification of "spontaneous rupture."

Although in Case 2 the lower limit of liver dulness was only pushed up about two centimetres above the edge of the rib cartilages, and even that was caused by air in the greatly distended transverse colon rather than by the small quantity of gas free in the peritoneal cavity, Dr. Grünbaum rightly attached great weight to the symptom. Diagnosis in this case was further complicated by the nervous and hysterical state of the patient. She had no abdominal tenderness.

In Case 11, that of the infant who was shot through the liver and stomach and who died on the eighth day, there are several obvious points which recall the case of President McKinley. This unfortunate child, aged 14 months, was handicapped by (1) marked rickets; (2) whooping-cough; and (3) a burn to the bone on the right heel. I regret now not having excised the whole of the bruised and extruded omentum. It was, however, carefully cleaned, not only by us, but by Mr. H. W. Chambers of Goldhawk-road who sent the patient into hospital so promptly. The oblique incision parallel to the edge of the rib cartilages proved admirable for exposing the whole stomach and even the spleen.

The patient in Case 5 had parotitis after operation for perforation performed on the fifth day. This case was also remarkable on account of the second perforation, which I am certain followed the laparotomy performed for the first perforation and polluted the sutures which lay near it, thus destroying what little chance of life this case possessed.

*Sub-diaphragmatic abscess.*—Cases 9 and 10 illustrate the long and dangerous period of chronic invalidism which may ensue even if a case of gastric perforation which is not operated on escapes the immediate danger to life.

### NON-PERFORATIVE CASES.

In THE LANCET of June 8th, 1901 (p. 1597), I have published four of these cases in which severe hæmorrhage occurred Case 12 in this series ought really to have been published with those four, but it was forgotten, probably because it was not operated on. With regard to Case 8 the result may be traced, I think, to several causes. 1. To the overloading of the whole colon with masses of fæces, which overloading was due partly to the prolonged previous use of opium and partly to insufficient preparation of the patient before operation. It is quite possible that the persistent vomiting which had lasted for five weeks daily was itself partly caused by the opium and the constipation. 2. To the close continuous glover's suture with which I sutured the edges of mucous membrane together. Abscess between the layers of the stomach wall occurred and the suture in question must have tended to prevent the discharge of the pus into the gastro-intestinal canal. I know of two following passage. Captain Yule says, after describing Maphoon :—

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[4] Kingston Barton writes "If there is delay the symptoms become more general and less clear and the surgeon himself fails to recognise the necessity of immediate operation. Several of my cases sent to hospital were lost for this reason." (Records from General Practice, vol. i., p. 7.)

"Her husband and her two boys accompanied her. The elder, about four or five years old, had nothing abnormal about him. The youngest, who was 14 months old and still at the breast, was evidently taking after his mother. There was little hair on the head, but the child's ear was full of long silky floss, and it could boast a moustache and beard of pale silky down that would have cheered the heart of many a cornet"

Dr. Cholmeley has had the portrait of Maphoon and her infant son reproduced and has sent it to me together with the above quotation. Owing to his courtesy I am able to exhibit portraits of the man at two different ages and thus to add considerably to the interest of this communication.

Weymouth-street, W.

# A CASE OF APPENDICITIS IN WHICH THE APPENDIX WAS LODGED IN, AND ADHERENT TO, THE FEMORAL CANAL.

By JOHN HENRY GALTON, M.D. Lond.,

SURGEON TO THE NORWOOD COTTAGE HOSPITAL, &C.

The patient was a woman, aged 32 years whose previous history was to the effect that in January, 1900, she had an attack of appendicitis from which she recovered. I saw her on Oct 11th, 1901, when she had been suffering for some days from indigestion and abdominal pains, and was at the time complaining of pain in the right lower abdomen, with tenderness over McBurney's point. Her temperature was 98° F. and her pulse-rate was 90 ; there was no abdominal tension at any part. She was given an ounce of castor oil with 15 minims of tincture of opium and 20 minims of spirits of chloroform. On Oct. 12th at 11 A.M. her temperature was 107° and her pulse-rate 118 ; in the right iliac region there was great pain together with dulness and muscular tension, but there was no general abdominal tension. She was given 10 grains of citrate of potassium and eight minims of tincture of belladonna every four hours. At 7.30 P.M. her temperature was 101·4° and her pulse 100. On the forenoon of the 13th her temperature was 102°, her pulse 100, and her respiration 30 ; at 6 P.M. her temperature was 102° and her pulse 100. On the 14th her temperature was 101·6°, her pulse 87, and her respiration 26 At 9 A.M. she had an enema which acted well, producing a solid motion. The swelling in the right iliac region reached to within an inch from the umbilicus. At 10 A.M. on the 15th her temperature was 100·4°, her pulse 88, and her respiration 24 ; at 6 P.M. her temperature was 99°, her pulse 80, and her respiration 23. On the 16th her temperature was 98°, her pulse 70, and her respiration 23 On the 17th her temperature was 98°, her pulse 68 and her respiration 22. On the 18th her temperature was 97°, her pulse 70, her respiration 21, and so on to complete recovery.

On Nov 2nd she was admitted to Norwood Cottage Hospital and her food and bowels were regulated till the 4th. At 11.30 A.M. on that day chloroform was administered by Dr. C. E. Michael and with the assistance of Mr. J. Sidney Turner and Mr. A. Scott-Turner the following operation was performed : An incision four inches long was made parallel to Poupart's ligament and one and a half inches above it, and the peritoneum was carefully opened at the upper end. The head of the colon was found to be adherent to the anterior abdominal wall just below the incision. It was extremely difficult to find the appendix, which was firmly bound down by a strong meso-appendix adherent throughout its length to the posterior wall of the abdomen and dipping down for a quarter of an inch into the femoral canal, to which it was adherent. A strong and old adhesion also bound it to the ileum. The meso-appendix was pierced at an inch from the cæcum and a ligature which was passed round the appendix at this part gave control over the process during the operation. The adhesions of the appendix to the posterior wall were soft and separable by the nail, but in the process of doing this the soft and swollen appendix was torn in the middle and both ends were at once secured with Spencer-Wells forceps and ligatures of carbolised silk. The separation was then continued till the tip of the appendix had been enucleated from the femoral canal. The strong adhesion to the ileum was then ligatured and tied with silk and the meso-appendix was divided into four parts each of which was separately ligatured. A portion of peritoneum was then dissected back from the appendix above the temporary ligature and a permanent ligature applied half an inch from the cæcum ; the whole appendix was then cut off, a drop of strong carbolic acid was applied to the mucous membranes, and the deflected peritoneum was drawn over and secured by two fine silk ligatures. During the operation the parts were isolated by two flat sponges and pads of iodoform gauze well packed behind the parts. Four deep stout silver wire sutures including the peritoneum and five horsehair sutures closed the wound which was dressed with iodoform gauze wool and a spica bandage The operation lasted for one hour and 40 minutes. The appendix, which was three and a half inches long, was much thickened throughout, the termination being as large as the thumb (male), and it contained fluid stercoraceous matter, and at the distal end a stercolith quite square with well-defined angles, fairly hard, but crumbling on pressure and dry in the centre, having apparently no nucleus of foreign matter.

After the operation the patient's temperature was 98° and her pulse 74 ; at 10 P.M. her temperature was 98·4° and her pulse 80 ; there were retching and a little sickness ; only sips of hot water were given for 24 hours. At 2 A.M. on Nov. 5th her temperature was 100°, her pulse 81, and her respiration 20. A nutrient suppository was given every six hours. In the forenoon her temperature was 99°, her pulse 78, and her respiration 21 ; there was good abdominal respiration. At 6 P.M. her temperature was 99·4° and her pulse 79 ; milk and barley-water were given, one drachm every two hours. On the 6th her temperature was 90°, her pulse 70, and her respiration 21 ; there was slight abdominal pain. On the 7th her temperature was 98°, her pulse 70, and her respiration 20 ; menstruation came on, 10 days overdue ; three pints of milk were given, with beef essence twice a day. On the 8th her temperature was 98·4° and her pulse 72 ; an enema of soap-and-water brought away a good solid motion. On the 9th she had fish and on the 10th she had chicken. On the 11th the wound was dressed for the first time ; union was found to be firm throughout and all sutures were removed. On the 16th she left the hospital quite well.

The case is worthy of record as one of an unusual position of the appendix. Mr. A. H. Tubby in his excellent monograph on appendicitis only mentions one such case as recorded by Sir F. Treves, and this was associated with a femoral hernia and therefore more easily explicable. The condition of the parts during the operation also and the ease with which the more recent adhesions were separated pointed to some ground for determining the period of selection for operation, for had the present case been deferred till a later period it would have been impossible to separate the adhesions which time would then have strengthened.

Upper Norwood.

# Clinical Notes:

## MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

### A CASE OF INOPERABLE CANCER ; FAVOURABLE RESULT FROM OÖPHORECTOMY AND THYROID FEEDING.

By Walter Edmunds, F.R.C.S. Eng.,

SURGEON TO THE TOTTENHAM HOSPITAL ; SURGEON FOR OUT-PATIENTS TO THE EVELINA HOSPITAL FOR SICK CHILDREN.

A woman, aged 36 years, married and with four children, had noticed for two years a tumour in the left breast. It appeared to be an adenoma but on operation it was found to be a carcinoma with infection of one at least of the lymphatic glands. The breast and axillary glands were removed. This was in 1894 and 15 months later a recurrence appeared at or near the scar. This was excised. Except for one or two minute recurrences which were removed under cocaine the patient continued well till October, 1899—five years from the first operation—when she became extremely ill with symptoms of intra-thoracic growth and bronchitis.

stomach, and one patient alone could be fairly said to have died from operation. On the 15 patients who were operated on 17 laparotomies were done.

(*To be concluded.*)

# AN EXAMPLE OF UNIVERSAL HIRSUTENESS.

BY A. J. BALMANNO SQUIRE, M.B. LOND.,
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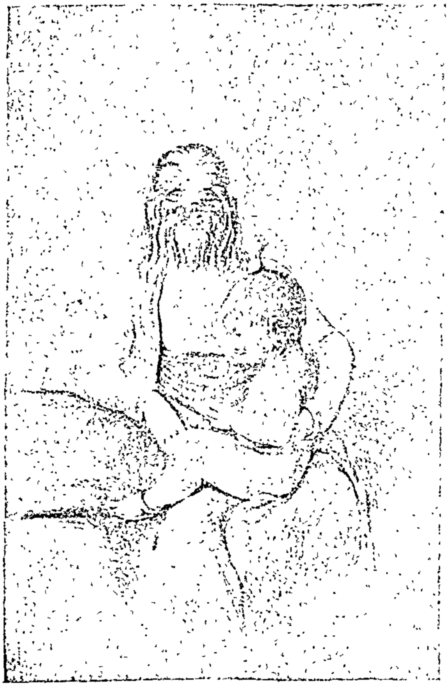
SURGEON TO THE BRITISH HOSPITAL FOR DISEASES OF THE SKIN, ETC.

THE extreme rarity of cases of universal hirsuteness and the fact that a portrait of this example of it in his middle age has never been published by anyone else may perhaps be a sufficient apology for my submitting it to the notice of the readers of THE LANCET. The person represented is the son of the Burmese woman named Maphoon who was a classical instance of the same peculiarity, her father, Shevémaong, having also presented the same condition. *Among the most noted instances of universal* hirsuteness are a Russian, Andrian Jeftichjew, and his son Feodor, the hairy family of Ambras, and the Burmese child Krao. The condition is hereditary, it is also congenital, and it is accompanied by a congenital deficiency of the teeth.

In the family to which the person here represented belonged the condition ran through three generations, but Maphoon, who was the youngest of four sisters (she had no brother), was the only one of the four who was affected in the same manner as her father. She had two sons, of whom the younger alone inherited her peculiarity (Fig. 1).

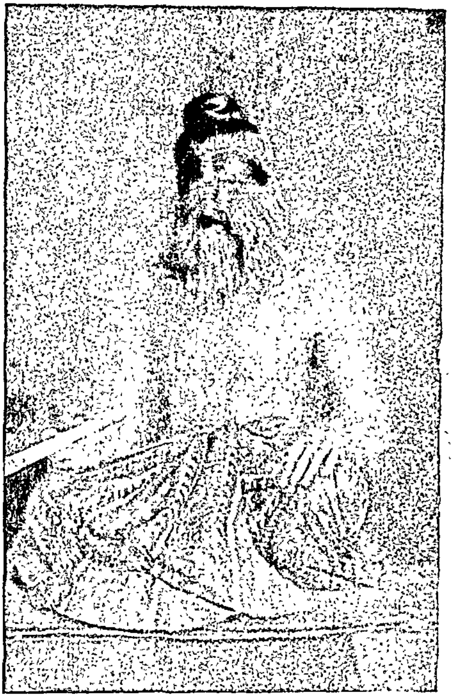
FIG. 1.



Maphoon and her younger son in 1855. From a drawing by Mr. Colesworthy Grant, by permission of Messrs. Smith, Elder, and Co.

Although the condition is congenital it develops itself slowly. Shevémaong and his hirsute daughter and grandson were not born universally hairy but with abnormal hairiness of the ears only; during their infancy and their earlier childhood they became by degrees universally hairy. As to the congenital deficiency of teeth which accompanies this condition Shevémaong at no time had any back teeth. When he was 30 years *old the only* teeth which he had were the four incisors in his upper jaw and the four incisors and the left canine in his lower jaw, but he had never lost any tooth. *His daughter, Maphoon, in adult age had developed only the* eight incisors. As to her son, of whom an illustration is given herewith (Fig. 2), I have no information as to the condition of his teeth. However, in the case of Andrian Jeftichjew *the back teeth of his upper jaw never appeared,* although the row of teeth was complete in his lower jaw. His son Feodor when three years old had an absolutely toothless upper jaw and possessed only the four incisors in his lower jaw.

FIG. 2.



Maphoon's younger son in middle age.

In the case portrayed in this paper the normally bare surfaces, but more particularly the face, are covered with an abundant growth of hair. The face is completely covered with thick and long hair excepting only the red margin of the lips and the upper eyelids, so that his face presents a scarcely human appearance. The hair growing on those regions which are usually bare is soft and fine in texture so as to resemble wool rather than ordinary hair. The hair is more abundant over the shoulders, back, and breast than over the abdomen and the limbs. The palms, the soles, and the last joints of the digits are absolutely bald.

For the portrait of Maphoon and her infant younger son I am indebted to the kindness of Dr. H. P. Cholmeley, whose father, the late Dr. Henry Cholmeley, of the Madras Service, went as medical officer to the escort of *a mission sent to the* Court of Ava by the then Governor-General of India in 1855 and saw the child when he was 14 months old. In the Narrative of the Mission, written by Captain Yule and published by Messrs. Smith, Elder, and Co., occurs the of deep inflammatory redness. On the swollen areola round the base of the nipple were situated six similar but smaller vesicles, each one being distinctly umbilicated. Four of them were on the inner side and the remaining two were on the upper and outer side of the base of the nipple. Over the greater part of the breast the skin was red and tense and the axillary glands were enlarged. There was great tenderness over the whole of the breast The temperature, taken in the mouth, was 100·6° F. and the pulse was 120.

Although the vesicles were suggestive of vaccinia in their appearance and in the history of their development the diagnosis of the case would probably have been somewhat puzzling from the unusual situation of the lesions but for my recollection of the fact that on Dec. 4th I had vaccinated the four children of this patient, none of whom had been previously submitted to the operation. In each case good results were obtained and when the arms were inspected on the tenth day they each presented four perfect though somewhat slowly developed vesicles. In the case of the two-month-old baby there was a good deal of inflammation and I therefore saw the child again on the 16th, when I found the vesicles had been broken and there was then a considerable amount of discharge from them which the mother afterwards told me continued for some days. I advised her to bathe the arm frequently and to dredge over it some boric powder. On questioning her closely I learnt that she had misunderstood my directions and had merely wiped away the discharge with a small piece of dry wool and that she was in the habit of putting the child to the breast immediately afterwards without previously washing her hands. In doing so she no doubt conveyed the vaccine matter directly from the baby's arm to the abraded surfaces on her own left nipple and thus unwittingly infected herself. It may be added that she had not been vaccinated since she was two years old.

Commercial-road, E.

# A Mirror
OF
# HOSPITAL PRACTICE,
## BRITISH AND FOREIGN.

> Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

## ST. GEORGE'S HOSPITAL.

### A CASE OF PERFORATED DUODENAL ULCER; OPERATION; RECOVERY.

(Under the care of Dr. CYRIL OGLE and Mr. A. MARMADUKE SHEILD.)

DUODENAL ulcer is decidedly more common in men while [illegible]stric ulcer is more frequent in women but the symptoms [illegible]duced by perforation of a duodenal ulcer resemble so [illegible]osely those arising from perforation of a gastric ulcer that a diagnosis between the two conditions is rarely possible before the abdomen is opened. It is very desirable that all cases should be recorded in which an operation has been performed for a perforated duodenal ulcer, whatever may have been the result, so that we may obtain data on which to found trustworthy statistics. For the notes of the case we are indebted to Mr. T. Crisp English.

A man, aged 36 years, walked into St. George's Hospital on July 26th, 1901, giving the following history. Four hours previously, when at work, he had been suddenly seized with violent abdominal pain which completely "doubled him up." This was accompanied by vomiting, collapse, and profuse sweating. In a short time he recovered but as the pain and vomiting continued he went to the hospital. He attributed these symptoms to having eaten half a pound of unripe cherries on the previous evening. In the past medical history of his life there had been no similar attack nor had there been any dyspepsia or other gastric trouble. Free indulgence in beer and spirits was admitted. On examination the patient presented an alcoholic aspect with marked acne rosacea. There was nothing in his appearance to suggest that he was seriously ill but he complained of intermittent colicky pain about the umbilicus and was sweating freely. There was slight tenderness in the epigastrium but there was no distension or rigidity of the abdominal wall which moved freely with respiration; the liver dulness was normal. There were no signs pointing to trouble in the region of the vermiform appendix. The pulse was 80, of good quality, and the temperature was 98·4° F. The only obvious symptoms, therefore, were colicky pain and slight epigastric tenderness and the diagnosis rested between intestinal colic resulting from the unripe cherries, biliary and renal colic, lead colic, and an acute peritoneal lesion in the stage of reaction.

The case was obviously one to be carefully watched and the patient was admitted by Dr. Cyril Ogle. Food by the mouth was withheld and the pain was treated by hot applications; enemata were administered and acted freely; no morphia was given throughout the case. The patient was at first much relieved but in the evening the pain again became severe, whilst the pulse-chart which had been carefully taken showed a progressive increase in frequency. At 6 P.M. it was 96, at 10 P.M. 110, at 12 midnight 116, and at 2 A.M. 128. The abdomen was now becoming markedly rigid and tender and vomiting occurred three times. The liver dulness, which as previously stated was normal on admission, now disappeared to the left of the right nipple line. On the following morning, after a consultation between Dr. Cyril Ogle and Mr. Marmaduke Sheild, a diagnosis of perforated gastric or duodenal ulcer was made and operation was determined upon. Mr. Sheild opened the abdomen in the middle line above the umbilicus (28 hours after perforation) and found free gas and a large quantity of bile-stained fluid in the peritoneal cavity, with early general peritonitis. A rapid examination of the stomach showed that this organ was intact, but on examining the duodenum a small perforation was found on its anterior aspect, just beyond the pylorus. This was closed with a double row of Lembert sutures which held readily and an omental graft was also sewn on the part of the operated area. The peritoneum was then thoroughly irrigated and cleansed with sponges, special attention being paid to the right kidney pouch and iliac fossa. The abdominal wound was closed, no drainage being employed. The operation lasted 25 minutes. The patient was kept on rectal feeding for four days, after which small quantities of peptonised milk were given and the amount was gradually increased. There was no return of pain or vomiting; the bowels were very freely opened by enemata containing one drachm of magnesium sulphate, one and a half drachms of glycerine, and water to four ounces. The wound healed perfectly and recovery was complete, the patient getting up at the end of the third week.

*Remarks by* Mr. ENGLISH.—Very few cases are on record of successful operation for perforated duodenal ulcer. Indeed, Mr. B. G. A. Moynihan[1] in an exhaustive examination of all the recorded cases, could only find eight instances of recovery. Within the last few years this subject has come prominently under the notice of surgeons and it is of importance that all cases, fatal or otherwise, should be reported, that in this way a reliable foundation may be built on which to extend our knowledge of the disease.

In connexion with the above case may be related another case of perforated duodenal ulcer in which death took place shortly after admission to the hospital, on May 11th, 1901. The patient was a dairyman, aged 32 years, who for one week had suffered from indigestion with vomiting. On May 10th at 11 A.M. he was seized with sudden agonising pain in the abdomen followed by severe vomiting and profound collapse. He was taken home and seen by a medical man. The pain and vomiting continued and the abdomen became distended but the patient was not sent to hospital until 9.30 P.M. on May 11th. On admission he was extremely pale and collapsed, the radial pulse could scarcely be felt, the temperature was 96° F., and the extremities were cold. Intense abdominal pain was complained of. The abdomen was greatly distended, tender, and rigid. Liver dulness was completely absent, a tympanitic note being obtained all over. In spite of full doses of strychnine subcutaneously, brandy, &c., he died in about half an hour, 35 hours after perforation. The necropsy revealed advanced general peritonitis, with much gas and fluid in the peritoneal cavity. In the upper aspect of the

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[1] THE LANCET, Dec. 14th, 1901, p. 1656.

There was also a recurrence in the right (remaining) breast. The bronchitis got better but the patient remained very weak and emaciated, and suffered from dyspnœa on exertion together with frequent asthmatic attacks. In January, 1901, she was seen in consultation with Dr. C. R. Box. There was a tumour in the right breast with enlargement of the axillary glands, also a small flat tumour in the skin behind the left ear. She complained of shortness of breath and attacks of dyspnœa at night. There was evident stridor which was bilateral. The chest was fairly resonant save at the left base where the vocal fremitus was diminished. There was still, therefore, clear evidence of intra-thoracic pressure. The catamenia had ceased during the illness in October, 1899, and had not reappeared. Oöphorectomy with subsequent thyroid feeding was recommended. This was consented to, and the operation was performed on March 11th, 1901. One ovary was found to be atrophic, the other appeared normal. Thyroid feeding was commenced early. On March 26th (15 days after the operation) the tumour in the breast and that behind the ear were both thought to be smaller.

The patient came up to be seen on May 14th (two months after the operation). She was clearly much better and stronger. The tumour in the right breast and the glands in the axilla had almost disappeared and the recurrence behind the left ear was also much smaller and the stridor had disappeared. The breath sounds over the right lung were harsh and over the left lung faint. The stridor had disappeared. On March 4th, 1902 (a year after the operation and commencement of thyroid treatment), the patient had gained flesh, become much stronger, been nearly free from dyspnœa, and, in fact, was quite a different woman There was then a small tumour in the right breast (the patient said that at one time it had completely disappeared), and a lymphatic cord could be felt running up towards the axilla, but there were no enlarged glands in the axilla and the small growth behind the ear had disappeared. Dr. Box reported that the signs in the chest were practically unaltered since the examination of May, 1901—two months after the operation. The thyroid feeding was continued regularly for four months after the oöphorectomy and irregularly up to the present time.

Whatever may be the further history of this case, the great benefit which has been enjoyed for a year has entirely justified the operation. As both oöphorectomy and thyroid feeding were had recourse to this case throws no light on their relative efficiency, but Mr. Stanley Boyd gave no thyroid in his cases, and Mr. H T. Butlin found no benefit from thyroid feeding alone. Mr. F. Page and Dr. W. H. Bishop,[1] however, have recorded a case in which this treatment did much good, and in a recent paper by Mr A. M Sheild[2] reference is made to another case in which great relief is stated to have followed thyroid feeding without oöphorectomy. In cancer of the uterus Dr. R Bell of Glasgow[3] has recorded two cases cured or greatly benefited by thyroid treatment, and quite recently Dr. H. A. Beaver[4] has given us another such case. Thyroid feeding, too, as is well known, will greatly reduce or cure certain goitres, so there is nothing incredible in it benefiting other tumours. As our primary object is clinical and not scientific, it would seem best in the present state of knowledge to give thyroid and to continue it, if it produces no ill-effect, for the rest of the patient's life Occasionally in cancer of the breast recurrence occurs only very late—in another case the disease reappeared 11 years after the original operation. Now one explanation of these cases is that a focus of disease has been lying dormant till it is stimulated into active growth by some change in the metabolism of the body, in which the partial atrophy of the thyroid which occurs with advancing years may be a factor It would therefore be rash to conclude that there can be no use in these cases in thyroid feeding.

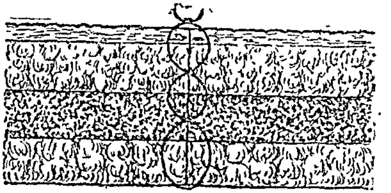
Devonshire place, W.

## A NEW DEEP SUTURE.

By S. L. Woolmer, M.R.C.S. Eng., L.S.A.

I BEG to introduce to the profession a new form of deep suture which has in my hands proved very useful and which must commend itself where sutures have to be applied in superimposed planes. In all laparotomy wounds, in wounds of the body involving muscles and tendons, and in amputations, the general rule has been to suture each layer separately, and of these layers, when they are three, two become necessarily "buried." Only surgeons whose experience is extensive know what are the ulterior results of many buried sutures in spite of their perfect asepticity. The suture which I propose overcomes all objections which can be laid to the account of permanent buried sutures, for the reason that it is only a *temporary* buried suture. It also saves time in its application, as there is only one knot to be tied and one pair of suture ends to be cut off, instead of three, when the suture is applied separately to each plane.

The illustration represents its use in a case of laparotomy, where its application first suggested itself to me. A piece of silkworm gut of sufficient length is threaded with a double needle and the first insertion is made at the bottom of the wound, including subperitoneal fat and peritoneum. The needle is then carried across the peritoneal section and made to emerge in the subperitoneal fat of the other side at a point opposite that of its first entrance. Thence it is carried across the wound and made to penetrate the two layers of the aponeurosis within the rectus muscle. The other needle is now made to embrace the opposite side and is then crossed to penetrate the tegument, the suture being completed by the first needle, which issues from the skin on the opposite side. The suture is tightened with a slight rocking movement and tied in the ordinary manner. In order to effect its removal the silkworm gut is pulled upon on one side of the knot and then cut close, whereupon it recedes within the skin. Slight traction upon the knot is sufficient to withdraw it It will thus be seen that one can secure perfect apposition of a deep wound without any of the disadvantages which accompany a permanent buried suture. I have only applied it in a case of laparotomy, a deep incised wound of the muscles of the forearm, and an amputation of the thigh, but its applications are obvious and extensive For example, it should be the ideal suture in a case of ventrofixation of the womb.



Section of tissues showing suture in position.

I have not seen this form of suture described in any work of reference within my reach and if I am guilty of piracy the act has been unintentional.

Concordia, Argentine Republic

## NOTE ON ACCIDENTAL VACCINAL INFECTION OF THE NIPPLE.

By Frederick Spurr, L.S.A.

ALTHOUGH accidental vaccination is by no means an unheard of occurrence the following case is sufficiently unusual to be worth recording.

On Dec. 25th, 1901, a married woman, 34 years of age, came to me complaining of great pain and tenderness in the left breast, soreness of the nipple, and a painful swelling in the axilla of the same side She had had four children, all of them living, the last confinement taking place two months before She had suckled all her children and had previously suffered from "cracked" nipples She informed me that for several weeks the left nipple had been slightly "cracked" and sore at intervals On Thursday, Dec 19th, she noticed several whitish spots on and around the nipple, which became larger from day to day and more and more painful, but it was not until Christmas Day that she sought advice. On examining the breast I found the nipple swollen, reddened, and having an areola of intense inflammation round its base. This inflamed areola extended for about half an inch beyond the root of the nipple and was quite œdematous in appearance. On the inner side of the nipple itself there was a circular vesicle, one-third of an inch in diameter, with raised margin and a depressed centre, surrounded by a zone

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[1] THE LANCET, May 28th, 1898, p. 1460.
[2] THE LANCET, March 8th, 1902, p. 647 (Case 15).
[3] British Gynæcological Journal, August, 1896.
[4] Brit. Med. Jour., Feb 1st, 1902.

# Medical Societies.

## MEDICAL SOCIETY OF LONDON.

*Discussion on the Treatment of Puerperal Eclampsia.*

A MEETING of this society was held on March 24th, Dr. W. H. ALLCHIN, the President, being in the chair.

Dr. G. ERNEST HERMAN opened a discussion on the treatment of puerperal eclampsia by a paper entitled, "Some Points in the Treatment of Eclampsia." The two points, he said, to which he would confine his attention were (1) Was emptying the uterus the appropriate treatment and would it stop the fits? and (2) the use of the tepid bath in the treatment of the condition. Dr. Herman quoted the teaching of old and recent writers to the effect that emptying the uterus stopped the fits and that therefore this procedure should be the first thing in treatment. He pointed out that although this had been taught for at least three generations its recent defenders tacitly recognised that it still needed proof. He brought forward statistics drawn from the practice of many lying-in hospitals, based upon a large number of cases, and showed that in every institution in which experience was large enough it was found that fits continued after delivery about as often as they ceased with it. He showed that the statement that "after delivery the fits at once cease" could not possibly be reconciled with the facts. But even if the fits did not at once cease, perhaps the acceleration of delivery might yet favour recovery? Dr. Herman inquired if this were so and he found that in the most recent maternities, conducted in the best manner with strict antisepsis, the mortality of eclampsia cases delivered naturally and of those in which the emptying of the uterus was accelerated was about the same. In some institutions in pre-antiseptic times the mortality of accelerated delivery had been in eclampsia cases much higher than that of those allowed to be naturally delivered; and this would probably be so again were it taught that labour in all circumstances should be induced. Dr. Herman then referred to those cases of eclampsia in which death took place by steadily rising temperature and pulse. He thought that the most hopeful and reasonable treatment of such cases was to bring down temperature with the tepid bath. He related a case in which, with a temperature of 105° F. and a pulse of 170, the former was reduced to 102° by the bath and recovery followed. He also referred to a somewhat similar case in private practice.

Dr. J. M. AMAND ROUTH remarked that the prevailing belief in the treatment of emptying the uterus depended on the reasons given for the operation. It was generally admitted that the nephritis was largely dependent upon the toxic condition of the blood, a condition which was largely relieved when the child and the after-birth came away. The treatment by the tepid bath was not always so successful as in the case quoted by Dr. Herman; and he (Dr. Routh) narrated a case in illustration. The temperature, which went up to 107°, was reduced to 101° several times but the patient died. After death the axillary temperature was 109°.

Dr. F. J. MCCANN remarked that puerperal eclampsia was now known not to be due to pressure on the vessels and he quoted some older authors who taught that rapid delivery was not the correct treatment. Morphia and saline injections evidently aided the tepid bath in Dr. Herman's case. The fact that the fits continued after delivery did not prove that emptying the uterus was not the correct treatment. The fits often underwent considerable diminution after delivery though they might not altogether cease.

Dr. W. J. GOW remarked that the actual pathology of the disease was unknown. A certain number of patients in these cases died and others got well whatever was done, and the real question was whether treatment aided the recovery of those who would otherwise die. The appropriate treatment would be to eliminate the poison on which the convulsions depended. Failing this half measures might be adopted such as calming the nervous system. His opinion was that the mere process of induction of premature labour aggravated the fits, though the emptying of the uterus might ultimately relieve them. Morphia or chloroform with an expectant treatment was preferable to more violent methods.

Dr. H. CAMPBELL POPE referred to cases of eclampsia which occurred largely in one particular village in which there seemed to be a special tendency to the disease.

Dr. W. RIVERS POLLOCK remarked that whatever was done violent methods for the rapid induction of labour such as those suggested by Dührssen should not be adopted, though milder methods might be applicable.

Mr. JONATHAN HUTCHINSON, jun., asked whether trephining the head might not be useful. He had seen one case in which the patient, a male, suffering from eclampsia, had received immediate relief in this way.

Dr. R. A. GIBBONS remarked that the etiology of the condition was uncertain. It was, at any rate, a poison which could produce rapid degeneration of the vessels of the liver and other large glands. The patient might die from the intensity of this poison. Anything, therefore, which could dilute the poison was useful and that was why he advocated the use of saline injections. His experience was that the outlook was more favourable when the uterus was empty—though he did not always advocate artificial means. As a means of prevention the urine of pregnant women should be more frequently examined. If there was a large amount of albumin premature labour was undoubtedly indicated even although the patient seemed to be in apparent health. He mentioned cases in illustration.

Dr. G. F. BLACKER questioned the advisability of interfering with the uterus. There were, in his opinion, three indications: (1) to lessen the reflex excitability of the nervous system; (2) to eliminate the poison, which could be done by venesection, even to the extent of 500 cubic centimetres at a time; and (3) to dilute the poison remaining in the blood which could best be done by the intravenous injection of saline solution up to about 1000 cubic centimetres at a time.

Dr. M. HANDFIELD-JONES expressed himself as being in general agreement with the author of the paper. He referred to a woman in whom three pregnancies were all attended by eclampsia. He emphasised the importance of treating the renal inadequacy which appeared to exist in cases of eclampsia, and in some of these cases the emptying of the uterus might very well be considered before the convulsions supervened. There were enormous differences in the clinical features of the condition. He would certainly not abstain from the operation of inducing labour in all cases, even when in presence of eclampsia.

Dr. HERMAN, in replying, said that his chief object had been to controvert the emphatic statement in the current text-books that when the uterus was emptied the fits ceased. As a prophylactic treatment he fully believed in inducing premature labour when there was much albumin in the urine. In treating the fits bleeding was a good treatment. If labour was induced in presence of convulsions Cæsarean section was undoubtedly the best method.

## HARVEIAN SOCIETY OF LONDON.

*Exhibition of Cases.*

A MEETING of this society was held on March 20th, Mr. W. WATSON CHEYNE, the President, being in the chair.

Mr. E. W. ROUGHTON showed a child, aged seven months, after Operation for Intussusception. Four weeks previously the child was brought to him with the complaint that it had been sick more or less continuously since last Christmas, and that on the previous evening it was taken considerably worse and began to pass blood and slime. Intussusception was at once suspected, and on palpation a small swelling was found above and to the right of the umbilicus. Injection was not resorted to but the abdomen was at once opened and an intussusception of the ileo-cæcal variety was found which had only travelled as far as the hepatic flexure of the colon. It was reduced with ease. Mr. Roughton afterwards noticed that the vermiform appendix presented a bruised appearance, and he accordingly removed it.—The PRESIDENT said that he had taken a fancy to combining the two methods—that of injection and of abdominal section. He opened the abdomen and located the intussusception and then injected fluid slowly per rectum. Then if the fluid did not seem to be doing good the bowel could be brought out and the intussusception removed.

Mr. ROUGHTON showed another case in a child, aged 13 months, who was operated upon at the age of four months when the symptoms had lasted 24 hours. He reduced the intussusception easily except the last two inches, but that occupied a quarter of an hour and was very troublesome.—Dr. W. CAYLEY supported the combined method of reducing first part of the duodenum just beyond the pylorus was a sharply punched-out ulcer of about the size of a threepenny-piece, with a small circular perforation at the bottom of it. There were no adhesions or thickening round the ulcer.

The first case forms an excellent illustration of a fact which is, perhaps, not sufficiently emphasised—namely, that there frequently exists a well-marked stage of reaction in acute peritoneal lesions. Failure to recognise this has frequently led to errors in diagnosis and serious delay in treatment. *Three distinct stages may be described in these cases.* First, the stage of collapse, which is usually profound and which with the agonising pain and vomiting forms the clinical condition known as "peritonism." A history of the *sudden onset of these symptoms in a healthy individual* is strongly suggestive of some very serious lesion within the abdomen and forms a valuable aid in the diagnosis of the condition. *The second stage is that of reaction and this may prove very misleading.* The patient rallies from the initial shock, the general condition improves, whilst the pulse and temperature may be normal and the abdomen may present no evidence of serious mischief. The patients may, as in the case related above, walk into a hospital with the contents of their intestines leaking into the peritoneal cavity. If first seen in this stage, as is frequently the case, a too hopeful view is apt to be taken, the patient is not carefully watched, and thus by delay the chances of recovery are minimised. Should morphia, as is usually the case, have been given freely the symptoms are still further obscured. The third stage is that of the onset of obvious peritonitis, in which the general condition progressively deteriorates, the pulse increases in frequency, and the condition of the abdomen points unmistakably to a widespread infection of the peritoneum. Progressive quickening of the pulse is a sign *of the utmost importance.*

It is noteworthy that vomiting in cases of perforated duodenal ulcer is usually pronounced and persistent from the beginning, contrasting with the vomiting in perforated gastric ulcer, which occurs as an initial symptom in about 40 per cent. of the cases and rarely persists. The mortality of the affection is necessarily very high. Mr. Moynihan places the mortality of cases operated upon at 84·6 per cent. It must, however, be remembered that it is certain that many of the fatal cases are not recorded, whilst, on the other hand, it is probable that some perforations are sealed by the formation of adhesions and that a natural cure results. In still other instances abscesses have formed and these have been known to "*track down*" behind the peritoneum. *One* of the principal operative difficulties is to find the ulcer when this is small and situated towards the posterior aspect of the gut; indeed, the lesion has repeatedly been "missed" by operators and has actually only been discovered with difficulty at the necropsy.

Dr. Cyril Ogle and Mr Marmaduke Sheild kindly gave me permission to publish this case.

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# EDINBURGH ROYAL INFIRMARY.

## A CASE OF TABES WITH ACUTELY DEVELOPED ATAXIA IN WHICH GREAT AND RAPID IMPROVEMENT RESULTED FROM FRENKEL'S PLAN OF TREATMENT.

(Under the care of Dr. BYROM BRAMWELL )

THE value of Frenkel's *treatment of locomotor ataxia* is by no means yet generally acknowledged and therefore the following case will be of interest. In the rapid onset of the ataxia and its almost equally rapid disappearance, even though Frenkel's treatment was employed, Dr. Bramwell's case differs markedly from most cases of tabes and therefore it does not, perhaps, prove very clearly the benefit of this *form* of treatment.

The patient was a married man, aged 35 years. For five years he had been a barman and for 16 years previously a ship-steward. He was admitted into the Edinburgh Royal Infirmary on Jan. 22nd, 1902, because of inability either to stand or to walk. He had enjoyed good health until the present illness commenced. He absolutely denied having had syphilis or gonorrhœa There was no suspicion of alcoholic excess; his average allowance of alcoholic liquor was four glasses of beer per week; he did *not* take more than 12 glasses of whisky per annum. He was not a heavy smoker. For six months before the inability to walk developed he had had some, but only slight, shooting pains in the legs, more especially the left leg, which was sometimes swollen at night, the result, he thought, of varicose veins. He had occasionally experienced a dull *pain in the* back and some little difficulty in micturition, having to "force" a little to get the urine away. The inability to walk developed rapidly on Jan. 13th, 1902. For a fortnight before this date he had felt some stiffness and "pins and needles" in his legs and feet but had no difficulty in walking *in the dark. He was in the habit of walking from his place* of business to his house—a distance of about a mile—every night at 12 o'clock. On Sunday, Jan. 12th, he walked three miles. On the 13th he had great difficulty in walking from one room to another and on the 14th he was quite unable either to stand or to walk.

On examination it was found that the inability to stand and walk was due to ataxia. There was no paralysis. The muscularity of the legs was good. The movements of the legs were wildly ataxic. There was no ataxia in the arms. When the eyes were closed there was *total loss of the* sense of position, both during and after passive movements, in the lower extremities. Occasional shooting (lightning) pains were complained of in the legs (thighs and calves). There was some varicosity of the veins of the left leg. The left calf measured 12½ inches and the right calf 11¾ inches in circumference. The patient was a short, spare man. The knee-jerks and Achillis-jerks were completely absent, even after reinforcement; the deep reflexes in the upper extremities were present but not exaggerated; the jaw-jerk was present. *The direct muscular excitability of the anterior* and posterior muscles of the leg and of the quadriceps group was slightly increased; there was no myoidema contraction. The plantar reflex was very active in both legs, the toe *movement being flexion; the cremasteric reflex was absent* on both sides; the abdominal reflex was present but slight. The pupils were unequal in size and markedly dilated; the right measured eight millimetres and the left 10 millimetres; *they were quite insensible to light* and only contracted very slightly in the act of accommodation, the right pupil becoming six millimetres and the left eight millimetres in size; they did not dilate on powerful stimulation (pinching and faradic irritation) of the skin of the neck. There was well-marked thoracic and ulnar analgesia and there were considerable analgesia and anæsthesia of the lower extremities. Biernacki's sign was not present. There was also marked analgesia of the muscles of the calf. There *was some, but only slight,* hypotonia. There was no girdle sensation. A slight dull pain in the "small of the back" was occasionally experienced. Slight difficulty in micturition (necessitating "forcing") was occasionally *experienced; the* bowels were regular; there was little or no loss of sexual desire and power. There had never been diplopia or ptosis; the ocular movements and the optic discs were normal; the special senses were normal; there were no crises and no trophic or vaso-motor derangements. The mental functions were unimpaired, there was no articulatory defect, and there were no facial or tongue tremors.

A striking and rapid improvement resulted from Frenkel's plan of treatment. *On Jan. 22nd the patient was unable to stand or to walk, the movements of the legs being wildly* ataxic. Frenkel's treatment was commenced on the 27th. In the course of 10 days (on Feb. 7th) the patient was *able to stand and to walk with the help of a go-cart.* A week later (the 14th) he was able to walk with the help of two sticks. On March 5th he could walk steadily and well with sticks and he could also walk across the room fairly *well and without a marked ataxic gait without sticks*—i.e., totally unsupported.

*Remarks by Dr.* BRAMWELL.—The case is interesting because of the *following features*;—1. The absolute and apparently quite straightforward denial of the patient that he had ever had syphilis or gonorrhœa. 2. The rapidity with which the ataxia was developed. I have lately analysed 155 cases of tabes which came under my notice and in only three of them was the ataxia very rapidly developed. 3. The dilated condition of the pupils. In 104 of the 155 cases of tabes which I have analysed the size of the pupils was mentioned in the notes. *In 69 of these 104 cases, or 66·3* per cent., the pupils were contracted (below three millimetres); *in 27 cases, or 25·9 per cent.,* they were of medium size (between five and three millimetres); and in only eight *cases, or 7·6 per cent*, they were dilated (above five millimetres). 4. The rapid improvement which resulted from Frenkel's method of treatment.

number of rings and patches studded over the upper arms and deltoid regions. The faint red margin and the fawn centre were conspicuous and offered a contrast to the seborrhœic patch on the back with its greater degree of scaliness and rougher surface.

Mr. C. W. Cathcart showed the following cases:—1. A man whose right arm had been caught between two rollers in a paper factory. He presented every indication of complete paralysis of the brachial plexus as well as complete loss of sensation in the areas supplied by these nerves; not even the intercosto-humeral nerve had escaped. There seemed to be a slight action of the subclavius and the serratus magnus muscles. On making an incision in the neck no trace of the brachial plexus could be found, but merely a mass of scar tissue. The separated ends were so distant that the clavicle was cut through and a graft of the two ends was made. As yet no advantage had resulted from this operation. 2. Mr. Cathcart contrasted the above with a case of partial rupture (the lower cords) of the left brachial plexus in a man, the result of a fall. The eighth cervical nerve and the first dorsal nerve had been ruptured as well as part of the seventh cervical nerve possibly. 3. A man, aged 66 years, who had suffered from a hernia for some time. It had come down on several occasions but had always been replaceable except on this last occasion when it could not be reduced. He was operated on 24 hours after the strangulation had occurred and the bowel was then quite gangrenous. As the patient seemed to be fairly strong the gangrenous part of the bowel was excised and the healthy extremities were at once sutured with silk sutures. Recovery was going on satisfactorily. 4. A child who had fallen and later had developed cerebral symptoms, unconsciousness, fits, restlessness, and dilatation of the pupils. There had been a discharge from the right ear for some time antecedent to the injury but when examined this discharge was mixed with blood. The indications were enough to warrant the opening of the skull in the mastoid region. This was done but no abscess was found. On opening the dura mater, however, much blood-stained fluid escaped, as there had been fracture of the base of the skull. The child at once improved and the case had gone on successfully since. 5. A case of Bazin's Malady in a woman who was first seen in November, 1901, with Multiple Ulcers on the Legs. These were not thought to be syphilitic or tuberculous then and so they were scraped and carbolic acid was applied. Mr. Cathcart expected that they would have healed up at once but in a few days they were found to be again breaking down. The ulcers were treated again still more energetically. Dr. Allan Jamieson was asked to see the case and he diagnosed it as one of Bazin's disease. Mr. Jonathan Hutchinson had described this disease as an intractable form of ulceration most often mistaken for syphilis, but it was probably a tuberculous lesion, though no tubercle bacilli had been found to be present. The case had improved greatly under salicylic and creasote plaster with a later application of ichthyol and zinc plaster.

Dr. Byrom Bramwell showed two cases. 1. A man in whom the Stereognostic Sense in the Left Hand was for a time completely lost. He did not know if an article in his pocket were a coin, key, or knife. 2. A case of Bright's Disease in which Marked Diuresis resulted from the administration of boric acid when other diuretics had failed to increase the urinary flow.

Mr. H. Alexis Thomson demonstrated the following cases. 1. A patient, a young man, after Suture of a Penetrating Wound of the Stomach. A gouge had been pushed through the abdominal wall below and to the left of the umbilicus and being directed upwards and backwards had penetrated the anterior wall of the stomach close to the lesser curvature. The case seemed at first trivial as the patient's symptoms were not severe. Later, however, he began to vomit blood and although a probe entered only three quarters of an inch into the wound it was determined to open the abdomen. On doing so the bowels were found to be covered with blood and an opening allowing the tip of the finger to be passed in was present in the stomach. 2. A man, aged 61 years. after Operation for Irreducible Inguinal Hernia containing a Large Diverticulum from the Urinary Bladder.

Dr. G. A. Gibson showed two cases. 1. An Aberrant Case of Polyneuritis simulating Landry's Disease. The patient had had no infectious disease since childhood or any accident except a fall on the bridge of a steamer due, Dr. Gibson thought, to the disease and not a cause of it. There was an almost complete paralysis of both lower extremities as well as of the right arm and, to a great extent, the left also. There was a total loss of all reflex phenomena as well as a loss of tone in the muscles which began to waste. There was no diminution in the sensibility but some subjective disturbances, as pain on pressure. There was no reaction of degeneration. 2. A patient with Pyloric Stenosis in whom pyloroplasty had been done by Mr. Cotterill. The patient was 45 years of age and he had suffered from dyspeptic symptoms for three years. About three months previously he had suffered greatly from vomiting and had lost weight rapidly. There was a total absence of free hydrochloric acid in the gastric secretion as well as a great diminution of the total acidity; no lactic acid was present. The stomach reached to one inch below the umbilicus. No peristaltic movements occurred in the gastric walls and splashing easily took place. Examination of the blood showed no pathological leucocytosis. The case was not one of atonic dilatation. Dr. Gibson was inclined to think that it was not a malignant contraction. Mr. Cotterill found it to be a cicatricial contraction of the pyloric opening. The patient had increased nearly one stone in weight since the operation.

Dr. Gibson also showed a Brain from which a cerebellar tumour had been removed.

Mr. Wallace showed (for Professor Chiene) three cases of Injury to the Head. 1. A patient who had received a severe injury to the right side of the head three years ago. The wound was treated and he recovered well at the time, but a year subsequently he developed fits to a very great degree, 180 or so in 24 hours, and even passed into the status epilepticus frequently. Professor Chiene operated, reflecting a large flap, and found the scalp, the dura mater, and the bone all united. These were separated from one another and the patient now felt better and had had no recurrence of the fits. 2. A boy, aged 11 years, who received an injury to the forehead. 10 days subsequently his mental character underwent a change; he quarrelled and fought with his brother and later developed convulsions. This condition continued for a year. At the operation a depression was found, the bone was thickened, and the dura mater was adherent. These were separated and for a time improvement seemed to continue but now this was very doubtful. 3. A patient who received an injury to the left parietal region of the skull 15 weeks previously. There was some paresis of the right arm and leg and operation seemed to be indicated as he was beginning to develop fits.

Dr. Norman Walker demonstrated three cases. 1. A child showing Urticaria Pigmentosa. The yellow raised spots when examined microscopically were seen to consist of Ehrlich's mast cells. The prognosis was that when such patients reached the age of from 18 to 20 years the disease disappeared. 2. A case of Rodent Cancer of the Tip of the Nose in a woman who was treated and cured by arsenious acid. The part so treated sloughed and came away *en masse*. There was a tiny recurrence in this case necessitating a second application but the cure was now complete. 3. A case of Mild Ichthyosis in a boy. This disease was commonly stated to be congenital. As a matter of fact it was not so but was hereditary, commencing at the second year of life. The child was being treated by small doses of thyroid extract.

Dr. Jamieson demonstrated the new Marshall and Wood's Lamp for the treatment of Lupus by light, which has just been installed in a room set apart for this treatment and for that of lupus and rodent ulcer by the x rays.

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# ROYAL ACADEMY OF MEDICINE IN IRELAND.

## Section of Medicine.

### *Pseudo-elephantiasis.—X Rays in Medical Diagnosis.*

A meeting of this section was held on March 7th, Sir Christopher Nixon, the President, being in the chair.

Dr. William J. Thompson showed a case of Pseudo-elephantiasis. The patient, a woman, 64 years of age, had been admitted to Jervis-street Hospital, Dublin, a few days previously with an enormously enlarged spleen which extended downwards almost to the crest of the ilium and inwards as far as the umbilicus. Further examination revealed an abnormal condition of the left leg which she had never before shown to anyone or spoken of in any way. It might, Dr. Thompson thought, be classed as a case of pseudo-elephantiasis. Her family history was good. both her parents lived to advanced an intussusception. The great drawback to relying upon the older method of reduction by water alone was that it was impossible to tell whether the intussusception had been completely removed.—Dr. LEONARD G. GUTHRIE asked whether Mr. Roughton had had experience of the results of leaving such cases alone. He had met with one case of so-called "nature's cure." A child, aged 15 months, had signs of obstruction lasting for some days. Six months previously there had been pain in the abdomen and the passage of blood and slime. A medical man who was called in told the mother that the bowel had become telescoped and that such cases were best left alone. Some days later the patient passed a gangrenous mass per anum. The child recovered for a time, but later was brought again and operated upon, when there was no trace of either cæcum or vermiform appendix. At the junction of the small and large bowels there was a constricted portion one and a half inches long which was twisted one and a half times on itself. The surgeon dissected that, used a Murphy's button, and sewed the ends together. The child, however, died in a few hours.—Mr. ROUGHTON, in reply, said that he did not propose to try the combined methods mentioned by the President. He had only operated upon three cases of intussusception and they had all recovered. Injection had not been used. He thought the fluid must distend the bowel and that would probably be a greater source of shock than manipulation outside. He did not see why such cases should not recover if operation were done sufficiently early, say within 24 hours.

The PRESIDENT showed a man who had Fractured both Patellæ, one of which had been treated by wiring and the other not, and he remarked that the secret was not to put the leg in a splint but to make the patient walk as soon as possible.

The PRESIDENT also showed a boy who a year ago fell from a parapet, a distance of 20 feet, and Fractured the Left Femur above the Condyles. When seen the lower end of the upper fragment was in the lower part of the popliteal space behind the tibia. Reduction was tried but every time the force was relaxed it shot back again. The application of heavy weights was also tried but without permanent success. Eventually he made a long incision, turned back everything, and exposed the bones. It was found that not only was the femur fractured across but the condyles were down in the joint and the ends of the bones went in between the condyles, separating the two halves. He therefore nailed on the outer side a plate of aluminium, fastening it with silver tacks. The leg was put into a splint and was kept there for a long time because the bone was so thin. For a time the lad had a stiff knee, but he could now bend it to a right angle. The plate was still *in situ*. He found that the use of the plate was an excellent measure in such cases and he had treated several by it It would be an advantage to have the plate and the nails of the same metal to obviate any possible electric action.

Mr. J. JACKSON CLARKE showed a boy the subject of Severe Spastic Paralysis one year after operation. He had shown the boy before operation and shortly afterwards. The right leg had been particularly stiff but was now more useful, though he still walked plantigrade. There had been a lot of clonic movement, and he performed an elongation of the tendo Achillis on the right leg. Instruments had been left off during the day but were resumed at night. He did not believe that tendon transplantation had been very useful for the condition. He thought that the prognosis after operation in such cases was more hopeful than he had been taught, and than he at one time believed.—Dr. E. CAUTLEY believed that anything which would assist such children to walk would also assist their mental development. He thought that in all cases of spastic paralysis any operation which would enable the patients to stand, and later to walk, should be done, even though the child might not be mentally competent. Once they associated with other children and could play with them the mental and physical development was improved.

Dr. GUTHRIE showed a case of Charcot's Disease in both Hip-joints in a woman, aged 44 years. 12 years ago she had slight pains in the limbs which did not last long. Three years ago they were much worse and of a lancinating character and there was numbness about the soles of the feet. At about that time a sudden swelling arose in the neighbourhood of the right hip but it was painless. But she thought that the bone was out because, she said, she could hear the bones rattle. Six months ago the other hip was similarly affected. The patient had the Argyll-Robertson pupil and the left pupil was larger than the right. Romberg's sign was marked and she had absence of the knee-jerks on both sides.

Dr. GUTHRIE next showed a case of Arrested Growth of the Forearm following Fracture, with Ischæmic Paralysis, in a man, aged 58 years. The condition of Volkmann's ischæmia was of 50 years' duration. At nine years of age the patient fractured both bones of his left forearm and tight bandaging and subsequent ulceration resulted in firm flexion of the wrist when the splints were taken off. The fingers were bent into the palm of the hand and there was no use in the fingers. Operations had since been performed with the view of increasing the length of the contracted tendons. There was a difference of two and a half inches in the measurement of the two sides. The bones of the left forearm were small, infantile in appearance, and delicate. The fingers were dwarfed and stumpy and somewhat glossy. Reaction to faradism could be obtained in both flexors and extensors. The condition had been known to follow the application of Esmarch's bandage. Volkmann thought that the condition was due to a condition similar to rigor mortis produced by stoppage of the circulation, while others were of opinion that it was a purely nervous phenomenon. The previously described cases had been in children and had not been watched long enough.—Mr. RAYMOND JOHNSON and Dr. JAMES TAYLOR took part in the discussion which followed.

## EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

*Exhibition of Cases, a Specimen, and a Lamp for the Treatment of Lupus.*

A SPECIAL clinical meeting of this society was held on March 19th, Professor T. R. FRASER, F.R.S., the President, being in the chair.

Mr. F. M. CAIRD showed (1) a girl after removal of an Intracranial Tumour; and (2) a woman after partial removal of an Intracranial Tumour.

Dr. FRANCIS D. BOYD demonstrated a case of Congenital Paraplegia.

Mr. DAVID WALLACE showed a patient after removal of 44 inches of Tuberculous Intestine.

Dr. W. ALLAN JAMIESON exhibited four interesting cases. The first was a case illustrating the combined features of Lupus Vulgaris and Lupus Erythematosus on the same patch. A country girl, aged 17 years, presented a cluster of nodules arranged in an annular form on the left cheek, conforming generally to the appearance of a patch of lupus vulgaris, but in the centre of the patch was a scaly spot of the size of a pea, the scales having the splintery character of those in lupus erythematosus, and on being removed showing the usual epidermic tags on their under surface. On the right ear near the lobe was a distinct patch of lupus vulgaris. The disease had lasted for a year. The second case was one of Lupus Erythematosus after prolonged treatment by quinine. The patient had been under observation for 16 years but the disease had existed longer. In June, 1900, there were two patches of the size of a crown piece on each cheek, no treatment having had any decided result. The patient was then placed on quinine, five grains three times a day, and up to the end of January, 1902, she had taken in all six ounces. Improvement began at once, and the former diseased area was now a fine scar. She had found out for herself what Unna so strongly insisted on—that dry applications suited best locally. The third case, one of Para-keratosis Variegata (Unna) was one of those which were shown by Dr. Jamieson at the meeting of the British Medical Association in Edinburgh in 1898. Little alteration had taken place since then. There was still the same mottling of the skin, the same smoothness and absence of hair, and the same crimson-red appearance which led Unna to term the cases "red men." The first case which Dr. Jamieson had met with was in a female, many years since. He still regarded the cases as akin to lichen planus. No treatment had produced any result. The fourth case was one of Pityriasis Maculata et Circinata The patient, a man, aged 40 years, had had a patch of seborrhœic dermatitis of the size of a florin midway between the scapulæ for three years, but a month since a blotch presenting the aspect of pityriasis rosea had appeared on one shoulder and there were now quite a vaccinia. A few days showed that it was only vaccinia with a generalised eruption. Dr. Hingston Fox went on to refer to the records of generalised vaccinia, pointing out the various forms: accessary vesicles around the primary ones; pocks elsewhere from accidental auto-inoculation; and a truly generalised rash as in this case. Acland had described it as "vaccinal eruptive fever," the eruption appearing from the fourth to the tenth day. The distribution was irregular. Recent cases described by Dr. Morrow, Dr. T. Colcott Fox, and Dr. W. T. Freeman showed implication of the whole *skin-surface, upper limbs, and upper half of the trunk,* and wrists alone respectively; but the face, mucous membranes, palms, and soles were scarcely ever affected. The irregular location, the multiform character of the rash, with quickly-maturing vesicles, and the slight prodromata and malaise, served to establish the diagnosis. In some cases the eruption had followed ingestion of vaccine lymph by the digestive system; in others an irritable state of the skin, congested by pyrexia, or broken in its continuity by dermatitis, seemed to be the cause. In the present case probably the catarrh of the fauces with pyrexia had determined the outbreak of the eruption and its distribution had been influenced by friction. In the often difficult diagnosis of modified small-pox it was well to bear in mind the occasional occurrence of generalised vaccinia.—Dr. Denning quoted a case where the patient had gone into the country from London in which pocks appeared, pronounced to be those of small-pox, 16 days after a successful vaccination.—Mr. F. R. Humphreys said that he had seen a case where a vaccination spot appeared under the clavicle and a rash on the face.—Mr. John Adams said that for a rash to appear after vaccination was a not unlikely thing. He had met with marked cases of vaccinia rash. These appeared frequently about the neck and vaccination was unlikely to take after a patient had been infected with small-pox, but he had known a child to be well vaccinated after four days' exposure to infection of small-pox who a little later developed small-pox. The malaise after vaccination after 20 years of age was considerable and seemed greater in revaccination than in primary vaccination. A great distinction between variola pocks and those of vaccinia was the constant size of the former and the variable size of the latter. Inoculation of vaccinia by swallowing seemed to be unlikely.—Mr. E. Carnall mentioned a type of rash after vaccination which was confined to the arms and face; it was not glazed and was short-lived.—Mr. F. J. P. Daly said that there were three types of rashes appearing after vaccination: papules over the back of the wrist, a pustular form, and an erythematous eruption scattered all over the skin, except on the face and hands, disappearing in a week.—Dr. Hingston Fox thought that Mr. Humphreys's case was a self-inoculated one and that Dr. Denning's case was one of small-pox. —Dr. John Adams quoted a case of a vaccinated child who had slept with a case of virulent small-pox.—Dr. W. A. Milligan showed a case of Paget's Disease. The patient was a woman, aged 52 years, who had married at 39 years of age, and had a child at the age of 40 years, whom she had suckled for 10 months. Menstruation left her suddenly at 45 years, and during the time from suckling the child up to 12 months previously the only thing that troubled her was a milky discharge every now and again. 12 months previously the left breast began to itch, and then the nipple became red and slightly ulcerated; it scabbed over but never healed. The redness gradually spread down over the whole areola which presented a raised brawny appearance. The breast gradually got more and more painful. When examined six weeks previously an enlarged gland was found in the axilla, but there was no definite involvement of gland tissue. Microscopic examination of the scrapings showed the presence of psorospermia.—Mr. J. H. Targett considered that the presence of psorosperms completed the case, but he did not think that they were the cause of the disease.

**Liverpool Medical Institution.**—A meeting of the Pathological and Microscopical Section of this institution was held on March 20th, Dr. W. B. Warrington being in the chair. (Dr. J. Barr occupied the chair during the later part of the meeting.)—Dr. Arthur Wallace showed a specimen of Tuberculosis of the Body of the Uterus removed by vaginal hysterectomy from a married woman, aged 40 years. The endometrium was chiefly affected, but the disease had also extended into the muscular layer. There was no evidence of tuberculosis in any other part of the body, so that the condition was probably the rare one of primary corporeal tuberculosis.—Mr. J. P. Martin showed a Hydrocephalic Brain from a boy, aged one and a half years. The circumference of the head was 23 inches and the weight of the brain was 17 ounces.—Dr. Warrington showed a specimen of Tubercle connected with a Small Artery in the Sylvian Fissure in a case of Tuberculous Meningitis. In the cerebro-spinal fluid withdrawn by lumbar puncture from the case lymphocytes were numerous but there was no other type of leucocyte.—Dr. Warrington also showed a specimen of blood from a typical case of Pernicious Anæmia. Megaloblasts were present but few in number, and also red cells with many granular particles deeply stained with methylene blue; these were regarded as degenerating megaloblasts.—Dr. R. J. Ewart showed specimens from cases of Bronchiectasis and Atrophy of the Cerebellum.—Dr. Warrington, Dr. A. J. Campbell, and Dr. A. S. F. Grünbaum took part in the discussion on the various specimens.—Dr. E. E. Glynn read a paper entitled, "Bacterial Investigations of the Water of Public Swimming Baths." He had directed his attention to the following points: (1) the total number of bacteria present in the water of the first-class and second-class baths at the beginning and end of the day; (2) the number and nature of the pathogenic organisms present; and (3) the source of the organisms. Samples of water were taken in sterilised flasks and plated on agar within an hour of leaving the bath; these plates were incubated at 37° C. and the number of bacteria present in a cubic centimetre of the bath-water was estimated. The colon bacillus was demonstrated by the method of Dr. McConkey—i.e., culture on bile salt agar. The majority of the observations were made at baths which were filled with fresh water every morning always derived from the same source. This water was practically sterile, containing less than three bacteria per cubic centimetre. An hour after the baths were opened the water gave 46 bacteria per cubic centimetre; these were derived mainly from the air and the walls of the baths, as a series of experiments showed that at the temperature of the baths (21° C.) the organisms concerned—i.e., those which grew on agar at 37° C.—did not multiply to any considerable extent. During the eight hours of the night the number of bacteria therefore rose from three to 46 per cubic centimetre; if this rate of increase were maintained at 9 P.M. the number should be about 200 per cubic centimetre. The examination of the water in the first-class plunge bath at 9 P.M. on five different occasions during the months of June and July gave an average of 4676 bacteria per cubic centimetre, the average number of bathers being 292; samples collected in the second-class bath on three occasions contained an average of 11,970 per cubic centimetre, the average number of bathers being 186. A calculation based on the capacity of the baths showed that the water removed from the skin and hair of each bather contained between 4,000,000,000 and 6,000,000,000 bacteria, excluding moulds and others which did not grow at 37° C. One source of pollution of the bath arose from a tiled corridor, about four feet wide, running round between the edge and the dressing-boxes; on this both the bathers and those waiting to bathe walked, with the result that soon after opening this was more or less muddy. To avoid this a bath should have two corridors—an inner one between the bath and the boxes and another outside the boxes, the latter being open back and front. With regard to the organisms discovered in the water streptococci were never found and staphylococcus aureus and citreus very rarely; staphylococcus albus was abundant in three varieties—pyogenes albus, epidermidis albus, and cereus albus. Bacillus coli was present in the bath at the end of the day to the number of eight per litre for each bather in the first-class and 48 for each bather in the second-class. Probably typhoid fever was never contracted in baths such as those investigated and the swallowing of water of the type analysed was quite innocuous. Various complaints had from time to time been ascribed to infection in baths but with doubtful accuracy; some who bathed constantly in the open complained of lassitude after swimming in a public bath; this could not be due to the quality of the water, but to its temperature and to defective ventilation. Liverpool was peculiarly fortunate in the number of its baths and the excellence of the water supplied to them.—In the discussion which followed the following speakers took part: Dr. W. Permewan, Dr. Barr, Dr. E. L. Anderson, Dr. Grünbaum, Dr. Matthews, Dr. Kelly, Dr. T. B. Grimsdale, and Dr. Bennett.

**Childhood Society.**—A meeting of this society was held on March 20th, Dr. James Kerr being in the chair. —Dr. Arthur Newsholme read a paper on the Lower Limit of ages, neither of them had ever been abroad, and she had never been out of the country. She had always been strong and healthy and had been a domestic servant for 40 years. About 30 years ago she first noticed a swelling in the upper and outer part of the leg, about the region of the great trochanter, which came on very slowly, gradually extended inwards (surrounding the leg) and downwards. This swelling at first was always moist on the surface, so much so that it kept her underclothing damp but, as far as the patient remembered, never stiffened the linen. In about seven years the whole leg down to the ankle was involved. At the time of her change of life, 23 years ago, she had some very severe attacks of uterine hæmorrhage which necessitated her resting in bed and she affirmed that while so resting the swelling in the upper part of the leg commenced to get smaller. She was never married and never had any trouble at her menstrual periods. The leg was at present about the same as it had been for the past 15 years, except that the exudations had stopped and the surface had lately become very dark in colour and quite rough. There were great thickening and enlargement between the knee and the ankle-joint. The measurement at the thickest point was 26 inches, at the same point on the right leg it was only 11½ inches. Since her admission into hospital the swelling had become much softer and less resisting, probably due to the rest in bed. The foot and as far on the ankle as the shoe fitted was scarcely swollen and the swelling above this hung quite over the foot when the patient stood up. From the thigh to the knee the swelling was not nearly so marked; the thickest part measured 24 inches and the measurement at the corresponding point on the opposite leg was 15 inches. Up to the time of her admission she was at work as a cook and had never had any pain. The urine contained no trace of albumin, sugar, or chyle. The woman was pale, thin, and emaciated, and she stated that for the past year she has lost flesh rapidly.—Professor E. J. McWeeney remarked that save for a moderate polymorphonuclear leucocytosis and an increase in large hyaline leucocytes of transitional type the blood exhibited no abnormality. He had observed three cases of this kind. In one lymphorrhœa was a prominent feature and the patient, a young man, ultimately died from septic poisoning. The two others were middle-aged men and were treated by amputation. In both cases he had satisfied himself by dissection that the cause of the lymphatic obstruction was chronic tuberculous lymphangitis. The histological features were interesting and comprised immense thickening of the epidermis, especially of the stratum lucidum and coroneum, without thickening of the true skin but with dilatation of the lymph spaces and general œdema. All fibrous structures showed marked overgrowth. The lymphatics were accompanied by streaks of small old infiltration, in which encysted giant cells of tuberculous character were embedded. The skin was about 10 or 12 times as thick as normal skin. In both of these cases he had convinced himself that the pseudo-elephantoid condition was of tuberculous origin and had confirmed his view by discovering the bacilli in one of them.—Sir George F. Duffey stated that not long ago he met with a similar case of pseudo-elephantiasis of both legs in a patient who had formerly suffered from eczema; he ascribed it to chronic lymphangitis excited by eczema. The blood showed nothing abnormal; it was carefully examined for filaria but none were found.—Mr. R. F. Tobin said that some years ago he met with a case of the disease. The importunity of the patient induced him to tie the femoral artery of the side affected, but the operation, which he performed contrary to his own opinion, did no good.

Dr. J. Magee Finny and Dr. E. J. M. Watson gave details of cases illustrating the use of the X Rays in the Diagnosis of Intra-thoracic Tumours. Dr. Finny claimed for the x rays a great utility in clearing up the doubts which must attend such cases as regards (*a*) the presence of a new growth or an aneurysm, (*b*) the pulsatile or non-pulsatile nature of the tremor, and (*c*) the exact position and dimensions of the tumour. He also submitted skiagrams which Dr. Watson had taken of three cases which occurred in 1901. Case 1 was an example of sarcoma of the right lung which occurred in a woman, aged 30 years, whose illness commenced with hæmoptysis. When admitted under Dr. Finny's care in Sir Patrick Dun's Hospital in February, 1901, the right side of the thorax was apparently full of fluid and was opaque to the x rays, so that no information was at that time afforded. Something more serious than pleural effusion was suspected because the right mamma and the subcutaneous tissue of the right side were thick and œdematous and the veins were varicose with a downward blood-stream. After 72 ounces of serum, clear and free from inflammatory or other morbid products, had been withdrawn, Dr. Watson took the skiagram now exhibited, and it was then evident that a tumour existed in front of, and to the right of, the vertebral column occupying more than three-fourths of the lung space below the level of the fourth rib and extending to within a short distance above the diaphragm. Although the tapping gave relief to the dyspnœa and some of the other symptoms, the solid œdema, the varicosity of the veins, and the other evidences of intra-thoracic pressure did not disappear, but rather increased, causing cyanosis and dysphagia, and the patient died at home four and a half months subsequently in an attack of breathlessness. No necropsy was obtainable. The disease was primary, and, considering the age of the patient, it was presumably sarcomatous and had its origin in the connective tissue of the glands in the posterior mediastinum. Cases 2 and 3 were examples of aneurysm of the aorta occurring in adult males, aged 42 and 54 years respectively; the first was an aneurysm of the arch, the latter was an aneurysm of the descending thoracic aorta. In Case 2 the x rays showed that the sac was much larger than physical examination could determine and extended quite as much to the left as to the right of the middle line. In Case 3 the x rays showed a very distinct shadow in the region of the aorta, above the heart, extending well to the left side, and, more than that, the tumour was seen by the screen to be distinctly pulsatile, enlarging with each systole of the heart. In both cases a modified Tufnell treatment was adopted and iodide of potassium was administered for five to seven weeks and both patients left hospital greatly benefited as regards relief from pain.

Dr. W. S. Haughton read a paper on the Use of the X Rays in Medical Diagnosis. He said that in his opinion x-ray examination in chest cases would eventually come into very general use. Before describing his method of examination he stated that the fluorescent screen was preferable to photography because cardiac movements disturbed the lung a good deal and although respiratory movements could be avoided by very short exposures the heart movements always spoiled the photographic result.—Dr. T. P. C. Kirkpatrick, Dr. Lane Joynt, and the President took part in the subsequent discussions.

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Hunterian Society.—An ordinary meeting of this society was held on March 12th, Dr. A. L. Galabin being in the chair.—Dr. Galabin delivered a Presidential address on the Annual Variation of Puerperal Fever compared with that of some Allied Diseases.—Dr. R. Hingston Fox read notes of a case of Vaccinia with a Generalised Eruption simulating Small-pox. A vigorous young man, aged 26 years, a student, was vaccinated with glycerinated calf-lymph. Two fellow-students vaccinated at the same time had ordinary vesicles without further symptoms. In the case under notice the vesicles were rather large; the area of redness around was about three inches in diameter. Upon the ninth day of vaccination he felt unwell. On the next day there was more malaise, but only slight, general pain. On the eleventh day he complained of sore spots on his back and kept his bed. The temperature was 102·6° F. and the pulse was 112. He was flushed, with furred tongue but not much prostration; the fauces were very red and swollen but no spots were visible on the palate. There was an eruption of spots at the root of the neck, chiefly about the inner end of the right clavicle, three or four more over both scapular regions, and a few indefinite papules about the nates, the right patella, and on the face. Those about the root of the neck, and especially two or three of those on the back, were quite indistinguishable from the pocks of variola, having a central hard pustule not collapsing on puncture and a red areola. On the next day the temperature was normal and the spots had slightly receded, the little pustules drying up and no fresh ones appearing. After this he quickly became well. On the twenty-fourth day of vaccination the spots were still present, consisting of a small central scab little raised above the surface of the skin and slight areola. The diagnosis presented at first much difficulty. The slight prodromata, the fewness of the spots, and the distribution, entirely avoiding the face, wrists, and ankles, were against small-pox. On the other hand, several of the pocks were exactly like those of variola, and it was thought possible that it might be that disease, greatly modified by the co-existence of active (inebriety) in its manifold forms. The period of time recommended was to be at least 12 months, as shorter periods were not to be relied upon for prolonged cases. During the quinquennial period ending 1884 there was a yearly average of three retreats and 71 patients annually admitted thereto, whereas in 1900 alone there were 20 licensed retreats and 422 patients admitted for treatment. After 20 years' experience this maintained advance was the strongest evidence of utility and sufficient proof that retreats were meeting the requirements of an increasing demand for institution treatment and control of inebriates.—An animated discussion followed in which the President, Dr. A. E. Larking, Mr. W. F. Chambers, Dr. P. G. Lewis, and others took part, and Dr. Norton replied.

PATHOLOGICAL SOCIETY OF MANCHESTER.—A meeting of this society was held on March 19th, Mr. J. Collier, the President, being in the chair.—Dr. W. Walter showed a Solid Tumour of the Right Ovary removed from a multipara, aged 39 years. The pedicle was fleshy and vascular. When drawing the tumour through the abdominal incision the fingers penetrated the capsule which was friable over a small area where the tumour was soft like putty and of a pink colour. The other ovary was atrophied and there was no ascites. On section the tumour was seen to be of the consistence of a pear, yellowish-white in colour, with a pink streak in the centre. Microscopically the stroma of the ovary was found to be extensively infiltrated with round cells resembling closely in appearance a sarcoma testis, but the arrangement of the cells permitted the possibility of a carcinomatous origin.—Dr. T. P. Cowen and Dr. J. Orr described a case of Syringomyelia with symptoms of Progressive Muscular Atrophy only, without Sensory Symptoms or Spastic Paralysis. The spinal cord was wasted and softened in its upper half. There were two cavities in the grey commissure surrounded by gliomatous tissue extending from the first cervical segment to the upper lumbar segments. The anterior one was the real central canal and was partially obliterated for almost its whole length but with occasional dilatations. The posterior one—a large cavity—had enlarged by gliomatosis and softening so as to invade almost the whole of the grey matter, especially in the mid-cervical and dorsal regions. There were marked ascending and descending degenerations.—Dr. Moore showed two specimens of Unsymmetrical Kidney and he referred to compensatory hypertrophy of the kidney.—Dr. W. M. Smith (Leeds) showed two Ovarian Tumours removed by operation.

# Reviews and Notices of Books.

*Selected Essays and Monographs, chiefly from English Sources* (BRAXTON HICKS, BODINGTON, HODGKIN, PAGET, HUMPHRY, EHLERS). With Obituary Notice of the Society's late Treasurer, Dr. W. Sedgwick Saunders. London: The New Sydenham Society. Vol. clxxiii. 325 pages text, 6 pages Report.

IT is announced in the preface to the present volume that it has been decided during the next five years to spend the funds of the New Sydenham Society almost entirely in the publication of a "Clinical Atlas of Illustrations of Disease," to abstain from undertaking the translation of any large works, and to refrain almost entirely from reprinting the works of English authors. In this volume, which will therefore be for a time at least the last of its kind, there are several monographs which are of interest chiefly from the historical point of view, and amongst these are three papers by Sir James Paget, one by Sir George Humphry, and Dr. Hodgkin's original article which contained the first description of the disease with which his name is associated. The collected papers of Dr. Braxton Hicks are presumably published in this volume chiefly with a view to place on permanent record in a readily accessible form some original work which might otherwise have been scattered abroad. The monographs of Sir James Paget are on Symmetry and Disease, on Disease of the Nipple, and on Osteitis Deformans It is not too much to say that these papers will prove of permanent interest. Sir George Humphry's note is on a case of Unilateral Hypertrophy of the Gums associated with other abnormalities, chiefly hypertrophic and unilateral. This brief article may well serve to show the younger surgeons of to-day the way in which such a paper should be written.

The most interesting of the contents of the volume appear to us to be the reprint of Dr. Bodington's pamphlet on the Cure of Consumption and Dr. Ehlers's History of Danish Lazar-houses in the Middle Ages. George Bodington was born at about the beginning of the last century, was educated at Magdalen College School, Oxford, was apprenticed to a surgeon at the age of 17 years, afterwards became a student at St. Bartholomew's Hospital, took the licence of the Society of Apothecaries in 1825, and immediately went into practice at Birmingham. He afterwards removed to Sutton Coldfield, Warwickshire, devoted most of his life to the treatment of the insane, and took considerable interest in the local affairs of the borough in which he lived. He was endowed with a large measure of common-sense and was a fearless writer. His chief title to fame is to be found in the paper which is contained in the present volume, and is due to the fact that he strongly insisted on the importance of fresh air at a time when the balance of medical opinion was directly opposed to its use and when physicians of the greatest respectability took every available means to keep it from consumptive patients who would have been the most benefited by its inhalation. "One mode of treatment prevailing," says Dr. Bodington, "consists in shutting the patients up in a close room, to exclude as far as possible the atmospheric air, and thus forcing them to breathe over and over again the same foul air contaminated with the diseased effluvia of their own persons." This, he maintained, was a treatment founded on the most erroneous principles, and "more deserving of reprobation than is even the apathetic indifference and desperate hopelessness generally entertained with regard to this disease." He goes on to condemn strongly the exhibition of tartarised antimony—"a fashionable medicine" and "a most destructive one." "Patients seldom long survive the use of this medicine when administered freely if the disease is much advanced unless an antidote to the poison be timely given." Dr. Bodington taught that "the most important remedial agent in the cure of consumption" was the free inhalation of a pure atmosphere—not "the impure air of a close room ...... but the air out of doors, early in the morning." Patients should walk if they could, otherwise "riding or carriage exercise should be employed." Dr. Bodington says that "the surest way in which a successful treatment can be arrived at by the medical man is by the reception under his own roof of the consumptive patient"—if the sanitary conditions of his house happen to be suitable. Special consideration is given to the sleeping-room which should be cool, airy, and properly ventilated. Dr. Bodington's paper did not revolutionise the practice of his time; it probably did not receive the attention it deserved. Its teaching, however, is well in accord with the present "mode."

Dr. Edward Ehlers's article on the Danish Lazar-houses in the Middle Ages contains a very large collection of miscellaneous information derived from various sources. In its present form it gives the reader the sort of pleasure which is to be derived from looking over a number of antiquarian notes in their natural form before they have been finally classified and digested. The article has three illustrations, one showing a Medical Visitation of a Leper (Strasburg, 1535), Satan striking Job with Leprosy (same date), and a Leper with his Rattle, from Franklin's "Vie Privée d'Autrefois, Hygiène," of which the original source is not stated. The title of Dr. Ehlers's article is a little misleading, for less than half of it is devoted to Danish lazar-houses. It is

Wells, and Civil Surgeons Sterne, Bowen, Pickering, Wilkinson, and Buckley have been discharged from hospital to duty.

### THE MEDICAL JOURNAL OF THE ITALIAN NAVY.

The *Annali di Medicina Navale* enters upon its eighth year of existence with a double number, comprising the parts for January and February, 1902, and consisting of 260 pages, rather more than half of which are devoted to reviews. In a prefatory note the editors apologise for the delay which has arisen from unforeseen causes and is by no means attributable to a lack of material. As a matter of fact they receive a continuous influx of important papers from their colleagues, some of whom are fortunate enough to be following university courses in Italy or elsewhere, while others are charged with the care of the sick in the various naval hospitals, with the sanitary superintendence of these and other establishments, with the supervision of the emigration department, and, in fine, with general medical and sanitary duty in different quarters of the world. Having such a wealth of matter there can be no difficulty in conducting the *Annali* in a satisfactory manner, but it is also the intention of the editors to keep their readers well abreast of all scientific progress wherever it may occur. In the present issue the leading article is by Dr. C. M. Belli who discusses the important question of "Bilge-water in Men-of-War" at considerable length and with much erudition. A shorter paper by Dr. Enrico Bindi on Operative Procedure in Cardiac Traumatic Lesions is also of considerable interest, being admirably illustrated.

### SUDDEN DEATHS IN THE RUSSIAN ARMY.

During the quinquennium ending December, 1898, there were 537 cases of sudden death among the soldiers occupying the Warsaw district, 204 of the fatalities being ascribed to disease, 223 to accident, and 110 to suicide. Dr. Scherkin, who is the author of a statistical paper on the subject in the *Voienno Medicinski Journal* for October, 1901, does not mention the exact strength of the troops concerned but merely enumerates the various units as follows: infantry, 57 regiments; Chasseurs, seven corps; garrison infantry, 16 regiments; garrison artillery, six battalions; field artillery, 11 brigades; siege artillery, seven batteries; cavalry, 25 regiments; Cossacks, six regiments; sappers, four battalions; pontoon-trains, two battalions; and railway corps, one battalion—in all 142 units, probably comprising about 125,000 men. Deaths from disease were classified as sudden when less than 24 hours had elapsed after admission to hospital.

### MEMORIAL TO THE LATE SURGEON-GENERAL W. NASH.

The following subscriptions to the above fund have been received since our last notification:—Lieutenant-Colonel E. A. H. Roe, £1 1*s.*; Colonel F. W. Moore, 10*s.*; and Sir J. Fayrer, K.C.S.I., £2 2*s.*, making a total of £23 2*s.*

# Correspondence.

"Audi alteram partem."

## SERUM REACTION IN MALIGNANT ENDOCARDITIS.

*To the Editors of* THE LANCET.

SIRS,—In THE LANCET of March 22nd, p. 817, is a report by Dr. W. Hale White and Mr. W. C. C. Pakes on a case of malignant endocarditis giving the serum reaction (so-called "Widal" reaction). Upon this I should like to offer a few remarks. I know that it is not quite fair to either author or critic to base arguments on an abstract report. Not having heard the paper read I must excuse myself that it is all I have to go upon. The points at issue are of some importance regarding the value of the test. The authors base the title of their paper on the fact that the serum in this case gave a reaction when diluted 1 in 20 with four strains of the typhoid bacillus and with a fifth partially at 1 in 200. Now I would submit that a reaction occurring in a dilution of 1 in 20 will not suffice for the diagnosis of enterica. The dilution is not high enough. This was pointed out some years ago by myself and others. It is, of course, not often that a blood is found which does react in this dilution, but they do occur occasionally, even in normal individuals. In the case of the fifth sample of typhoid bacillus the fact that it reacted partially in a dilution of 1 in 200 to my mind throws some doubt on the identity of the bacillus or its virulence must have been minimal.

I do not gather from the abstract what the time-limit was or whether the reaction was obtained only after the treatment with anti-streptococcus serum had commenced. Since many bloods will agglutinate if given sufficient time and since horse-serum also often spontaneously agglutinates typhoid bacilli in comparatively high dilution I think these are points of importance, especially the latter, since the reaction seems to have appeared only after treatment had been begun. Should any number of cases occur which give a positive reaction with suitable technique in cases *not* enterica the test will be practically valueless. I have not myself in the course of some experience (based on a dilution of a 1 in 33 and 30 minutes' time-limit) seen any *positive* results in cases where enterica, either past or present, or conferred immunity could be definitely excluded. *Negative* results in cases which are clinically thought to be enterica are comparatively common, especially in the early days of the disease; but in view of recent work by various investigators, as well as of some observations which have come under my own notice, I feel certain that the clinical diagnosis in some of these negative cases has not always been correct. I am, Sirs, yours faithfully,

Liverpool, March 24th, 1902. ALBERT S. GRÜNBAUM.

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## DRUNKENNESS AND THE ABUSE OF NARCOTICS.

*To the Editors of* THE LANCET.

SIRS,—

"Intemperance, like a roaring flood,
Is sweeping o'er our land;
Its dire effects in tears and blood
Are traced on every hand."

Everybody deplores drunkenness. Everybody admits that something should be done to mitigate the evil. Everybody will not agree about how the mitigation is to be accomplished. Total abstainers desire their way; prohibitionists and local-vetoists desire theirs. Others think that it would be sufficient to restrict the number and hours of public-houses and to abolish all grocers' licences. The latest proposal hereabout is to make the publicans in populous places—in specified areas of Glasgow and Dundee—close at 10 P.M., the same as in country districts. The most pernicious drinking is in the morning, and it would be much better not to allow any alcoholic beverages to be sold before noon.

It is often said that a nation cannot be made sober by legislation: this nation will never be made sober by any other means. The laws of a nation that would be happy and prosperous should be like the unwritten laws of a well-ordered household, giving every facility to all its members to do well but no facilities to do otherwise. When a member of a family betrays a weakness for alcoholic beverages the use of these beverages in that house is either entirely abolished or very much restricted, and if the same restrictions could be kept up when that weak member was outside the house he would never become, as too often happens, a drunkard and a disgrace to the family. The other members of the family may feel these restrictions somewhat irksome; but they cheerfully acquiesce in the new arrangements for the sake of their weaker member. In the greater family—the nation—it is well enough known there are many weak members, and if restrictions be put upon the procuring of alcoholic beverages which may be somewhat irksome to many, they should not complain for the sake of the weaker members. The total abolition of drunkenness might be quickly accomplished by the Government undertaking the making, importing, storing, and distributing of all alcoholic beverage and, instead of granting licences to publicans to sell these to Tom, Dick, and Harry in indefinite quantities, granting descriptive licences to whoever desires to use these luxuries, with coupons attached for each day's allowance to be given up when obtained. A small sum to be paid for the licence which may be valid for a week, month, or year, and the drink to be paid for when obtained. The day's allowance for an adult should not be more than five fluid ounces of proof spirit, or the alcoholic equivalent of that in any other beverage; and the licence coupons could be so arranged that the day's allowance could be obtained at two, three, or four times. Special licences could be granted as now for special occasions and to responsible persons who would guarantee that there would be no abuse of the beverages; and as all the alcoholic drinking of the country would be under the eye of the Government any abuse of these licences or privileges could soon be put down.

About 30 years ago a circular was sent to all the medical men in this district "asking them to refrain as much as possible from prescribing alcohol in any form." My reply was that I prescribed castor oil when required and that I expected when the patients got better they would cease taking it, and that I expected that if I prescribed any alcohol the patients would do the same. I received another notice that many drunkards alleged that the beginning of their bad habits took place when they were under medical treatment, which may be quite true in some cases. Certainly it is perfectly true that many women begin to use alcohol in some form for painful menstruation and during puerperal weakness, and many others have begun to use narcotics by a medical man being either too busy or too lazy to write a prescription, telling his patients to go into the nearest druggist's and purchase a narcotic and take so much of it. Much drunkenness and narcotic-consuming might be prevented by medical men always and only administering alcohol and narcotics medicated in a prescription, not to be repeated unless sanctioned by the prescriber.

Thanking you in anticipation of your finding room in your valuable journal for the above, and hoping that other members of our profession may be induced to state their opinions how best to combat these evils,

I am, Sirs, yours faithfully,

Paisley, March 18th, 1902. J. B. HUNTER.

## A NATIVE REMEDY FOR BLACKWATER FEVER.

*To the Editors of* THE LANCET.

SIRS,—I have read with great interest the notes by Dr. D. R. O'Sullivan-Beare in THE LANCET of Feb. 1st, p. 282, on the native remedy for blackwater fever and I should like to offer a few suggestions on this most important subject.

Before dealing with the question of the remedy there are several points raised in this paper as to the nature of blackwater fever which call for some comment. In the five cases quoted the patients had either never tasted quinine or at least had not taken it for two months previously, so that this adds one more to the many facts which militate against the dangerous doctrine that quinine is the cause of blackwater fever which has prejudiced large numbers against the use of quinine. I most emphatically differ from Dr. O'Sullivan-Beare in his view that blackwater fever is not a form of malarial fever, and I consider that "the test of practical experiment" is in favour of the use of quinine in its treatment. I believe it to be an assumption which has not been proved that the hæmoglobinuria is caused by a toxin rather than by the parasite itself, and the idea which is suggested that nephritis is set up in *ordinary* cases is in my opinion an erroneous one, the albumin present being due to the presence of hæmoglobin. The mention of two cases of blackwater fever occurring among negroes is interesting, as I do not think this is common, and it will be still more important if the information can be borne out which Dr. O'Sullivan-Beare has obtained concerning some tribes in the interior, "amongst whom blackwater fever would appear to be endemic"; but may not this be hæmaturia due to bilharzia hæmatobia?

Having delivered myself of these criticisms I desire to thank your correspondent most heartily for the interesting particulars which he has given us concerning this native remedy, for although I do not agree with his estimate of the value of quinine in this disease there can be no question that we are in need of other remedies, and I think that after the testimony we have received *Cassia Beareana* should receive a full trial. As to its mode of action and the reason for its usefulness a few remarks may not be out of place. The most important points in the treatment of blackwater fever, apart from any specific malarial treatment, are to maintain the flow of the urine and to deal with the vomiting which is often a dangerous feature of the malady, making it difficult to administer either food or medicine and weakening the patient. It seems to be a point in the prescription of this medicine to give it with a great deal of fluid, and probably this assists in promoting free diuresis, even if the drug itself is not a diuretic. But what interests me more is the influence which it appears to have upon vomiting. In the cases mentioned vomiting seems to have been a prominent symptom and the medicine seems to have relieved it. Perhaps even more striking than the effect of the remedy upon blackwater fever is the result obtained in so-called bilious remittent fever. I have sometimes wondered whether the number of cases classed under this head are all of them malarial; at all events the trouble here is usually vomiting and this the medicine seems to relieve. If this is so, the drug may be useful in other cases where vomiting is a troublesome symptom and it is to be hoped that all who use it will note carefully the effects produced, so that we may not be acting in the dark in prescribing the remedy.

I am, Sirs, yours faithfully,

CHARLES F. HARFORD-BATTERSBY.

Livingstone College, Leyton, E., March 24th, 1902.

## VAGARIES OF VACCINIA.

*To the Editors of* THE LANCET.

SIRS,—From personal experience of the vagaries of vaccinia I am intensely interested in the clinical note sent you by Dr. J. W. Washbourn, published in THE LANCET of March 8th, p. 664. It is within the recollection of many of your readers that when the Local Government Board first introduced the glycerinated calf-lymph it was found to be very irregular and uncertain in action. A not uncommon experience was to make four careful scarifications, insert the glycerinated calf-lymph from the same tube in each, and then to find quite a variety of vesicles, papules, blebs, and minute vascular spots, these last resembling small nævi, none of them coming to maturity and disappearing without leaving a cicatrix; one class of immature vesicles left a slight scar more like staining of the skin than a scar.

I have notes of a case almost identical with the one recorded by Dr. Washbourn. In March, 1899, I vaccinated a child, a female, aged two years, in four places. Two of the scarifications developed into mature vesicles leaving well-marked cicatrices; the other two were simple blebs, with no areola; the serous fluid was re-absorbed, the vesicles shrank and never scabbed. The mark left was more like a stain than a cicatrix. After a lapse of nine months the mother complained that whenever the child had a cold the vaccination spots came back. At first I treated this piece of curious information as purely mythical—on a par with many of the funny things said about vaccination. However, to please the mother I asked her to let me see the child's arm when she had the "spots" on again. This she did in the course of a few weeks, when, to my surprise, at the site of the *imperfect vesicles only* the superficial layer of the epithelium was raised in the form of two or three small vesicles resembling exactly a group of herpes; be it noted there were none in the cicatrices left by the mature vesicles. I saw them two days after the child scratched them; they were red at the base and covered by a scab. To prevent further scratching the arm was dressed; the sores soon healed and left *no scars.* Now, it may be due to over-dulness, but it requires a stretch of the imagination to fancy that in this case the vaccinal virus in the original lymph was of two kinds—one active, producing satisfactory results; the other inert, lying dormant for nine months and then by the aid of a cold or, as in Dr. Washbourn's case, scarlatinal infection developing its latent powers in producing good results. Or shall we put it this way—the more or less inert lymph having exhausted its strength in its first abortive effort, by a further period of rest in the living tissue acquired sufficient vitality when reinforced by scarlet fever to produce true vesicles.

With your permission, Sirs, I should like to ask so great an authority as Dr. Washbourn one or two questions. His patient was vaccinated in four places, "only *one* of which took and that very slightly," yet we are informed further on that Mr. Percy Rose found four spots on the left arm at the usual site of vaccination. Query, were there cicatrices "at the usual sites of vaccination"? Again, and more important, did the four spots, "exactly like mild vaccination at about the seventh day," leave cicatrices behind them like genuine cases of primary vaccination? Is it not generally the case that the concurrence of scarlet fever, whooping-cough, and measles modifies rather than accentuates the vaccinal process? My own interpretation of the phenomenon was that it was either herpes or due to some other irritant producing dilatation of the capillaries of the cutis causing the superficial layers of the epithelium to be raised from the deeper in the form of a bleb.

I am, Sirs, yours faithfully,
March 24th, 1902. J. MACKENZIE.

## BEEF-WORM IN THE ORBITAL CAVITY.

*To the Editors of* THE LANCET.

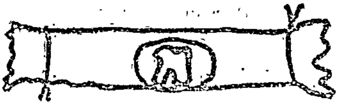
SIRS,—In connexion with my article "Beef-worm in the Orbital Cavity," published in THE LANCET of Jan. 4th, 1902, p. 19, I have received the following suggestions from Mr. Ernest Austen who has charge of the collections of diptera in the British Museum. The so-called beef-worm, he thinks, is the larva of a species of dermatobia, probably *Dermatobia cyaniventris*, a dipterous fly belonging to the family œstridæ. I stated that the egg had been laid by the parent fly *beneath* the human skin or mucous membrane, but Mr. Austen suggests—and no doubt rightly—that the egg was laid *upon* the skin and that the larva, on hatching, burrowed beneath the surface in the subcutaneous tissue, which would account quite satisfactorily for the extraordinary position in which it was found. I stated that in the full-grown worm the bristles encircling the middle two-thirds of the body attained a length of half an inch. This statement had never been verified by personal experience, as the longest bristles I have seen on the creature have never exceeded one-twelfth of an inch, but I considered my authority reliable. Mr. Austen, however, informs me that the bristles *never* reach a length of half an inch in *any* dipterous larva.

I am, Sirs, yours faithfully,
Corozal, British Honduras, March 4th, 1902. THOMAS GANN.

## INTESTINAL OBSTRUCTION CAUSED BY A TOOTH.

*To the Editors of* THE LANCET.

SIRS,—On Sunday, Feb. 9th, I was called to see a dentist in this neighbourhood and on arrival found him dead. He was taken suddenly ill the night before with colic but I was not sent for till too late. I performed a necropsy and found all the organs normal. However, about midway between the duodenum and large intestine I found an obstruction in the shape of a hard foreign body. I removed the piece of intestine and on examination found a molar tooth encysted in a membrane which had become attached to the inner wall of the gut thus. It was a natural tooth and had evidently been there for a long period.



I am, Sirs, yours faithfully,
GODFREY WARNES.
Great College-street, N.W., March 23rd, 1902.

## CANCER IN INDIA AND IN CHINA.

*To the Editors of* THE LANCET.

SIRS,—In THE LANCET of to-day (March 22nd) Lieutenant-Colonel Maitland, I.M.S., writes that, "To say, as Mr. Keetley does, that I [i.e., Lieutenant-Colonel Maitland] alone am responsible for all the medical and surgical wants of 30,000,000 Hindoos in Southern India is as absurd as it would be to say that Mr. Keetley was responsible for the whole population of London." This seems to be Lieutenant-Colonel Maitland's *idea of a fair description* of the following sentence in my letter in THE LANCET of Jan. 18th (p. 193): "Captain Donovan says that Colonel Maitland speaks for the Madras General Hospital where cases from all over the Madras Presidency come for operation." I see nothing absurd in this statement of Captain Donovan.

Every London surgeon who once gets "known" does draw his cases from among the 5,000,000 of Londoners and from far beyond; but his position differs from Lieutenant-Colonel Maitland's in this: that there are 50 other surgeons as well known as himself practising in the same city with the Londoner, while the professor of surgery's position is unique at Madras. Therefore, the fact that the latter "almost always has one or two" Hindoo patients suffering from cancer is no proof of their suffering from it as much as Europeans.

I am greatly obliged to Lieutenant-Colonel George Ranking, I.M.S., for his valuable letter.

I am, Sirs, yours faithfully,
Grosvenor-street, W., March 22nd, 1902. C. B. KEETLEY.

## LOCAL OPTION IN VACCINATION.

*To the Editors of* THE LANCET.

SIRS,—I see that the town council of Hastings on March 21st passed a resolution to request Parliament in this session to abolish the conscientious objector clause and also to make revaccination compulsory. Seeing the difficulty of legislation now would it not be well to allow towns or counties who prefer it, say by a two-thirds majority, to adopt such regulations at once? Surely a short Act to that effect might be got through Parliament. The result of a few years' experience would then be convincing.

I am, Sirs, yours faithfully,
GEORGE HENDERSON, M.D., F.L.S.
Bushey, March 22nd, 1902.

## DIPHTHERIA OF THE CONJUNCTIVA.

*To the Editors of* THE LANCET.

SIRS,—One or two small errors have crept into the report published in THE LANCET of March 22nd, p. 818, of a paper on Diphtheria of the Conjunctiva read before the Ophthalmological Society on March 14th. The report represents me as insisting upon the practical value of an immediate examination of "smears" of the discharge, "stained in methylcosine, and the acid reaction of gelatin cultures." What I actually did was to insist upon the value attaching to the staining of cover-glass preparations by Neisser's plan and to the acid reaction of bouillon cultures.

I am, Sirs, yours faithfully,
Welbeck-street, W., March 23rd, 1902. SYDNEY STEPHENSON.

## THE DIPLOMA OF THE SPECTACLE-MAKERS' COMPANY.

*To the Editors of* THE LANCET.

SIRS,—Sir W. Hart Dyke's letter in THE LANCET of March 15th, p. 774, does not meet the case. He says the Company "do not examine in sight-testing." This is evading the question, as the greater part of the examination deals with visual optics and spectacle-fitting, and the Company's official instructor is a gentleman who teaches visual optics only; his printed circulars and advertisements are issued *by the Company* with the particulars and syllabus of the examination, and in one of these circulars he undertakes for a substantial fee to coach for the examination, partly by correspondence and partly by personal tuition at a class held in London during the two weeks immediately preceding the examination. In fact, the worshipful Company provides the examination for a substantial fee and thoughtfully circulates the advertisements of its official instructor who will for another substantial fee endeavour to cram sufficient information into the competitor to enable him to pass, and further thoughtfully provides that if the candidate cannot pass it all at once he may do so by *instalments* at successive examinations.

I am not raising the question as to whether opticians should or should not test sight but I do say that the intention of the original optical committee is not being carried out, that the present methods are calculated to do serious harm, because, though the examination is no proof of anything beyond the fact that the diploma holder possesses a certain amount of optical knowledge, the diplomas are being used for the purpose of inducing the public to believe that they have been granted for proficiency in knowledge particularly connected with the fitting and adapting of spectacles to correct defective eyesight and are used for advertising purposes to draw trade in the shape of the sale of spectacles. This is shown by the fact that some of the holders attach the letters F.S.M.O. to their names in their business advertisements, presumably to imply a professional qualification and also advertise themselves as "qualified by examination." Many of these men have scarcely any practical knowledge of the trade at all and do not even profess to understand anything but spectacles.

I may mention that I and eight of my assistants have passed this examination but refrain from making any public use of the fact.

I am, Sirs, yours faithfully,
JAMES AITCHISON,
Citizen and Spectaclemaker; Member of the Original Optical Committee of the Worshipful Company of Spectaclemakers.
Strand, W.C., March 18th, 1902.

## SIR JAMES PAGET'S LECTURES.

*To the Editors of* THE LANCET.

SIRS,—Old students of Sir James Paget and the many who enjoy and profit by his few preserved lectures may be glad to be directed to your first volume for 1869. There they will find three lectures which have never been republished as well as that on the Treatment of Carbuncle which is included in the volume edited by Mr. Howard Marsh. The other lectures were on "Diseased Joints of the Foot," Jan. 30th; "Treatment of Fracture," Feb. 27th; and "Aneurysm of the Femoral Artery," April 7th and 24th. The last is of special interest. As the headings show, they were all reported for THE LANCET at the request of the Editor, being revised by Sir James Paget. To THE LANCET belongs the credit of their preservation. This is a greater service than it might seem because they are perhaps the only hospital lectures of Sir James Paget preserved as delivered. He went through the reports but hardly altered a sentence. The lectures were given without a note and present perfectly his extempore style.

I am, Sirs, yours faithfully,
March 25th, 1902. THE REPORTER OF THE LECTURES.

## NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

*Plague Riot in Patiala.—Further Increase of the Epidemic.—Samaritan Funds for Indian Hospitals.—Cholera Inoculations.—Researches in Malaria.*

ON Feb. 19th a somewhat serious disturbance took place in Patiala which is said to have been occasioned by the compulsory segregation of two cases of plague. Major H. Hendley, I.M.S., medical adviser to the State, and Dr. Nathu Mau, the civil surgeon, were attacked by a large mob with sticks and bricks and in consequence of being wounded had to take refuge in the branch dispensary. This was then wrecked and set fire to but the troops arrived in time and the officers were able to effect their escape. The plague camp near the railway-station was also set on fire. According to another account Major Hendley was fastened down by a door, was pelted, and was then carried off and thrust into a mass of filth. He was wounded in nine places—most seriously on the head and on the right leg. These disturbances are not common now but their recurrence serves to show that the dangers to which plague workers are subject are very real.

The plague mortality for the whole of India has again increased. During the past week there have been 14,946 deaths, as against 12,695 for the previous seven days. There were 5922 deaths in the Punjab (an increase of 1809), 4373 in the Bombay Presidency (an increase of 543), 1351 in the North-West Provinces, and 863 in Bengal (an increase of 125). In Bombay city and in Calcutta the disease is growing apace. Bombay had a plague mortality of 701, the general mortality being 1635, equal to a rate of over 105 per mille. Calcutta had 176 plague deaths, an increase of 56, and later figures show a very rapid development. Karachi records 47 deaths, the Madras Presidency 543, Mysore State 507, and Kashmir 317. The old idea that plague is favoured by cold weather is not quite extinct but the continued development with a rising temperature in such places as Bombay and Calcutta ought to correct this fallacy. During the corresponding week of last year there were only 6307 deaths, so that the present serious increase of the disease should be noted.

There are not many hospitals in India which have Samaritan funds, so that the recent gift of Rs. 10,000 by Messrs. Ralli Brothers to the Medical College and Mayo Hospitals in Calcutta is particularly happy. It is intended to be used for clothing and the distribution of small sums for temporary assistance to poor native convalescents—Hindoos, Mahomedans, and Parsees.

Some interesting observations have been made by Major Buchanan and Captain Lamb on the effects of cholera inoculations which may be thus summarised: (1) a preliminary injection of a dead vaccine a few days before the living material is inoculated has the effect of increasing the subsequent constitutional disturbance (the larger the dose of the former the greater the subsequent reaction); (2) a slight increase in the amount of living material greatly increases the constitutional disturbance; and (3) a previous attack of cholera (within one month) decidedly lessens the reaction of a "living" inoculation. The chief inoculations for cholera are now at Goalundo, where the coolies for the tea-gardens pass through, but the returns for cholera are optional on the employers so that the information available is scanty.

Other interesting observations which are shortly to be published refer to researches on malaria fevers by the commissioners. The amount of infection of children is a trustworthy index of the general prevalence of malaria and the "endemic index" is determined by the proportion of children and of anopheles found to be infected. What is true for Africa seems to be true also for India. The endemic index was found to range very widely, from *nil* in Calcutta to 72 in the Duars. In Calcutta not one of the children examined had parasites and not one of the anopheletes dissected was infected. The commissioners, however, recognise malarial disease accompanied by parasites and a form without it. The latter is common in Calcutta, is grave in type, and passes into a true malarial cachexia with a large increase in the mononuclear leucocytes. The actual number of anopheletes present in a district is no criterion of the prevalence of malaria. In the Duars anopheletes are comparatively difficult to capture. All species of anopheletes are evidently not equally dangerous and it is thought that anopheles Rosii, a very prevalent species, is hostile or immune to the parasite. Other observations made are that while in the cold weather zygotes would not develop beyond a certain stage they progressed to sporozoites when the infected mosquitoes were warmed by means of an incubator.

Feb. 28th.

## MAIDSTONE AFTER THE EPIDEMIC.

(BY OUR SPECIAL SANITARY COMMISSIONER.)

*(Concluded from p. 701.)*

*The Diphtheria Epidemic.—The Good Effect of Sewer Ventilating Shafts.—The Sewage Disposal and Drainage Schemes.—Other Measures.—Dangerous Street Hydrants.*

WHEN insisting on the necessity of looking to the sewers and domestic drainage of Maidstone, instead of considering only the water-supply, it was pointed out that typhoid fever was not the only disease that seriously menaced the health of the town. Indeed, except for the great typhoid fever epidemic of 1897, diphtheria was doing more damage. During the six years previous to this epidemic there had been 498 cases of diphtheria notified and only 116 cases of typhoid fever. Then when, in 1897, typhoid fever assumed an epidemic form diphtheria did the same, but the typhoid fever epidemic exhausted itself in a few weeks while the diphtheria epidemic lasted three years. There were 211 cases notified in 1897; this increased to 240 in 1898, to 213 in 1899, and ceased only in 1900, when, however, there were still 50 cases. During these three years there were only 35, 23, and 28 cases of typhoid fever respectively. If we take the 10 years from 1891 to 1900 there were in all 2082 cases of typhoid fever notified, and this includes the great epidemic. But though there has been no such great epidemic of diphtheria it will be found that during these same 10 years no less than 1212 cases of that disease were notified. Consequently, if something is not done to check the prevalence of diphtheria it is possible that in the course of years the cases of diphtheria will exceed in number even those of typhoid fever. This danger is so serious that the Local Government Board held an inquiry on the subject in 1899. It was then shown that the schools had served as a focus for the spread of the disease and that when the schools were closed by order and disinfected or adjourned for the holidays the prevalence of the disease abated.

Apart from the closing and disinfecting of schools Dr. Charles Pye Oliver, the present medical officer of health, attributes the gratifying reduction in the number of cases of diphtheria notified during the year 1900 to the construction of a number of ventilating shafts in connexion with the main sewers and to the more general and more efficient flushing of the house drains. As a consequence there has been, he states, a marked decrease in the number of complaints received concerning the offensive odours that used to issue from the street manholes. As already mentioned, four ventilating shafts were constructed in 1897. There were three more erected in 1898 and two in 1899. This was altogether insufficient, but there had been so much talk about the contamination of the water as the cause of disease that the authorities did not yet fully realise the absolute necessity of ample ventilation for the sewers. The fact, previously mentioned, that in the two years following upon the typhoid fever epidemic improvements in domestic drainage had been effected in 7776 cases, while this had been done in only 2794 cases during the previous two years, shows that the importance of this phase of sanitation had been appreciated. It was also understood that more sewers and better sewers had to be built, for the length of new pipes laid amounted to 37,714 feet during the two years following upon the epidemic; this contrasts favourably with the 9250 feet laid in the two previous years. But it does not seem to have been fully realised that though the construction and condition of both private drains and public sewers may be improved, still sewer air will force itself upon the population if the sewers are not efficiently ventilated. This danger is greatest at the high levels, and sewers going down a steep incline are apt to become ventilating shafts for the sewers which they join at a lower level. So long as the air can travel upwards it will do so in a straight line and without seeking side issues. But when stopped suddenly at the top end of the sewer the air will then expand and seek an issue at the nearest point. The pressure may be so great that the sewer air can then force its way even through a well-constructed syphon-trap and thus enter the houses that are on the higher levels. This may explain why by far the greater number—indeed, nearly all—the cases of typhoid fever occurred among those who lived 100 feet or more above the main collectors. Now, at last, this fact has been appreciated and during the year 1900 16 new ventilating shafts have been introduced at the termination or summit of the sewers, and thereupon the epidemic of diphtheria ceased. The figures for the year 1901 have not yet been published, but I am told that seven or eight more ventilating shafts were erected last year. Diphtheria still maintained its hold on the town and there were 82 cases notified in 1901; but this gives an annual average of 66·5 cases for the two years following upon the erection of numerous street sewer ventilators as opposed to an annual average of 221·3 cases during the three years preceding this improvement in sewer ventilation. Of course, this incident taken by itself does not suffice to prove that inefficient sewer ventilation was the one cause of the widespread prevalence of diphtheria and of typhoid fever, but doubtless it contributed to render the population more susceptible. There is good reason to believe that diphtheria especially was spread by personal contact at the schools, where, for instance, some children drank by putting their mouths to the same tap instead of using glasses. Nevertheless, it is obvious that means must be taken to prevent people breathing the air that comes from sewers, especially when, as is the case at Maidstone, these sewers are not all self-cleansing.

The question now arises as to what still remains to be done so that Maidstone shall no longer be exposed to the risk of yet another great epidemic. The two most difficult, because they are the most expensive, reforms needed relate to the disposal of its sewage and the reconstruction of its main collecting sewers so that they shall be self-cleansing. The wisest and the cheapest course would be to unite the two questions and to make the one scheme serve both purposes. Unfortunately, the condition of the sewers at present holds quite a secondary position. The inquiries made and the reports published deal mainly with the disposal of the sewage rather than with the sewers themselves. The first report was made by the borough surveyor, Mr. Bunting, and by Mr. W. J. Dibdin and was presented to the town council in October, 1900 This report estimates the flow of sewage at 30 gallons per head, or 1,020,000 gallons per day, and states that the sewage is sometimes of an exceptionally bad quality in consequence of the admixture of refuse from manufactories. In the course of July, 1897, two bacteria beds, a coarse and a fine bed, were constructed for experimental purposes. They had been working satisfactorily for two years. The solid matter held in solution was completely removed. What was oxidisable in the sewage was extracted to the extent of 69 per cent., and the nitrogenous matter, as measured by albuminoid ammonia, to the extent of 75 per cent. The effluents steadily improved in quality when kept either in open or closed bottles; this, it is claimed, proves conclusively that under no circumstances could they injuriously affect the condition of any stream into which they might be discharged. The land actually disposable for the treatment of sewage amounts to nine and a half acres. According to the Local Government Board regulation, for a population such as that of Maidstone there should be at least 20 acres and the greater portion of the nine and a half acres available is unsuitable for the purpose. Therefore a new site must be secured. The first likely site is near at hand, but it could not be reached without pumping the sewage up to a height of 80 feet. The second site proposed would involve the extension of the outfall to a distance of 633 yards, and then what is qualified as very suitable land would be reached below Allington lock. In this case pumping is also necessary, but only to a height of 25 feet. There is, however, a serious objection. The water company has its pumping-station on the north side of the river Medway immediately opposite this area and has sunk a well near its engines. Then there is residential property in the neighbourhood and it is anticipated that the owners would raise objections. Finally, this land is occasionally flooded. A third outfall is suggested at Millhall and New Hythe, where the land would be cheaper, but it would be necessary to obtain a leave of way from the present outfall at Allington Lock and to pump up the sewage 25 feet. The beds might be cheaper, as they could be sunk in the ground and thus would save the cost of sustaining walls. It will be seen that all these schemes are subject to serious objections, and under these circumstances it was only natural to seek further advice. Therefore Mr. James Mansergh was selected to give an expert report on the question and this second report was published in September, 1901. It also presents a confusing variety of schemes, and there is no agreement as to the principle to be adopted. Shall the sewage be purified by land irrigation? shall such irrigation be preceded by bacterial treatment? or will the bacterial treatment alone suffice? Naturally the last proposal would be preferred if the Local Government Board gave its consent. In that case a much smaller site would suffice. The beds, four feet deep, would cover 7·494 acres, with an extra 1·264 acres for storm water, making a total of 8·758 acres. Then, according to the Local Government Board requirements, there ought to be 17 acres more for irrigation with the effluent. If, however, the bacterial treatment was absolutely perfect there would be no need for the 17 acres. Mr. James Mansergh argues that the proximity of tidal waters and the character of the sewage renders Maidstone a typical place for the application of the bacterial method. Otherwise the only really suitable site is at New Hythe or Lansford, and this is the farthest from the town and the most expensive. Here the outfall into the Medway would be considerably below and beyond the Forstal Well and the waterworks.

Without, however, attempting to give any definite opinion as to the respective merits of these different sites I am more concerned in urging the necessity of diverting the greater part of the sewage from the main collectors that follow the course of the river and are not self-cleansing. The schemes mentioned involve the necessity of pumping the sewage up to reach the site selected. Obviously, it would be preferable to construct a main intercepting collector at a higher level which would bring the sewage by gravitation to the site secured. The sewage of the small portion of the town situated below this high-level collector might continue to flow into the existing main collectors; but perhaps the amount of this sewage would be so reduced that pipe sewers placed inside the main collector would suffice to carry it away, and their cleanliness might be more easily maintained. The larger sewer could be used for rain-water only. In other words, the separate system might be adopted for the lower levels, and the amount of the sewage that would have to be pumped up would thus be greatly reduced and an economy would be effected. The point is to cut in two the long branch sewers which, going down from the highest latitudes to the river bank, act as ventilating shafts to the big collector built at the water side. The high-level intercepting collector, being built on high ground, could be given a sufficient fall to be self-cleansing. Thus the adoption of a new system for the disposal of the sewage should be made to coincide with the introduction of a better system for the drainage of the whole of the town. This would entail a greater outlay, but it is always cheaper in the long run to do what has to be done once for all and thoroughly.

By the side of vast schemes of this description, which are of no productive value, there is a good opening for smaller enterprises at Maidstone, such as the building of a municipal common lodging-house and artisans' cottages which might be made a source of municipal revenue. Also, there are many complaints as to the collection of household refuse and this likewise might be undertaken by the municipality and done more efficaciously. It should be possible in an agricultural centre like Maidstone to sell some portion of the refuse at a remunerative price. Then there are private courts and alleys where the scavenging is very inefficient. As these are not public thoroughfares it is not the business of the municipality to keep them clean and in such places decaying organic matter is apt to accumulate. The owners should see to its removal, but the fact remains that they neglect to do so; and as in such places gratuities are not forthcoming the refuse collectors are also liable to be forgetful. But if the refuse was collected by municipal servants and was a source of municipal revenue such negligence would be less likely to occur. There is yet another point which is a matter of detail but might lead to serious consequences if neglected. The system for closing the street hydrants cannot be qualified otherwise than as dangerous. In the vertical pipe that rises from the main to reach the surface of the street there is an enlargement forming a little chamber big enough to hold a gallon of water. Here is placed a vulcanite ball which is forced up to close the upper aperture by the pressure from the main below. To open the hydrant a key is introduced which presses this ball out of place and then the water surges up into the street. This is all very well so long as the main is full and the pressure is strong enough to hold up the ball in its place. But the effecting of repairs, or intermittent supply during dry seasons, or other causes may reduce this pressure, and then the ball falls from its position. Dirt and water from the street can then enter the space where the ball is kept and thence can reach the main to mix with the water which the inhabitants drink. There are 279 such hydrants in Maidstone, and it is not to be expected that in all cases they should invariably remain in proper working order. This system was adopted some 40 years ago. It was then considered ingenious, but now it is quite obsolete and a safer apparatus should be employed. The medical officer of health in his last report describes a specimen of water which contained nematodes four inches long. He suggests that in its embryo stage the nematode burrows into certain insect larvæ which are swallowed by water-beetles and other aquatic insects. Here it becomes encysted and is discharged by the beetle into the water, where it develops into young and perfect nematodes. The pathogenic germ might, with equal facility, reach the water-supply through these defective hydrants. Seeing how much work has now been accomplished to improve the general sanitary condition of Maidstone it is not too much to hope that the remaining sanitary defects will soon be swept away. In this manner will the great typhoid fever epidemic have proved itself a blessing in disguise.

## MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

### *Jubilee of Owens College, Manchester.*

THE Prince and Princess of Wales visited Manchester on March 12th in connexion with the jubilee of Owens College and the opening of Whitworth Hall, the latest addition to the collegiate buildings. They arrived at the Victoria station at 10.50 A.M., accompanied by their host and hostess, the Earl and Countess of Derby, and were met at the station by the Lord Mayor and other officers of the corporation of Manchester. They then proceeded to the college, where the Duke of Devonshire, the President of the college, and Principal Alfred Hopkinson received their Royal Highnesses. After a reception by the governors and senate in the Christie Library, a procession was formed which included the teaching staff and lecturers. Several distinguished Members of Parliament, notable professors, and eminent ecclesiastics were present, including Earl Spencer, Chancellor of the Victoria University. Thus escorted into the hall the Prince and Princess took their seats on the right of the Duke of Devonshire, the audience rising and singing "God Save the King." The Duke of Devonshire thanked the Prince and Princess for their presence at the celebrations and said that the idea of the founder was to provide in that great centre a university to supply higher education in such branches of learning and science as were usually taught in English universities. It was laid down as a fundamental and immutable rule that the governors, teachers, and students should be subject to no religious tests. The address of welcome from the college authorities was then read by the Principal. Afterwards Alderman Thompson presented to His Royal Highness on behalf of the council a gold key of the hall. The Prince expressed the pleasure of himself and the Princess at being there that day to join in the celebrations and to open the beautiful hall. He regretted the absence of the architect (Mr. Alfred Waterhouse) and of Dr. A. W. Ward and Sir Henry Roscoe through illness. He said also that a college which after five years of its existence was reduced to 33 students and yet could persevere in the path which had been originally marked out, and which could now boast of 32 professors and over 1000 students, had indeed earned a just right to celebrate with pride and satisfaction its first jubilee. He also made sympathetic reference to the names of Owens, Beyer, Christie, Whitworth, and other benefactors of the college, and paid compliments to the great teachers and students who had by their genius and force of intellect maintained in the college a high standard of learning, and added that the presence there that day of the governing body and the representatives of the municipalities of Manchester and the neighbouring towns should serve to strengthen the mutual sympathy and guide the college in its work. He called attention to the special effort recently made to raise a fund to pay the amount of the indebtedness of the college, which was very considerable, and to provide against an annual deficit, and said that the fund had now reached £100,000, which, however, was only enough to carry on the extended work of the college without making additions to the staff and appliances which it was desirable should be made. He was sure that Manchester men would not allow this institution in any way to suffer from want of funds. He then declared the Whitworth Hall open. The meeting was addressed by Sir R. C. Jebb who took the place of Dr. Ward as "representative of literature" and by Professor Rücker as "representative of science." Thanks for their addresses were voted on the motion of Sir F. Adam. The Prince subsequently at the town hall received an address of welcome from the corporation of Manchester and made a suitable reply; he said that had it been practicable to include in that day's proceedings the opening of the new school of technology he would gladly have taken part in that ceremony. The Prince and Princess, with about 300 other guests, were entertained to luncheon in the principal room of the hall. The Prince referred to the recent tour of the Princess and himself and also said that he was sure that they were all happy to see present amongst them so many distinguished representatives of foreign and colonial universities, who had come to take part in the proceedings. On the way to the Victoria station the Royal procession halted at the west porch of the cathedral for the unveiling of a statue of Queen Victoria, the work and gift of Princess Louise, Duchess of Argyll. The Royal departure for Knowsley took place a few minutes after 4 P.M. Several of the tradespeople who occupy premises along the line of the route of the Royal procession offered to give to the hospitals the money received from letting their windows to sight-seers. The Lord Mayor approved the idea and mentioned that as regards subscriptions Manchester compared unfavourably with other large cities. It is to be hoped that the hospitals will benefit considerably by this generous offer.

### *Manchester and Salford Sanitary Association: Jubilee Conference.*

The committee of this association has decided to hold a Conference on Sanitary Reform in commemoration of the fiftieth anniversary of the formation of the association. This conference will take place in the Town Hall, Manchester, on April 24th and 25th next. On April 24th the Bishop of Manchester, who is the President of the association and of the general conference committee, will deliver an inaugural address. Dr. Arthur Ransome, F.R.S., will then relate the interesting history of the Manchester and Salford Sanitary Association, and Sir James Crichton Browne, F.R.S., will follow with an address on Light and Sanitation. On April 25th Mrs. H. J. Tennant will speak on Women's Work in Sanitary Reform; Dr. Arthur Newsholme of Brighton will discourse on Vital Statistics and their Relation to Sanitary Reform; Mr. T. C. Horsfall, a local authority, will read a paper on the Housing Question; Sir William H. Broadbent will give an address on the Prevention of Tuberculosis; Dr. A. Bostock Hill of Birmingham will deal with the Relationship of Voluntary Effort to Constituted Authority in promoting Sanitary Reform; the Earl of Meath will speak on Physical Training; and Dr. J. Niven of Manchester will deal with the Economics of Health. Amongst others who will preside at meetings are Professor J. Dixon Mann, M.D. (the present chairman of the association), Sir William H. Houldsworth, Bart., M.P., Mrs. Moorhouse, Dr. Henry Simpson (a former chairman of the committee), Alderman Walton Smith, J.P. (chairman of the Sanitary Committee, Manchester), Mr. W. J. Crossley, J.P., C.C., Mr. A. Hopkinson, K.C., (Principal of Owens College), the Mayor of Salford, Sir J. T. Hibbert, K.C.B., and Councillor W. Huddart (chairman of the Salford Health Committee). Many municipalities, urban district councils, and other public bodies have appointed delegates or intimated that they will be otherwise represented. All local institutions having aims in common with the association are represented on the conference committee. The proceedings of the conference will be eventually printed and published.

### *Flannelette Test.*

At an inquest held at Southport on March 22nd, on a child who died from burns through its flannelette clothing catching fire, the coroner read a letter from a Manchester manufacturer protesting against the opinions of coroners on flannelette and inclosing a sample for testing. On putting a lighted match to it the sample would have been consumed quickly if the coroner had not blown it out, and he said: "With all due respect to the manufacturer I think it would be better not to continue the test."

March 24th.

## WALES AND WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

### *The Notification of Tuberculosis.*

IN some towns where phthisis is notified to the medical officers of health there appears to be a little doubt as to what subsequent action should be taken by the sanitary authority, and at a recent meeting of the South Wales branch of the Association for the Prevention of Tuberculosis the medical officer of health of Cardiff (Dr. E. Walford) suggested that female health visitors might very profitably be employed in this connexion, and it was decided to solicit the coöperation of nursing institutions and of voluntary workers.

### *A Medical Slander Action.*

At the Glamorganshire Assizes held at Cardiff on March 17th a medical man practising in Barry was the defendant in an action for slander and was ordered to pay £10 damages. The case arose out of the death of one of the defendant's patients who had been struck some time prior to his death by the plaintiff. The defendant attributed his patient's death to this blow and was said to have remarked to a friend when speaking of the affair, "It is a brutal murder." His own version of the expression used was, "It is a brutal matter." The smallness of the damages awarded makes it apparent that the jury were not very much impressed with the gravity of the slander.

### *Cardiff and County Public Health Laboratory.*

The Cardiff and County Public Health Laboratory was established about three years ago by the Glamorganshire County Council, and for the past two years has been under the joint control of the Cardiff Corporation and the county council. The second report of the bacteriologist (Dr. W. G. Savage) reveals the immense value such an institution must be to the sanitary authorities in the county. The water-supplies of Cardiff are now examined monthly and of many parts of the administrative county at fixed intervals. Altogether, 558 samples were examined during 1901. It is noticeable that there were 575 specimens for suspected diphtheria, tubercle, &c., from Cardiff examined bacteriologically and only 395 from the county, although the population of the latter is 600,000 and of Cardiff only 170,000. This disparity can hardly be due to the absence of material in the county, for diphtheria was excessively prevalent during the whole year in the large centres of population such as Merthyr and the Rhondda. In connexion with the laboratory, classes in bacteriology, chemistry, and practical outdoor sanitary work are held and were attended during 1901 by some half-dozen students.

### *Depopulation of Rural Districts.*

Most of those who have given the subject any serious consideration are agreed that the cramped and often dilapidated condition of the cottages in rural districts accounts in a great measure for the decrease in the population in those districts. The medical officer of health of the Gower peninsula in South Wales (Mr. H. E. Rawlings) in his annual report states that in his opinion if more cottages with small holdings were established it is practically certain that a large number of those who had emigrated to the towns in search of employment would return to the country to pursue a more healthy and congenial industry.

March 24th.

## SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

### *The John Usher Institute of Public Health, Edinburgh.—Arrangements for the Examination of Pathological Products for the City.*

THE John Usher Institute of Public Health, which is now almost completed, will probably be opened within the next three months. The chair of public health in Edinburgh University was founded in 1898—the necessary endowment having been provided by a legacy of £5000 from the late Mr. A. L. Bruce, supplemented by over £2000 from Mrs. A. L. Bruce and others, together with £8000 given by Sir John Usher of Norton. The Public Health Department in the new university did not, however, possess adequate laboratory accommodation for the new chair. Sir John Usher then most generously offered to build and to equip an Institute of Public Health, and it is this institute which is now nearing completion. It was at first intended that the building should occupy ground lying between the Music Class-room and the Students' Union but this site had to be abandoned as the supply of light was deficient. A site in Warrender Park-road was then adopted, where the conditions as regards light-supply are all that could be desired. The institute lies on the south side of the road and faces north. It is rectangular in form and covers an area of 133 feet by 48 feet. The exterior of the building is treated simply in classic Renaissance style. On the lintel of the main doorway three shields are to be cut, the centre one representing the Scottish Lion and the lateral shields showing the coat-of-arms of the donor, Sir John Usher, and of the Chancellor of the university, the Right Honourable A. J. Balfour. The coat-of-arms of the university will be carved on the pediment above the entrance. On the west front of the building the following inscription will be carved:—

University of Edinburgh.
The
John Usher Institute of Public Health,
Presented to the University of Edinburgh
by
Sir John Usher of Norton and Wells, Baronet.
May, MDCCCCII.

The ground floor contains entrance-hall, staircase, museum, research room, gas analysis and micro-photographic room, three laboratory workrooms designed for carrying on the bacteriological work in connexion with the public health administration of the city, two subsidiary workrooms, and caretaker's house. The first floor contains a chemical laboratory, balance room, optical room with adjoining dark room, students' reading room, water analysis room, research room, cloak room, and lecture theatre, with adjoining preparation room. Under the staging of the lecture theatre are store-rooms for apparatus, &c. On the second floor there are a bacteriological laboratory, research room, observation room, disinfection room, two incubation rooms, small lecture room for advanced class, professor's laboratory, retiring room, and library and assistant's room. In the upper storey are placed the extraction ventilation chambers and on the roof provision has been made for carrying out experiments in the open air. In the basement floor there are a refrigerating room, an incinerating room, a room containing a large centrifugal machine with electric motor, and a room for air and water pressure apparatus. Needless to say, the internal arrangements and fittings of the museum and of the various laboratories are of the most approved and up-to-date description. In giving the institute to the university Sir John Usher made the request that the University Court should provide accommodation for carrying out scientific work in connexion with the public health administration of the city. The committee of the institute accordingly set apart the three rooms above-mentioned on the ground floor of the institute for that purpose, and since 1898 has been carrying on negotiations with the town council in connexion with the matter. The Public Health Committee of the town council was not in favour of handing over the bacteriological work of the city to the Usher Institute, and a fortnight ago reported to the town council on the subject, recommending that the work should not in the meantime be taken from the laboratory of the Royal College of Physicians of Edinburgh, where it was being done in a perfectly satisfactory manner. The town council, however, refused to adopt this report and accepted the proposals of the committee of the Usher Institute. Put as briefly as possible those proposals are: 1. That the three rooms above-mentioned be entirely set apart for the city's work. 2. That a qualified assistant be appointed who shall attend exclusively to the city's work and that the services of an attendant be available. 3. That the whole work be done under the supervision of the professor of public health who shall alone be responsible to the city for the work. 4. The scope of the work to be as follows: (1) bacteriological examinations required by the medical officer of health in the daily work of dealing with infectious disease; (2) bacteriological examinations required by the sanitary inspector (these would include examinations of water, milk, food-stuffs, and flesh, and would also include examination for anthrax and glanders); and (3) bacteriological examinations of specimens in cases of diphtheria, typhoid fever, and tuberculous disease which may be sent by medical practitioners in the city for diagnostic purposes. 5. That the university agrees to perform the whole work for the outlay incurred. The committee estimates that for the investigation of 1000 specimens the cost will be about £360 per annum, this being founded on the experience of cities where a similar arrangement prevails. Of the three rooms mentioned two will be fitted with laboratories, while the third will be used for clerical work. In this third room the samples for examination will be received, the result of the examination recorded, and the reports of the results sent to the medical officer of health or to the practitioner, as the case may be. It is expected that the institute will be opened in May by the Chancellor of the university, the Right Hon A. J. Balfour, M.P.

### *Aberdeen University.*

The Aberdeen University Court met on March 11th. The secretary read a letter from the Baroness de Gurbs, intimating her desire to place a stained-glass window in King's College Chapel as a memorial of her late husband, Stephen Baron de Gurbs, a former student of Aberdeen University. It was agreed that the offer should be accepted.—It was agreed to appoint Mr. Charles Murray, M.A., M.B. Aberd., to the post of university assistant in physiology, vacant through a resignation.

March 24th.

## IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

### *Public Health of Dublin.*

THE fortnightly meeting of the Public Health Committee was held in the Municipal Buildings on March 18th, when Sir Charles Cameron reported that the death-rate from all causes in the city for the week ending March 15th was 22·2 per 10,000 persons living. This rate, he observed, was unprecedentedly low for this time of the year, the mean for the last 10 years being 34·1. The zymotic death-rate for the suburbs proved to be unusually high—namely, three per 1000, or six times that of the city.

### *Surgeon-Captain Crean, V.C.*

The Royal College of Surgeons in Ireland has decided to confer the honorary Fellowship on Surgeon-Captain T. J. Crean, V.C., in recognition of his distinguished services in South Africa. He commenced his medical studies in the College School and obtained the Licence of the College in 1895. Since the institution of the reward for "conspicuous valour in the presence of the enemy" five Irish surgeons have been awarded the Victoria Cross. Of these, one belongs to the University of Dublin, while the other four are Licentiates of the Royal College of Surgeons in Ireland.

### *An Isolation Hospital for Kingstown.*

A special meeting of the Kingstown Urban District Council was held on March 21st in the Town Hall, Kingstown, to deal with the question of a proposed isolation hospital for the township. After a lively discussion the matter was practically shelved. Mr. D. Edgar Flinn, the medical inspector of the Local Government Board, who was present, intervened, and addressing the council said that in postponing this question it had incurred a very serious responsibility by taking no steps in reference to the treatment of infectious diseases. He pointed out that the council was the custodian of the public health of the most important watering-place in Ireland, in touch with the other side of the Channel where small-pox was now epidemic. He stated that he was there at the request of the Local Government Board to convey to the council their desire that arrangements should be made for the treatment of infective diseases and to state that a temporary isolation hospital could be erected in a fortnight. Rathmines and Pembroke districts were constructing a temporary isolation hospital and such buildings were being erected all over the three kingdoms. If a case of small-pox occurred where was it to be sent? None of the Dublin institutions would admit the patient. This postponement, he said, might mean a very serious matter for the council and the responsibility was on its shoulders and not on those of the Local Government Board. At the conclusion of the meeting it was arranged that Mr. Flinn should attend the proposed meeting of the Sanitary Committee of the council.

March 24th.

## PARIS.

(FROM OUR OWN CORRESPONDENT.)

### *The Plague.*

I HAVE on previous occasions[1] given your readers information about sundry cases of plague which occurred last year on board the *Sénégal* and about the complaints made concerning the Frioul lazaretto. The Academy of Medicine which was very anxious to find the best means of prophylaxis against the plague appointed a committee of inquiry with a view to the reform of the French sanitary service. Dr. Vallin, the secretary, made a minute investigation of the Frioul lazaretto on behalf of the committee and his report thereon was submitted to the Academy of Medicine at the meeting held on March 11th. Dr. Vallin insists on the reorganisation of the lazaretto at Frioul. There should be a medical director serving immediately under the Minister of the Interior and a sanitary station ought to be erected at the north-east point of the island of Pomègues which should be independent of the lazaretto. Quarantine for passengers should be given up but they should be compelled to be inoculated with anti-plague serum. The report suggests that the Minister of Marine should be asked to make the carriage of anti-plague serum and the instruments necessary for its administration obligatory on all merchant ships which take long voyages. The inspection of ships' medicine chests and dispensaries should be much more strict and such should be passed by the port sanitary authorities. All rats on board a ship coming from an infected port should be destroyed. Facilities should be given to medical men who may be candidates for employment in the maritime sanitary service for study at a port school of medicine so that they could acquire special professional knowledge which should be tested by examination. Finally, medical men in the service of steamship companies should be given an independent position, so that they should no longer, as is the case at present, be in the position of having to make the performance of their duty stand out in opposition to their chances of security of tenure.

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[1] THE LANCET, July 20th (p. 163), August 17th (p. 493), and Oct. 19th (p 1087), 1901.

### *The Inability of Medical Men to Inherit from Patients.*

It is well known that neither medical men nor pharmaceutical chemists in France have any legal right to receive a legacy from their patients or customers. Dr. Delarue brought before the Chamber of Deputies on Feb. 21st a proposed alteration in the law which ran as follows: "The incapacity laid down by Article 909 of the Civil Code is henceforward abrogated as far as concerns physicians, surgeons, and apothecaries." It is extremely improbable that the Chamber will pass this alteration in the law, despite the very serious reasons which exist in favour of such alteration and which were put forward by Dr. Delarue. Very often, he said, the medical man was exposed to the risk of serious illness or even of death and had to be contented with very poor pay, and, in fact, more often than not the only reward he gained by his profession was the consciousness of duty done. His devotion was always being appealed to and such appeal was never unheard. If the medical man were always to demand remuneration for his work it would be impossible to make certain that the hospital service should be carried on or that the regulations of the Assistance Publique should be duly complied with. Official salaries were increasing and also retiring pensions but there was nothing to help an old physician who had devoted perhaps 40 years of his life in the service of his equals. Moreover, the law as it existed at present did the medical men the injustice of apparently suspecting every medical man to be capable of abusing the power which he possessed over his patients for the purpose of getting hold of their money and of making them carry out their last wills and testaments in opposition to their own wishes. Why did not the law inflict the same disabilities on other professional men, such as barristers or solicitors who had just as much influence over their clients as medical men had over their patients. There was no good explanation why medical men should be thus treated. As for apothecaries, they had nothing to do with the treatment of patients, for their only duty was to send in medicine prescribed by the medical man.

### *Photo-therapy and the Iron Electric Arc.*

On March 3rd M. A. Broca and M. Chatin laid before the Academy of Sciences the results of their attempt to utilise an iron electric arc in photo-therapy. They have managed to obtain a perfectly steady arc which takes a current of from 10 to 30 ampères. This arc is very rich in actinic rays which are alone of use. Exposure to it for five seconds reduces ordinary silver photographic paper to a deep red-violet colour. Moreover, it gives hardly any heat rays and so the patient can be placed within 10 centimetres of the apparatus, while the need for a cooling jacket is done away with. The simplification of the apparatus allows of much more exact compression of the affected region being employed than has hitherto been the case with other apparatus, and M. Broca and M. Chatin have used the process at the St. Louis Hospital in nine cases of lupus with excellent results. The arc is covered by a metallic sleeve with a hole of three centimetres in diameter opposite the patient, so that the assistants are completely protected. With an iron arc taking from 15 to 18 ampères and an exposure of from 19 to 25 minutes very remarkable cutaneous reactions were produced in all the patients. They appeared from some 24 to 48 hours after the exposure. Phlyctenulæ comparable to those seen after the use of the Finsen and similar apparatus were noticed, but the light rays appeared to exercise a selective influence on the lupus nodules which were profoundly affected, although the periphery of the ulcer and the healthy skin only showed a slight raising of the epidermis. These results would seem to foreshadow a great future for this method which in addition to giving rays of increased actinic power enables photo-therapy to be carried out without the use of the cooling apparatus which, besides being very complicated, absorbs a certain amount of light rays.

### *Action against the Director of a Lazaretto.*

A curious case is now before the courts. Last year a ship arrived from Brazil at Bordeaux on board of which was a young woman far advanced in pregnancy whom the medical officer of the lazaretto compelled to disembark as he suspected that she was suffering from yellow fever. Within a few hours she died and was hurriedly buried. The husband hastened to the spot and, having obtained an exhumation order, found not only the body of his wife but also that of an infant lying between her legs. Now he has haled the medical officer before the courts, declaring that his wife was not suffering from yellow fever but only from troubles incidental to pregnancy. He further declares that she was buried alive and that the birth of the child followed spontaneously on the burial. So, then, this case raises a curious point in obstetrics as well as the question of the responsibility of medical officers of lazarettos.

March 24th.

## BERLIN.

(FROM OUR OWN CORRESPONDENT.)

### *Bacilli in the Seminal Fluid in Syphilis.*

AT the last meeting of the Berlin Medical Society Dr. Joseph and Dr. Piorkowsky showed specimens of bacilli discovered by them in cases of syphilis. They examined the semen of syphilitic persons, because in many instances a man without manifest symptoms of syphilis has been known to communicate the virus to a healthy woman by way of the placenta, the effect being that she does not exhibit evidence of the disease until she becomes pregnant. They described their procedure as follows. Semen was obtained from 22 men who had contracted syphilis at different periods varying from five weeks to two years previously and was placed in contact with sterilised pieces of placenta, on which as a nutrient medium there was an abundant bacterial growth, containing after 12 hours long bacilli with clubbed ends resembling those of diphtheria. Cultures transferred from the pieces of placenta could be grown upon agar and blood serum, but direct inoculation of the semen upon agar without previous use of placenta gave no result. The colonies growing on agar developed very quickly but soon showed signs of degeneration which could be made to disappear by reinoculation of the cultures on placenta. The bacilli were stained by Gram's method and could be agglutinated by serum. In five cases of syphilis which had lasted for periods varying from three to 10 years the results were negative. The bacilli were not present either in normal semen or in cases of azoöspermia occurring in syphilitic men. Inoculation into animals gave no decided result. A pig after inoculation developed a peculiar exanthem on the genital organs together with a swelling of the lymphatic glands, but as it died six days later from an epizoic malady these symptoms might perhaps have been due to the latter cause. Dr. Joseph was of opinion that the bacilli discovered by him were specific for syphilis but further investigation on a larger scale was necessary. In the ensuing discussion Professor Jürgens of the Pathological Institute said that similar bacilli had already been described by Dr. Von Nissen. He pointed out that in one of the specimens there were no bacilli but there were spores, so that a mixed infection had perhaps occurred. He recommended that cases of congenital syphilis should be included in the observations, because in them it was possible to avoid mixed infections. Dr. Aronson said that chronic diseases were usually of slow development and considering the rapid growth of Dr. Joseph's bacilli it was unlikely that they were the cause of so chronic a disease as syphilis. Dr. Joseph, in his reply, said that as regards the bacterial origin of syphilis he had been careful to speak with all reserve but he thought it right to mention that the bacilli in question had never been found in normal semen.

### *Medical Experts in the Law Courts.*

The trial of Professor Dührssen, of which an account appeared in THE LANCET of March 15th, 1902, p. 779, has directed attention to the state of the law relative to medical evidence given before courts of justice. As a general rule the medical officer of health of the district is *ex officio* medical expert in the courts but in some of the larger towns special medical officers have been appointed for this duty. In cases of considerable importance and in appeal cases recourse is had to the provincial board which exists in each province (Provincial Medicinal-Collegium) composed of professors of the university of the province together with Government medical officers and others, and to a central board in Berlin (Wissenschaftliche Deputation für das nalwesen) composed of professors of Berlin University only. The professional opinions given by the authority last named have a great influence on the decisions of the courts, for the judges believe that no expert is more competent in medical questions than this board and its opinion is very seldom disregarded. Since the Dührssen trial, however, some medical journals have pointed out that although the board is composed of the leading medical men of Berlin its formally expressed opinions nevertheless do not possess the weight and importance with which they are usually credited. When in a given case the opinion of the board is asked by a public prosecutor or by a court of justice the president of the board, as a rule, entrusts the matter to a member who is a specialist in that department. If, for instance, a surgical case is under consideration it is one of the surgeons or if it is a gynæcological case it is the gynæcologist who draws up the report. There is no discussion of the matter by the whole board; when the report is prepared it is signed by the other members but in reality the opinion of the board is only the opinion of one member whose views may sometimes be out of date and who is by no means superior to other specialists who may be called by the other side. Moreover, the opinion of the board or of the member who acts in its name has to be based on written statements, for the patient is very seldom examined with a view to the preparation of the report. It is also quite unusual for members of the boards to attend a court as witnesses or to undergo cross-examination; a member of the provincial board was present at the trial of Professor Dührssen but the central board was not represented at all. Some medical journals now propose that this system should be altered by abolishing the boards and that in cases of considerable importance the opinions of the most competent men in the respective branches of medicine should be asked, as they would be required to appear in court and after being sworn as experts might be cross-examined like other witnesses.

### *The Congress of Naturalists and Medical Men.*

The seventy-fourth congress of the German Association of Naturalists and Medical Men will this year be held beyond the borders of the German Empire—namely, in Carlsbad, the famous mineral water resort in the Austrian province of Bohemia. The congress will meet in two principal sections—a medical one with 17 subdivisions and a scientific one with 11 subdivisions. The medical subdivisions are as follows: (1) anatomy, histology, and physiology; (2) general pathology and pathological anatomy; (3) clinical medicine, pharmacology, balneology, and hydrotherapeutics; (4) history of medicine; (5) surgery; (6) obstetrics and diseases of women; (7) diseases of children; (8) nervous and mental diseases; (9) ophthalmology; (10) diseases of the larynx, nose, and ear; (11) dermatology and syphilis; (12) odontology; (13) military medicine; (14) forensic medicine; (15) hygiene; (16) veterinary medicine; and (17) pharmacy. In the medical section the official subject of discussion will be physiological albuminuria and in the scientific section it will be the circulation of nitrogen.

### *"Christian Science."*

The fantastic doctrines known by the name of "Christian science," with which the name of Mrs. Eddy is associated, continue to occupy the attention of the public, and it is said that they have made more progress, especially among females, than is generally supposed. Believers abound in Potsdam, where the Emperor's summer residence is situated, and many of the nobility and court officials engage in the exercises prescribed by Mrs. Eddy. The Emperor has expressed strong disapproval of these proceedings, and has caused it to be announced that persons who attend the meetings or in any other way encourage the new system will not be admitted to Court.

March 24th.

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**THE EXAMINER IN PHYSICS AT EDINBURGH UNIVERSITY.**—The Edinburgh University Court, which met on March 17th, appointed Mr. Dawson F. D. Turner, M.D., F.R C.P. Edin., examiner in Experimental Physics to the University. We believe that this university is the first to have recognised the importance of having an examiner who has received a medical training to examine medical students in physics.

## Obituary.

### WILLIAM TOWLSON KAY, M.R.C.S. ENG., L.R.C.P. EDIN.

THE death is announced of Mr. W. Towlson Kay, late of Gateshead, which occurred at Eastbourne on March 9th. Mr. Kay was born in 1849 and was a student at the Newcastle-on-Tyne College of Medicine, where he had a distinguished career. After securing his diplomas he was appointed medical tutor to his college for a time when he joined the late Dr. Dixon of Gateshead in partnership. Later he practised on his own account and soon secured a large and good practice. He was appointed surgeon to the Gateshead police, a post which he held for 25 years. Three or four years ago his health began to fail and in October, 1900, he retired from practice and went to live at Eastbourne. For a time his health improved but in the autumn of last year he had a relapse which ended fatally on March 9th. Mr. Kay was a great favourite with his patients owing to his genial manner and assiduous attention to them. He took no part in public life but was a member of the local medical societies. He leaves a widow but no children.

### JOHN BARCLAY, M.D., C.M. ABERD.

DR. BARCLAY of Banff died at his residence there on March 11th, after a lingering illness. He received his medical education at the University of Aberdeen, where he graduated in 1862, and was then appointed assistant professor of materia medica and medical jurisprudence. 30 years ago he commenced practice in Banff and built up one of the largest medical practices in the county of that name. He held many public and official appointments in Banff. Dr. Barclay acted as an examiner at Aberdeen University from 1880 to 1883. His wife, who was a daughter of the late Provost Coutts of Banff, predeceased him several years ago. He leaves two sons and two daughters.

### HUGH FRASER, M.B., C.M. ABERD.

A CABLEGRAM was received in Aberdeen on March 11th stating that Dr. Hugh Fraser had died from enteric fever at Bethulie, South Africa, on March 4th. After graduating at Aberdeen University Dr. Fraser came to England, and some four years ago he proceeded to King Williamstown, Cape Colony, where he was stationed until a few months ago, when he accepted the position of medical officer in the camp at Bethulie. Dr. Fraser was the youngest son of the late Dr. George Innes Fraser of Aberdeen. The deepest sympathy is felt for Dr. Fraser's mother in her sudden and unexpected bereavement.

## Medical News.

**SOCIETY OF APOTHECARIES OF LONDON.**—In March the following candidates passed in the subjects indicated:—

*Surgery.*—C. R. Bradley (Section I.), St. George's Hospital; S. J. H. M. Eastwick Field, Royal Free Hospital; J. W. Elliott (Section I.), St. Mary's Hospital; H. S. French (Sections I. and II.), Oxford and Guy's Hospital; K. Heanley (Section I.), Royal Free Hospital; E. O. Libbey, Leeds; and S. C. Wilkinson (Sections I. and II.), Leeds.

*Medicine.*—F. G. Bennett (Section II.), University College Hospital; W. T. Colyer, Cambridge; H. S. French (Sections I. and II.), Oxford and Guy's Hospital; R. Gauld (Sections I. and II.), London Hospital; K. Heanley (Section I.), Royal Free Hospital; W. St. A. F Hubbard (Sections I. and II.), Charing Cross Hospital; O. Millauro (Section I.), Westminster Hospital; H. H. Sloane (Section II.), St. Bartholomew's Hospital; W. P. Taylor, Sheffield and Bristol; J. E. Turle (Section I.), University College Hospital; and A. F. Van Dijk (Sections I. and II.), St. Bartholomew's Hospital.

*Forensic Medicine.*—H. S. French, Oxford and Guy's Hospital; W. St. A. F. Hubbard, Charing Cross Hospital; W. P. Taylor, Sheffield and Bristol; J. E. Turle, University College Hospital; A. F. Van Dijk, St. Bartholomew's Hospital; and J. H. Williams, London Hospital.

*Midwifery.*—D. Cotes-Preedy, Cambridge and St. George's Hospital; G. M. Crockett, Royal Free Hospital; E. F. Forjett, Edinburgh; H. S. French, Oxford and Guy's Hospital; H. M. Jones, Royal Free Hospital; J. A. Kilpatrick, King's College Hospital; M. E. Martin, Royal Free Hospital; H. H. Sloane, St. Bartholomew's Hospital; G. B. S. Soper, Guy's Hospital; and S. Zweiback, Königsberg.

The diploma of the Society was granted to the following candidates, entitling them to practise medicine, surgery, and midwifery: W. T. Colver, S. J. H. M. Eastwick Field, H. S. French, E. O. Libbey, S. C. Wilkinson, and J. H. Williams.

THE Dawlish and Teignmouth District Councils have decided to erect a joint isolation hospital.

LARYNGOLOGICAL SOCIETY OF LONDON.—The ordinary meeting of this society has been postponed to Friday, April 11th, at 5 P.M.

VACCINATION GRANT.—Mr. David T. Key, M.R.C.S. Eng., L.S.A., public vaccinator for Wyke Regis, has received for the first time the Government grant for successful vaccination.

AT a public meeting at Peterborough last week it was decided to commemorate the Coronation of King Edward VII. by raising by voluntary subscription a sufficient sum to add a new wing to the hospital presented to the city by the late Earl Fitzwilliam.

KING EDWARD'S HOSPITAL FUND FOR LONDON.—The Organising Committee of King Edward's Hospital Fund for London, 81, Cheapside, E.C., has signified that it has much pleasure in accepting an offer which has been made to it with regard to Mr. Percy Godfrey's "Coronation March." This proposal is to the effect that *6d.* derived from the sale of each copy of the march shall be devoted to the "coronation gift" and that all sums derived from licences to perform the march and collections made at concerts shall be given to the same object. Mr. Godfrey's composition gained the prize recently offered by the Worshipful Company of Musicians for the best coronation march, the adjudicators being Sir Frederick Bridge, Sir Walter Parratt, and Sir Hubert Parry.

THE ROYAL INSTITUTION.—In a lecture on Some Electrical Developments delivered at the Royal Institution on March 22nd Lord Rayleigh said that although the Roentgen rays were so easily produced and were capable of giving such remarkable effects, their essential nature was in several respects unknown. They travelled in straight lines and could neither be refracted nor reflected, from which it necessarily followed that they could not be polarised. Diffraction experiments made with great care by Dutch investigators had led to no result beyond proving that if the rays had an undulatory character their wave length could not exceed the one-hundredth of that of light. As was well known, they produced photographic effects by the decomposition of silver salts and rendered certain fluorescent substances luminous; the only other respect in which they were found to resemble ordinary light was that both the Roentgen rays and the ultra-violet rays of the luminous spectrum caused electric leakage of gases. At one time it was supposed that the Roentgen rays admitted of partial reflection but it was now considered that the apparent effect was probably due to some secondary emission. There were many points of resemblance between Becquerel rays and Roentgen rays. Becquerel formerly believed that the rays discovered by him could be polarised but this view was now abandoned. Roentgen rays could be deflected by magnets and experiments were shown in which the rays passing through a hole in an aluminium plate and falling on a fluorescent screen were by means of magnets displaced both in straight lines and in curved lines. Changes produced in jets of steam and water by electrification were also shown. In another experiment common air was blown through a Woulfe's bottle containing sulphuric acid which did not cover the end of the inlet tube, so that the air did not bubble through the acid but merely passed over its surface. A jet of steam cast only a faint shadow on a screen when a beam of electric light was turned on it, but when the air from the Woulfe's bottle was directed against the jet of steam the shadow became much darker. When nitric acid was substituted for the sulphuric acid the effect did not take place. Lord Rayleigh said that the cause of this phenomenon was quite unknown and he recommended it to the notice of young experimenters because of the simplicity of the apparatus required.

NOTIFICATION OF CHICKEN-POX.—The Bath Rural District Council on March 12th decided to include chicken-pox in the list of notifiable diseases.

BRIDGWATER INFIRMARY.—On March 20th Colonel W. Barratt, the president of the Bridgwater Infirmary, formally opened the new operation room which has been provided by means of a bequest of £300 left for that purpose by the late Mr. George England.

ROYAL HOSPITAL FOR INCURABLES, DUBLIN.—A meeting of the board of governors of this hospital was held on March 18th, when six new patients were elected. The hospital is entirely unsectarian and provides accommodation for 212 patients, including separate wards for the treatment of 72 patients suffering from cancer and consumption, in addition to 140 inmates afflicted with various other incurable maladies, all of whom are disqualified for admission into the general hospitals. The average daily number of beds occupied throughout last year was 203 and further financial assistance is urgently needed to reduce a debt of £974.

BIRMINGHAM AND MIDLAND HOSPITAL FOR WOMEN.—During the past year 3285 new out-patients have attended at this hospital, showing a decrease of 38 as compared with last year's figures. The total number of new and old cases treated during the year was 17,174, being 570 less than last year. 440 patients were admitted to the in-patient department, an increase of 13 on last year and the total number of operations was 422, an increase of 12. The number of operations involving abdominal section was 213—that is, nine more than last year; of these nine patients have died, giving a death-rate of 4·2 per cent. This compares with 2·94 per cent. on 204 operations in 1900.

DOWN DISTRICT LUNATIC ASYLUM.—On March 15th at a meeting of the committee of management of the Down District Lunatic Asylum the following motion with reference to the necessity for the establishment of a central laboratory in Ireland for the investigation of the pathology of insanity was unanimously carried: "That we, the committee of management of Down District Asylum, desire to express our warm approval of the proposed central laboratory for research in the pathology of insanity; we hereby state our readiness to affiliate this institution with such an undertaking when it assumes a practical shape and to contribute towards its maintenance a sum of £25 per annum. We are of opinion that the project is deserving of general support, believing, as we do, that the prevention and the most effective treatment of mental disease must be largely aided by an accurate knowledge of the morbid physical conditions associated with it, and feeling that any step that tends to promote such knowledge must ultimately prove an important factor in the reduction of the burden of the lunacy charges of the country."

DONATIONS AND BEQUESTS TO HOSPITALS.—The Lord Mayor and Lady Mayoress of London have contributed 20 guineas to the Royal Hospital for Diseases of the Chest, City-road, London, towards the fund now being raised to build and to furnish a home for the nursing staff.—The committee of the Hospital for Consumption, Brompton, has received £1000 from the Goldsmiths' Company and £105 from the Mercers' Company for the country branch of the hospital at Bagshot where the open-air treatment of phthisis is to be carried out.—By the will of Miss Frances Hester Robinson of Richmond £2000 are bequeathed to the British Home for Incurables at Streatham, £2000 to the Deaf and Dumb Asylum in the Old Kent-road, £2000 to the School for the Indigent Blind (for the Junior Branch at Wandsworth), £2000 to the Society for Granting Annuities to the Poor Adult Blind, £1000 to the Charing-cross Hospital, and £1000 to the Hospital for Consumption and Diseases of the Chest, Fulham-road.—Under the will of the late Miss Olivia Atherton of Everton the Royal Infirmary (Liverpool), Northern Hospital (Liverpool), Southern Hospital (Liverpool), and Liverpool Country Hospital for Chronic Diseases receive £1000 each; the Hospital for Women (Liverpool), the Eye and Ear Infirmary (Liverpool), the Liverpool Dispensaries, Liverpool Children's Infirmary, Bootle Hospital, and Stanley Hospital receive £500 each; the Children's Convalescent Home at West Kirby, Wirral Children's Hospital, Home for Incurables, Cancer Hospital (Liverpool), and Liverpool Hospital for Consumption receive £250 each; and the Wallasey Cottage Hospital (Liverpool) receives £200.

**Health of Tiverton Rural Distict.**—Mr. J. R. R. Pollock, the medical officer of health, reports that during 1901 the birth-rate in this Devonshire rural district was 25·51 per 1000, and the death-rate was 14·81 per 1000.

**Defective Drains.**—At the Bristol County Court on March 18th a tenant claimed from the owner of a house £50 damages for alleged breach of warranty respecting the drains. The plaintiff stated that when he took the house from the defendant he was assured that the drains were in perfect condition. After a few months members of the family were constantly ill and one child died from diphtheria. Eventually the plaintiff communicated with the sanitary authority and the drains were found to be defective. The defendant stated that he gave no warranty; all he said was that to the best of his belief the drains were all right. Judgment was given for the plaintiff for £25, with costs.

**Cheltenham General Hospital.**—The annual meeting of the subscribers to this institution was held on March 18th under the presidency of Colonel Croker-King. The medical report stated that 896 in-patients had been admitted during 1901, against 871 in 1900, and there had been 8867 out-patients treated compared with 7936 in the preceding year. The financial statement showed that there was a small increase in church collections and Hospital Saturday collections and the legacies received amounted to £2250, but the excess of expenditure over income nevertheless amounted to £2419. Colonel Croker-King was re-elected president.

**Torbay Hospital, Torquay.**—There is some difficulty at Torbay Hospital with respect to a rule which was adopted by the committee last year providing for the annual election of the honorary medical staff. At the recent election two of the physicians, who were originally appointed for life, were not re-elected although they were thanked for their past services. The board of management then advertised for two gentlemen to fill the vacancies. The members of the profession in Torquay at a meeting agreed that none of their number should apply for the appointments and consequently no applications were received. The honorary medical staff of the hospital feel strongly on the subject of the rule alluded to and six influential governors have requisitioned a special meeting with the object of getting the rule altered.

**Winsley Sanatorium.**—A public meeting in aid of the proposed sanatorium for consumptives for Somerset, Wilts, Gloucestershire, and Bristol was held at Bath on March 13th under the presidency of the Mayor (Mr. E. E. Phillips, L.R.C.P. Edin., M.R.C.S. Eng.). Dr. L. Weatherly mentioned that the members of His Majesty's Advisory Board who recently visited the Winsley Sanatorium, although they regarded it as an admirable spot for such an institution, found that the space would be too small for the erection of the King's Sanatorium for which Sir E. Cassell had given £200,000. It was stated that £20,000 would be needed for the erection of the proposed sanatorium; £5000 had only been received at present, and it has been resolved that the foundation-stone shall not be laid until one half of the required sum has been raised.

**Birmingham General Hospital.**—The report of this institution for 1901 states that the old hospital which was sold to the corporation has now been pulled down and a building which for 130 years did so much for the relief of the sick and suffering passes away in all but memory. The demand on the beds, though great in previous years, has been even greater during the past year, the list of cases awaiting admission often exceeding 200 and it has rarely dropped to 100. The number of in-patients was 5170, a decrease of 41 as compared with the previous year. The daily average of patients in the hospital was 278, against 281½ in 1900. Of the in-patients admitted 902 were children under 12 years of age, of whom 138 were under the age of two years. The out-patients numbered 62,643, or 1778 more than in the previous year. The amount accruing from subscriptions, &c., was £7747 17*s.* 8*d.*, or £469 3*s.* 8*d.* more than in the previous year. Donations amounted to £582 0*s.* 5*d.* and special congregational collections to £52 0*s.* 5*d.* £2973 6*s.* 8*d.* were placed to the credit of the current account as the moiety of legacies received during the year. The ordinary expenditure was £24,411 9*s.* 11*d.* and the extraordinary expenses amounted to £812 17*s.* 2*d.*, while the sum of £276 8*s.* 5*d.* was transferred to the Jaffray branch account to meet the deficit at that institution. An adverse balance of £5110 19*s.* 1*d.* remained at the end of the year, the surplus of £1180 5*s.* 10*d.* shown on the year's working being applied to the reduction of the deficit of £6291 4*s.* 11*d.* brought over from last year.

**Health of Launceston.**—Dr. C. G. Gibson, the medical officer of health of Launceston (Cornwall), in his annual report for 1901 states that during the year the births numbered 59 and the deaths 48. The birth-rate was 14·5 per 1000 and the death-rate was 11·84 per 1000. Dr. Gibson urged the town council to provide an isolation hospital for small-pox cases.

**Dorset County Hospital, Dorchester.**—The sixty-first annual report of this institution which has just been issued states that 299 in-patients were admitted during 1901, against 311 in 1900. The out-patients numbered 961 compared with 996 in the previous year. The average daily number of in-patients was 33; the average cost per patient weekly amounted to £1 0*s.* 2*d.* The financial statement shows that the receipts for the year amounted to £2165 and the expenditure to £2284. The deficit balance at the end of 1900 amounted to £18 and this has now been increased to £137. During the present year it is hoped to provide the hospital with a new operation room, and owing to munificent donations from the Earl of Eldon and the Earl of Ilchester the committee hope that the work will be completed without any call being made on the general funds of the institution.

# Parliamentary Intelligence.

## NOTES ON CURRENT TOPICS.

### *Midwives Bill.*

In anticipation of the report stage of the Midwives Bill several amendments have been prepared and put down on the notice paper of the House of Commons. Mr. Griffith-Boscawen and Mr. Robert Ambrose propose to raise once more the question of the scope of the legislation by moving amendments to make it apply to all women who habitually and for gain attend midwifery cases, while Mr. George Harwood has put down a notice to strike out the subsection inserted at the instance of Sir John Batty Tuke in the Grand Committee which proposes that no woman shall be entitled to recover fees in the courts unless she is certified under the Act. In Clause 2 Mr. T. P. O'Connor will move to strike out the words which give special recognition to the certificates in midwifery of the Royal College of Physicians of Ireland and the Obstetrical Society of London. Several amendments appear in the notice paper with reference to Clause 3, the clause dealing with the constitution and duties of the Central Midwives Board. Mr. Patrick White proposes that the General Medical Council and not the Lord President of the Privy Council shall take the steps for the formation of the Board; Mr. McGovern that the four registered medical practitioners shall be appointed by the General Medical Council instead of by the Royal College of Physicians of London, the Royal College of Surgeons of England, the Society of Apothecaries, and the Incorporated Midwives Institute; and Mr. Griffith-Boscawen that the Royal British Nurses Association shall have a nominee on the Board. With this substantial body of amendments on the notice paper the Bill cannot be taken as unopposed business after midnight. In all probability, therefore, it will have to wait its turn with other private Members' Bills for consideration on a Wednesday after Whitsuntide, unless, of course, the Government arranges to give special facilities.

## HOUSE OF COMMONS.

### Tuesday, March 18th.

### *Vaccination in Government Departments.*

Mr. Channing asked the Vice-President of the Committee of Council on Education whether he was aware that on Feb. 19th a general order was issued on behalf of the Board of Education and signed by Sir William Abney inviting the officers of the department at South Kensington to submit themselves for vaccination and revaccination by the public vaccinator on Feb. 25th and 26th, and desiring those who did not wish to do so to send in their names to the heads of their sections; whether there had been issued since then a further minute, signed by Sir William Abney, inviting officers who still remained unwilling to reconsider the matter before the Board proceeded to decide what further steps should be taken; whether any similar action had been taken on the elementary side at Whitehall and in other Government departments; whether the order and minute were issued by Sir William Abney with the sanction of the Lord President and Sir George Kekewich; and, if so, under what powers, statutory or by regulation, any further steps to compel the officers to be vaccinated or revaccinated could be taken.—Mr. Grant Lawson, replying for Sir John Gorst, said: Notices relating to the vaccination of persons in the employ of the Board of Education have by the authority of the Board been issued both at Whitehall and South Kensington. Similar notices have, I am informed, been issued by other Government departments. No person can be compelled by the Board of Education to be vaccinated or revaccinated.

#### *The Water-supply at Darenth.*

Dr. FARQUHARSON asked the President of the Local Government Board (1) whether he was aware that the Kent Waterworks Company had nearly completed a large pumping station in the parish of Darenth in the Darenth valley, within 1100 yards of the inclosure at Gore Farm in which the Metropolitan Asylums Board had also nearly completed small-pox hospitals to hold a total of 2500 cases; and that the pumping station was at a lower level than any part of this inclosure; and (2) seeing that these small-pox hospitals and the other establishments belonging to the Metropolitan Asylums Board at Gore Farm had no means of drainage for liquids other than soakage into the porous gravels and sands overlying the chalk strata from which the Kent Waterworks derive their supply, whether he would institute an inquiry into the effect on the quality of the water-supply from this drainage, including that from the burial-ground belonging to the Metropolitan Asylums Board at Gore Farm, in which between 1500 and 1600 interments of small-pox and scarlet fever patients had been made, this burial-ground being situated 160 feet higher than, and 1700 yards distant from, the Kent Waterworks Company's pumping station.—Mr. GRANT LAWSON replied for Mr. LONG, saying: I am aware of the facts mentioned in the first paragraph of the question. The well was approved by me in December last as a source of supply after an investigation by an inspector and after samples of the water had been examined by experts and found to be of great organic purity. I am informed that there is no danger of the well being polluted by surface drainage as it is lined with closely fitting iron cylinders to a depth of 92 feet from the surface, the lower 60 feet being in the solid chalk. Moreover, I understand that Gore Farm drains into a subsidiary valley of the Darenth, which enters the main valley fully half a mile below the site of the well, and it is therefore impossible for surface drainage from the hospital lands to reach the vicinity of the well.—Dr. FARQUHARSON asked whether the Local Government Board would send down an inspector in order to relieve the local anxiety on this subject.—Mr. GRANT LAWSON: An inspector was there as recently as last November. He made a close inspection and, as I have said, the water was then submitted to analysis, I do not think it is necessary to do it again.

### THURSDAY, MARCH 20TH.

#### *Vaccination Questions.*

Mr. ROUND asked the President of the Local Government Board if his attention had been called to the danger of infection in schools from children who had not been vaccinated; and if he would take steps, if necessary by legislation, to empower school authorities to exclude such children from attendance at school.—Mr. LONG replied: I am aware of the danger referred to where small-pox is prevalent but it mainly affects children who are not protected by vaccination. I may, however, point out that under Article 88 of the Code of Regulations made by the Board of Education, the managers of any public elementary school must comply with a notice of the sanitary authority of the district or of two members acting on the advice of the medical officer of health, requiring them for a specified time with a view to preventing the spread of disease to exclude any scholars from attendance. There is a right of appeal to the Board of Education if the notice is considered unreasonable. I understand that in one case unvaccinated children have been excluded under the article.

Mr. CORRIE GRANT asked the President of the Local Government Board whether he was aware that Dr. S. M. Copeman inoculated monkeys with small-pox material obtained from cases under observation during outbreaks of the disease, that he inoculated calves from the vesicles so produced on the monkeys, and inoculated a considerable number of children from the vesicles so produced on the calves, as described by himself in a paper read before the Royal Medical and Chirurgical Society on Dec. 10th, 1901; whether these experiments were conducted with the knowledge of the parents or with the knowledge or sanction or at the expense of his department; and whether Dr. Copeman was now or had been in the employment of the Government.—Mr. LONG, in reply, said: The answer to the first two points is in the affirmative. I am informed that a considerable number of children were vaccinated with the lymph obtained from the calves referred to but none of the vaccinations were performed by Dr. Copeman. I have no information as to whether the experiments were conducted with the knowledge of the parents of the children vaccinated but they were not performed with the knowledge or sanction or at the expense of the Local Government Board. Dr. Copeman is one of the medical inspectors of the department.

### FRIDAY, MARCH 21ST.

#### *Enteric Fever among the Troops in South Africa.*

Sir WALTER FOSTER asked the Secretary of State for War if he could state the names of the special sanitary officers who had been sent to South Africa to inquire into the origin and spread of enteric fever and other preventable diseases among the troops, with the dates of their appointments, the length of time spent in South Africa on these duties, and the duties on which they were now engaged.—Mr. BRODRICK replied: Three gentlemen were specially employed in August, 1900, to inquire into the subjects mentioned—Dr. Simpson, Colonel J. L. Notter, R.A.M.C., and Major Bruce. Dr. Simpson served until November, 1901, with an interval of five months, when he was employed on plague duties. He has now gone to Hong-Kong to investigate the recurrence of plague there. Colonel Notter served till October, 1901, when he returned to England. He is now acting as principal medical officer at Aldershot. Major Bruce served till October, 1901. He is now serving on the Advisory Board for Medical Services. Captain Beveridge and Colonel Cooper, R.A.M.C., who were already in South Africa, were also employed in the same work. The recommendations of these gentlemen are being carefully carried out by the responsible medical officers on the spot.

While the House was in Committee of Supply discussing the vote for the salaries and expenses of the War Office Sir WALTER FOSTER made a speech on this subject. He argued that the wastage among the troops from enteric fever was not taken sufficiently seriously. During the months of January and February of the present year there had been 800 deaths among the soldiers—a mortality heavy in itself and representing a large amount of disability through sickness. This drain on the forces, he submitted, was not creditable to the administration. He had been told by the Secretary of State that he was advised by civilian medical men in the best practice in London, but what he stood in need of were the guidance and advice of special experts in sanitary matters—leading medical officers of health or experienced inspectors under the Local Government Board. There were no fewer than 60 places where the mortality from enteric fever was excessive. The disease was preventable and he thought special pains should be taken to protect the soldiers from it. He would like to know whether anything was being done in the way of providing the columns with the means of boiling water.—Mr. BRODRICK said that he agreed with the hon. Member as to the seriousness of the wastage from this disease, but he would remind him of the difficulty there was in enforcing any regulations or precautions that might be prescribed. Regulations might be enforced in a civil community, but the case was entirely different with a moving army scattered over so wide a region as South Africa. Soldiers tired and thirsty would drink water whenever they came across it. A column arrived at a place and while food was being prepared the men in defiance of regulations made off to the river and drank the water. In this way the very best precautions were rendered of no avail. At the same time he fully appreciated the force of the hon. Member's speech and he assured him that the matter would have his best efforts and attention.

#### *Medical Staff of the Refugee Camps.*

Mr. LAMBERT asked the Secretary of State for the Colonies whether any of the medical staff of the refugee camps had complained of their treatment by the chief superintendent, and whether the same had been dismissed by him without notice or reason assigned.—Mr. CHAMBERLAIN said: No, sir; I have not received any complaints, but I think that I ought to add that I have absolute confidence in Sir William Maxwell, the superintendent of the concentration camps and the military governor of the district, and that I should not think of interfering with his discretion in dealing with his subordinates.

### TUESDAY, MARCH 25TH.

#### *Colonel's Pay in the Royal Army Medical Corps.*

Captain NORTON asked the Secretary of State for War if he could state the total pay and allowances of a colonel on the general staff, a colonel on the staff of the Royal Engineers, and a colonel of the Royal Army Medical Corps respectively, and whether any increase of total emoluments for the last-mentioned officer had been arranged for in the forthcoming warrant for the Royal Army Medical Corps.—Lord STANLEY replied for Mr. BRODRICK: The pay and allowances are as follows: Colonel on the staff, £880 and forage; Colonel on the staff (R.E.), £1063 and forage; Colonel of the R.A.M.C., £880 and forage. The recent Committee on the Reorganisation of the Army Medical Service did not recommend any increase to the emoluments of colonels of the Royal Army Medical Corps and no increase is therefore provided for officers of this rank in the forthcoming warrant.

#### *Small-pox Statistics.*

Mr. CORRIE GRANT asked the President of the Local Government Board, having regard to the fact that the system of classification of small-pox deaths, according to a footnote in the weekly return of the Registrar-General, excluded from the classes of vaccinated and not vaccinated all cases not so certified by registered medical men and that cases were put under the heading "no statement" not only when the medical practitioner was unable to certify whether there had been vaccination or not but when the practitioner had failed to make any mention of vaccination, whether he would direct the Registrar-General to secure a stricter classification of the small-pox deaths.—Mr. GRANT LAWSON, for Mr. LONG, replied: I have communicated with the Registrar-General who states that he does at present secure a classification of small-pox deaths which is sufficiently accurate for statistical purposes. Frequently it is not practicable to obtain full information concerning particular cases in time for publication in the current weekly returns but from time to time the information is supplemented with the help of facts subsequently obtained. The Registrar-General will, however, consider whether any alteration shall be made as regards the publication of vaccination statistics in connexion with deaths from small-pox.

#### *Bubonic Plague in Hong-Kong.*

Mr. WEIR asked the Secretary of State for the Colonies if he would state the percentage of the bubonic plague cases in Hong-Kong for each month since August last inclusive; and, in view of the fact that the plague was largely attributed by the Legislative Council of Hong-Kong to the prevalence of rats, would he say whether effect had been given to the council's proposals to employ an English rat-catcher; and, if so, with what result.—Mr. CHAMBERLAIN replied: The number of plague cases in Hong-Kong was—for August, 20; for September, 22; for October 3; and one case occurred in each of the three months, December, January, and February. I have urged upon the Colonial Government the necessity of destroying rats and very large numbers have been killed, but no such proposal as that referred to by the hon. Member has been brought to my notice.

#### *Typhoid Fever Epidemic in Ireland.*

Mr. TULLY asked the Chief Secretary to the Lord Lieutenant of Ireland if he could say what was the nature of the report of Dr. McWeeney as to the outbreak of typhoid fever in Boyle Union in connexion with a local creamery; and could he state why no steps were taken to act on this report and to close the creamery during the epidemic.—Mr. WYNDHAM said in reply: The report was unfavourable. The creamery was closed for some days, during which the structural defects were remedied. The Local Government Board inspector considers the creamery may now be worked without danger to the public health.

## BOOKS, ETC., RECEIVED.

BAILLIÈRE, J. B., ET FILS, 19, Rue Hautefeuille, Paris.

Les Oxydations de l'Organisme (Oxydases). Par E. Enriques, Médecin des Hôpitaux de Paris, et J. A. Sicard, Chef de Clinique à la Faculté de Médecine de Paris. ("Actualités Médicales" Series.) Price 1 fr. 50c.

HIRSCHFELD BROTHERS, 13, Furnival-street, Holborn, E.C.

Plant Relations: a First Book of Botany. Plant Structures: a Second Book of Botany. By John M. Coulter, A.M., Ph.D., Head Professor of Botany, University of Chicago. Second edition, revised. Price 6s. net.

Kimpton, Henry, 13, Furnival-street, Holborn, E.C.

The Principles of Pathological Histology. By Harvey R. Gaylord, M.D., of Buffalo, N.Y., and Ludwig Aschoff, M.D., of Göttingen. With an Introductory Note by William H. Welch, M.D., of Baltimore, Md. Price 31s. 6*d*. net.

The Ready Reference Handbook of Diseases of the Skin. By George Thomas Jackson, M.D. (Col.), Chief of Clinic and Instructor in Dermatology, College of Physicians and Surgeons, New York. Fourth edition, thoroughly revised. Price 12*s*. 6*d*. net.

A Treatise on Pharmacy for Students and Pharmacists. By Charles Caspari, Jr.Ph.G., Professor of the Theory and Practice of Pharmacy in the Maryland College of Pharmacy. Second edition, revised and enlarged. Price 19*s*. net.

Naud, C., 3, Rue Racine, Paris.

Traité de Bactériologie Pure et Appliquée à la Médecine et à l'Hygiène. Par MM. P. Miquel et R. Cambier, Directeur et Sous-directeur du Laboratoire de la Ville de Paris. Price 45 francs.

Cliniques Médicales Iconographiques. Par MM. P. Haushalter, G. Etienne, L. Spillmann, Agrégés à la Faculté de Médecine de Nancy, and Ch. Thiry, Ancien Interne des Hôpitaux de Nancy. Price not stated.

New Sydenham Society, London.

Volume 174. The Clinical Pathology of the Blood. By Dr. Rud R. v. Limbeck of Vienna. Translated from the Second German Edition by Arthur Latham, M.A (Oxon. et Cantab.), M.R.C.P. Lond., and John Nachbar, M.A., M.D. Cantab. Price not stated.

Pentland, Young J., Edinburgh and London.

Handbook of Obstetric Nursing. By Francis W. N. Haultain, M.D., F.R.C.P. Ed., and James Haig Ferguson, M.D., F.R.C.P. Ed., M.R.C.S. Eng. Fourth edition, revised and enlarged. Price not stated.

Spottiswoode and Co., Limited, 54, Gracechurch-street, E.C.

The Dentists' Register. Printed and published under the direction of the General Council of Medical Education and Registration of the United Kingdom. 1902. Price 3*s*. 4*d*.

# Appointments.

*Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to* The Lancet *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

Adams, Harold Cotterell, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Paignton and Marldon Districts by the Totnes Board of Guardians, vice Dr. J. Hamilton Ward.

Allan, Hector, M.B., C.M. Aberd., has been appointed Medical Officer of Health to the Whalley Bridge Urban District Council.

Barnes, Arthur Stanley, M.D., M.R.C.P Lond., B.Sc., has been appointed Senior House Physician to the National Hospital for the Paralysed and Epileptic, vice Dr. Singer, resigned.

Beattie, R., M.D. R.U.I., has been re-appointed Medical Officer of Health to the Soothill Upper Urban District Councils.

Behrendt, M. R J., L.R.C.P., L.R.C.S. Edin., has been re-appointed Medical Officer of Health to the Scunthorpe and to the Brumby and Frodingham Urban District Councils.

Breton, Lancelot M., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer and Public Vaccinator to No. 3 District of the South Stonham Union.

Bullmore, Charles Cecil, L.R.C.P., L.R.C.S, Edin., L.F.P S. Glasg., has been appointed Medical Officer for the Falmouth and Truro Port Sanitary Authority, vice Dr. W. King Bullmore, resigned.

Buzzard, E. Farquhar, M.A., M.B., M.R.C.P. Lond., has been appointed Assistant Physician to the Belgrave Hospital for Children.

Forbes, R., M.D. Glasg., has been re-appointed Medical Officer of Health to the Eastwood Urban District Council.

Forsyth, R., M.D. Glasg., has been re-appointed Medical Officer of Health to the Drighlington Urban District Council.

Hamilton, John, M.D. Durh., F.R.C.S. Edin., has been re-appointed Medical Officer of Health to the Swadlincote Urban District Council.

Jones, Helena G., M.B. Lond., has been appointed Assistant Medical Officer to the District Asylum, Mullingar.

Parsons, Francis John Crane, L.R.C.P. Lond., M.R.C.S., L.S.A., J.P., has been re-appointed Medical Officer of Health for the Bridgwater Urban District.

Phillips, G. G., M.R.C.S., L.S.A., has been appointed Medical Officer of Health to the Tickhill Urban District Council.

Phillips, Hubert C., M.R.C.S. Eng., M. & L.S.A. Lond., has been appointed Anæsthetist to the Female Lock Hospital, Harrow-road, W.

Soltau, Grace, L.R.C.P. & S. Edin., has been appointed House Surgeon to the Belgrave Hospital for Children.

Stewart, Thomas Grainger, M.B., Ch.B. Edin., has been appointed Junior House Physician to the National Hospital for the Paralysed and Epileptic, vice Dr. Barnes.

Turner, Dawson, B.A., M.D. Edin., has been appointed Examiner in Experimental Physics to Edinburgh University.

Vernon, Ethel M., M.D., B.S. Lond., L.S.A., has been appointed Pathologist to the New Hospital for Women, Euston-road.

Wolfe, James Francis, M.B., C.M. Edin., has been appointed Medical Officer to the Heavitree (Exeter) Isolation Hospital.

Worger, Richard George, L.R.C.P. Lond., M.R.C.S., L.S.A., has been re-appointed Medical Officer and Public Vaccinator for the Kilmersdon District by the Frome (Somerset) Board of Guardians.

# Vacancies.

*For further information regarding each vacancy reference should made to the advertisement (see Index).*

Bedford County Hospital.—House Physician. Salary £60 p annum, with board, lodging, and washing. Also Senior Hou Surgeon. Salary £100 a year, with apartments, board, a washing.

Birmingham Workhouse Infirmary.—Assistant Resident Medic Officer. Salary £100 per annum, with apartments, rations, &c.

Brentford Union Infirmary and Workhouse.—Assistant Medic Superintendent, unmarried. The person appointed will be requir to devote his whole time to the service of the guardians. Sala £120 per annum, with apartments, rations, washing, &c.

Bridgwater Infirmary.—House Surgeon. Salary £80 a year, wi board and residence.

Central London Ophthalmic Hospital, Gray's Inn-road, W.C. Refraction Assistant. Salary at rate of £50 per annum.

Chelsea Hospital for Women, Fulham-road, S.W.—Pathologist.

City of London Union Infirmary.—Assistant Medical Superi tendent, single, or widower without children. Salary £150 p annum, with apartments, rations, and washing.

Durham County Hospital.—House Surgeon, also Assistant Hou *Surgeon. Salary of Senior £100, Junior £65, with board and lodgi* in each case.

Essex and Colchester General Hospital.—House Surgeon. Sala £100 a year, with board, washing, and residence.

Guy's Hospital.—Demonstrator of Bacteriology and Bacteriologi Salary about £180, rising to £200 per annum.

Hospital for Consumption and Diseases of the Chest, Brompto —Resident House Physicians for six months. Honorarium £25.

Leeds General Infirmary.—Honorary Dental Surgeon.

Leicester Infirmary.—Assistant House Surgeon. Salary £80 p annum, with board, apartments, and washing.

Lincoln Hospital for the Insane, The Lawn.—Assistant Medic Officer. Salary £100 a year.

Liverpool Royal Southern Hospital.—Junior House Surgeo Salary 60 guineas per annum.

Norfolk and Norwich Hospital.—House Surgeon, unmarrie Salary £80 per annum, with board, lodging, and washing.

North-Eastern Hospital for Children, Hackney-road, N.E.—Hou Physician for six months. Salary at rate of £80 per annum, wi board, residence, and laundry.

Northumberland House, Finsbury-park, N.—Assistant Medic Officer. Salary £120 per annum, with board, &c.

Nottingham General Dispensary.—Assistant Resident Surgeon, u married. Salary £160 per annum, increasing by £10 every yea with apartments, attendance, light, and fuel.

Oldham Infirmary.—Senior House Surgeon. Salary £100 per annu with board, residence, and washing.

Paddington Infirmary.—Clinical Assistant and Second Assista to the Medical Superintendent, unmarried, for six months. Hon rarium £36, with board, lodging, and washing.

Parish of St. Pancras, London.—Senior Assistant Medical Offic (Resident). Salary £135 per annum, with allowances.

Royal South Hants and Southampton Hospital.—Assista Physician.

Royal University of Ireland.—Examiners in Surgery, salary £5 Midwifery, salary £35; Pathology, salary £25; and Ophth mology, salary £20; in each case with travelling allowances.

St. Pancras and Northern Dispensary, 126, Euston-road.—Honora Surgeon.

Sheffield University College.—Demonstrator in Bacteriologic Laboratory. Salary £150, rising to £200 per annum.

South Lambeth, Stockwell, and North Brixton Dispensar Albert-square, Clapham-road.—Vacancy in Visiting Medical Staff.

Tottenham Hospital.—House Surgeon. Salary £50 per annum, wi board, residence, and laundry.

Tunbridge Wells General Hospital.—House Surgeon, unmarrie Salary £100 per annum, with board, apartments, gas, firing, a attendance.

Victoria Hospital, Folkestone.—House Surgeon. Salary £100 p annum, with board, residence, and laundry.

# Births, Marriages, and Deaths.

## BIRTHS.

Chambers.—On March 19th, at The Priory, Roehampton, the wife James Chambers, M.D. R.U.I., of a son.

Evans.—On March 23rd, at Upper Wimpole-street, the wife Willmott Evans, M.D., F.R.C.S., of a son.

Fawssett.—On March 16th, at Stratford-road, Sparkbrook, Birmir ham, Ethel, wife of Basil Fawssett, M.R.C.S., L.R.C.P. Lond., of son.

Hunnard.—On March 18th, at Mansfield, Notts, the wife of Arth Hunnard, M.B., B.S. Lond., prematurely, of a daughter.

Pearson.—On March 18th, at Aliceedale, South Africa, the wife Maurice Grey Pearson, M.B. Lond., of a son.

## DEATHS.

Caddy.—John Turner Caddy, M.D., died on March 21st at Chart house, Lion Gate-gardens, Richmond, Surrey, aged 80.

Phillips.—On March 19th, at Porchester-square, Francis Addis Phillips, M.R.C.S., L.R.C.P. Lond., aged 30.

*N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

# Notes, Short Comments, and Answers to Correspondents.

## SCOTTISH POOR-LAW MEDICAL OFFICERS.

our readers will turn to THE LANCET of March 8th, 1902, page 685, they will find an annotation under the above heading giving particulars of the differences between Dr. G. Nicoll, the medical officer of the parish of Clyne, Sutherland, and some of the ratepayers. Since then another meeting of ratepayers has been held at Brora on Feb. 28th in consequence of the Parish Council of Clyne not having acted upon the resolution of the ratepayers' meeting held on Feb. 11th demanding the dismissal of Dr. Nicoll. Mr. Andrew Ross, a ratepayer and a member of the county council, was elected chairman. The reply from the clerk of the parish council addressed to this gentleman and dated Feb. 13th was read. It acknowledged the resolution passed on Feb. 11th and stated that he had written to the chairman of the parish council (Mr. Sharp) for instructions. The chairman of the meeting said that he had heard nothing from that gentleman and thus they had met again. Four motions were then put to the meeting and carried *nem. con.* The first resolution was to the effect that the ratepayers' meeting was dissatisfied with the parish council in its still retaining the services of Dr. Nicoll, and dissatisfied with the chairman, Mr. Spark, for his lack of immediate action. The second resolution appointed a deputation of 12 ratepayers to wait upon the chairman of the council to learn his proposed action and requesting him to call an early special meeting of the council. The third resolution determined that should the parish council not take immediate action the matter be brought before the Local Government Board and the Medical Board. The fourth embodied the finding of the meeting that the officer should be dismissed instantly with payment of three months' salary in advance. Several councillors spoke at the meeting and it appeared that six months ago a motion was brought forward in the council to dismiss Dr. Nicoll; that five voted for it and five against; and that the chairman gave his casting vote in favour of keeping him. It is hardly necessary to add that the most prominent speakers at the ratepayers' meeting were some of the five who voted against the motion in council. This seems to have been the *primum mobile* of the matter. The chairman stated that the result of the deputation would be communicated to the ratepayers at a subsequent meeting. A deputation was then appointed which met the chairman of the parish council on March 3rd. He is reported to have replied that as the letter accompanying the resolutions was addressed to the council as a body he declined to take any action.

An interesting correspondance has been running in the pages of the *Northern Times* on this subject. One of the malcontents states that the parochial board of 12 years ago took steps to have a medical officer for its own parish and paid him £47 beyond the regular salary for attending paupers so that it could have a medical man nearer and at a cheaper rate to attend the other parishioners. "Lex Terræ," in reply, says he does not believe that the statement is correct; he states that such an arrangement is illegal and refers to the thirty-first annual report (1876) of the Board of Supervision whose decision in a similar case was that it was illegal to expend the funds raised for the relief of the poor in order to provide cheaper or more convenient medical attendance for persons who are not paupers. He refers also to the second annual report of the Local Government Board (1896), where it is pointed out that the inhabitants of a parish might make such arrangements as they saw fit to induce a medical man to settle in the parish, but these conditions could not enter into the contract between the parish council and its medical officer.

It seems to us that after being so narrowly defeated at the council meeting the minority have raised an agitation amongst the ratepayers starting with the assumption that their medical man is a sort of club doctor to the parish whom they have forced to accept a composition of a part of his proper fees, and in consequence that he is, like the parochial fireman, always at the beck and call, *nolens volens*, of any parishioner, especially an obtrusive ratepayer.

## GREEK FOUNDLING CHILDREN IN CONSTANTINOPLE.

THE LANCET of April 6th, 1901, p. 1020, we reviewed a work by Dr. Spiridion C. Zavitziano of Constantinople, in which that gentleman gave a very favourable account of the methods adopted by the Greek community in Pera for the rescue of foundlings, a system which has been in operation for about 12 years. Two or three months ago the Œcumenical Patriarch appointed a commission to consider whether the same system of caring for foundlings could be extended to the other suburbs of the Turkish capital, and this commission recommended the establishment of a maternity hospital with a view to the discouragement of abortion and infanticide. A serious difficulty has, however, now arisen because since the report of the commission has been printed the Turkish Government has issued an order to the police by which all the foundlings of Constantinople, whether they are of the Christian religion or not, must be sent to the poor asylum where, up to this date, the results have not been at all encouraging. For instance, out of 112 children admitted there only eight are now alive, whereas among the foundlings of Pera taken care of by the Greek community the death-rate is only 4 per cent. or less. Among about 80 of these last-mentioned children only two died during the month of January and none during the month of February. Under these circumstances it seems to be hardly possible to justify the new regulation made by the Turkish Government.

## FLUORIDES IN MEDICINE.

*To the Editors of* THE LANCET.

SIRS,—I shall be very much obliged if any of your readers can give me any information in connexion with the medicinal or other use of hydrofluoric acid and its compounds, and as to any injurious effects which may have resulted from their administration. I find that there is an increasing tendency to use them as food preservatives. I have noted references with regard to their use in Martindale and Westcott's Extra Pharmacopœia, ninth edition.

I am, Sirs, yours faithfully,  
March 18th, 1902. A. E. P.

## MR. RAWKINS REDIVIVUS.

AT the Plymouth County Court on March 12th Mr. William O. T. Annesley, L.S.A. Lond., brought an action against Mr. H. O. Lambart, L.R.C.P., L.R.C.S. Edin., for £5, balance of fees for acting as locum-tenent in April, May, and June, 1900, during which time plaintiff took charge of defendant's surgery at a salary of £2 2*s.* a week. Letters were read in court from defendant stating, "The surgery to pay expenses must make at least £4 per week, so charge them more and put in second bottles and plasters, ointments and lotions whenever you get the chance." "I saw you had given a six-ounce bottle to a child five years old, and the dose marked on it was one teaspoonful three times a day. Now you will see we shall never make a fortune at that rate. ...... Kindly remedy this. Give to a child of that age a one and a-half ounce bottle, charge 1*s.*, and order a teaspoonful every two or three hours, so that they may come back next day." The defence was that plaintiff did not perform his duties satisfactorily. His Honour Judge Lush Wilson, K.C., gave judgment for plaintiff for £2 18*s.* 11*d.* and costs.

Does anyone, we wonder, ever read nowadays a novel by Albert Smith called "*The Adventures of Mr. Ledbury*"? If so, he will remember the scene when Johnson announced that Mrs. Stokes wanted four more draughts and would call for them by-and-by.

> "Very good!" replied Mr. Rawkins. "Suppose you make it six. The bread bill will be heavy this week, and I shall want some ground bait on Friday. The extra three shillings will cover it."
>
> "Bob," shouted Mr. Prodgers ...... "Where are the clean phials?"
>
> "There ain't none," answered Bob. "I hadn't time to shot 'em."
>
> "We can send a mixture instead," said Johnson. "I can wash out this Reading-Sauce bottle in a minute."
>
> "No, no, by no means," returned Rawkins, "don't put her up to it. The minute people find that a three-shilling mixture holds more than four eighteen-penny phials, they put the skid on the draughts; wait for the little bottles."

So does history repeat itself, but it is the kind of history which needs no repetition. Mr. Lambart's situation was made to wear as undignified an appearance as possible, but he has his own letters to thank for this. It is an unfortunate fact that the medical man can always obtain thanks and sometimes payment for medicine, while his undiluted advice is very generally rewarded by neither. This attitude of the public, which is tantamount to a demand for a constant supply of drugs, compels medical men occasionally to order medicine so as to ensure their instructions being followed. It may also be here and there responsible for a revival of the policy of Mr. Rawkins, but we repudiate utterly any suggestion that such unworthy tactics are often resorted to by members of our great and philanthropic profession.

## STERILISED DRESSINGS IN PACKETS.

Messrs. Maw, Son, and Thompson have sent us a specimen packet of sterilised dressings. The specimen submitted to us contains Lister's cyanide wool. It is carefully packed in three papers, the outer being merely a covering layer. Within this is a layer of parchment paper carefully sealed with paraffin wax, and within this again another layer of thin paper. It is stated that the wool and the two inner coverings are carefully sterilised before putting up, and it is evident that the strict observance of all precautions will enable the surgeon to carry with him enough dressing for one case or so in a handy form.

## RARE MEDICAL LITERATURE.

Two rare old quasi-medical works were included in the sale of Lord Mexborough's library at Sotheby's auction-rooms, Wellington-street, W.C., recently. The first consisted of eight leaves, printed in a bold Gothic letter, 24 letters to a full page, and believed to have been issued by W. de Machlinia, of London, in the year 1483. The title runs, "Here begynneth a litill boke necessarye and behoveful ayenst the Pestilence," and the introduction states, "I the Bisshop (Ramicus) of Arusiens in the royame of Denmarke, doctour of Phisike, will write by the moost experte and famous doctours auctorised in Phisike somme thinges of the infirmyte of pestilence which dayly enfecteth and sone suffreth us to departe oute of this lyfe." This was sold for £160, the purchaser being Mr. Quaritch. The other work referred to was of the date 1652, the author being George Fidge, and the title "The Great Eater of Grayes-Inne, or the Life of Mr. Marriot the Cormorant, Wherein is set forth all the Exploits and Actions by him performed; with many pleasant Stories of his Travells into Kent and other places. Also a rare Physicall Dispensatory, being the manner how he makes his Cordiall Broaths, Pills, Purgations, Julips, and Vomits to keep his Body in temper and free from Surfeits." This realised £11 5s.

## A QUESTION OF FEES.

*To the Editors of* THE LANCET.

SIRS.—When attending a club patient with a dangerous aneurysm I at his request called in and conferred with my medical neighbours. Since the decease of the patient I find that the widow expects the club to pay the consultation fees, also my fee for meeting them in consultation. I have always made a rule of charging club patients a fee when I meet any medical man in consultation, and I think I am within my rights in so doing. Will you kindly express your view on the matter

I am, Sirs, yours faithfully,
March 25th, 1902. CONSTANT READER.

*** We think that such extra services rendered by the club medical officer as attending at a consultation *should be paid by the patient* or his representatives and not by the club. The patient or his representatives should also pay the consultation fees of the medical gentlemen called in to consider the case with the club medical officer.—ED. L.

## WANTED—A HOME.

*To the Editors of* THE LANCET.

SIRS,—Can any reader kindly recommend a comfortable home, in London or suburbs, where a lady, aged 76 years, would be well cared for? She is bedridden from right hemiplegia with contractures (no aphasia), and cannot pay more than £2 a week.

I am, Sirs, yours faithfully,
Teignmouth, Devon. F. CECIL H. PIGGOTT, M.D. Cantab.

## A WARNING.

*To the Editors of* THE LANCET.

SIRS,—A canvasser for a trade directory is calling at the houses of medical men at an hour when they are probably out and interviews their wives or housekeepers. He represents that the name of the medical man was in the last edition of his trade directory and asks sometimes 2s., sometimes 3s., for a re-insertion. His manner is plausible and he generally gets the money.—I am, Sirs, yours faithfully,

Romford-road, Forest Gate, March 21st, 1902. STEPHEN SMITH.

## COUNTRY HOUSE SEWAGE DISPOSAL.

*To the Editors of* THE LANCET.

SIRS,—I should be obliged if any of your readers would tell me the best way of dealing with the sewage of a country house having about one acre of ground. At present the sewage is conveyed into an underground covered tank made of unmortared walls, so that the liquid drains into the surrounding gravelly soil, the surface being thickly planted with trees. In wet weather the overflow comes to the surface and is at times offensive. The present system has been in operation or 12 years without causing any trouble, but now the soil is becoming "sick" and is a nuisance. The house is built on the slope and the soil is stony and porous. I am, Sirs, yours faithfully,

March 22nd, 1902. M.D.

## A CAUTION WITH RESPECT TO SAMPLES.

*To the Editors of* THE LANCET.

SIRS,—A tin box containing Bipalatinoids No. 581, forwarded by Messrs. Oppenheimer, Son, and Co., Limited, was incautiously opened and one of the bipalatinoids fell on the floor. My favourite cat played with it and ate it. In about half an hour after it was reported in a fit and when I saw it it was dead. It had micturated and its limbs were contracted. I referred to the prescription on the box and found inscribed —Ferrous carbonate (pil. Blaud), aloin, strychnia, ac arseniosi, āā gr. $\frac{1}{20}$, pulv. capsici, gr. $\frac{1}{4}$. Dose, one after meals. Strychnia gr. $\frac{1}{20}$ was the amount taken by the cat which caused its death by poisoning. If animals are about one should not be satisfied until such samples are burnt in the fire, as no other disposal is safe. I hope this may be a warning to others. I am, Sirs, yours faithfully,

F. A. PURCELL, M.D. R.U.I.
Manchester-square, W., March 24th, 1902.

## HOW DISEASE IS SPREAD.

TWO persons were fined 40s. each at the Glasgow Sheriff Court on March 20th for concealing cases of small-pox which had occurred in their respective houses. In the first case the defendant pleaded that the patient refused to see a medical man because he feared being sent to a hospital. The case was not discovered until after the patient's death. In the second case an Irishman was the accused. The first intimation which the sanitary authorities received was through the police who had been informed by neighbours. When
the medical officer called and asked to see the patient who was s
to be suffering from small-pox he was shown an elder sister and w
told that she was the only girl in the house. On going into t
kitchen, however, he found a young girl lying in bed, hidden
bedclothes, who was suffering from small-pox. The school boa
officer had been told that the girl was staying with some friends
Ireland. The elder sister was the only member of the household w
had been revaccinated and she was nursing the patient notwit
standing the fact that she was employed at home by a firm
dressmakers in the city. In reporting these cases the *Belfast W*
states that the sheriff regretted exceedingly that legislation o
provided a fine of 40s. for so gross a crime against the pu
interest. In the second case no comment seems to have b
made and no doubt the sheriff felt the impossibility of doing so
temperate language. In both instances the house was occupied
several people. We share the sheriff's regret that the fine which
Legislature has thought sufficient in these cases is so ridiculou
inadequate and we have called attention to the matter on sev
occasions, but until the law is altered and the penalty is m
greater the public will still be exposed to the danger of infec
through the criminal action of selfish or ignorant people.

THE writer of an account of a Case of Eclampsia, the manuscript
which bears no title or author's name, is requested to communi
with us.

THE writer of *a letter signed "G.P." and dated Feb. 17th is also*
quested to communicate with us.

◆

*Neurin.*—Our correspondent is recommended to apply to Profe
Adamkiewicz himself. His address is IV Wiedner Hauptstrasse
Vienna, Austria.

*J. B.* should consult his medical man. We do not give medical adv

## Medical Diary for the ensuing Weel

### OPERATIONS.

### METROPOLITAN HOSPITALS.

**MONDAY** (31st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.),
Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.
Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.
Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-sq
(2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P
Gt. Northern Central (2.30 P.M.) West London (2.30 P.M.), Lo
Throat (2 P.M.).

**TUESDAY** (1st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.)
Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), W
minster (2 P.M.), West London (2.30 P.M.), University Co
(2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. M
(2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Th
(2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M.
2.30 P.M.), Throat, Golden-square (9.30 A.M.).

**WEDNESDAY** (2nd).—St. Bartholomew's (1.30 P.M.), University Co
(2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-
(3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's Co
(2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P
National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Sama
(9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Nort
Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P
London Throat (2 P.M.), Cancer (2 P.M.), Throat, Golden-sq
(9.30 A.M.).

**THURSDAY** (3rd).—St. Bartholomew's (1.30 P.M.), St. Thon
(3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.),
George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middl
(1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-
London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gyn
logical, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P
St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Th
Golden-square (9.30 A.M.).

**FRIDAY** (4th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.),
Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Cha
cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. M
(2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.)
Northern Central (2.30 P.M.). West London (2.30 P.M.), Lo
Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P
Throat, Golden-square, (9.30 A.M.), City Orthopædic (2.30 P.M.).

**SATURDAY** (5th).—Royal Free (9 A.M. and 2 P.M.), London (2
Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University Co
(9.15 A.M.), *Charing-cross* (2 P.M.), St. George's (1 P.M.), St. M
(10 P.M.), London Throat (2 P.M.), Throat, Golden-square (9.30 A

At the Royal Eye Hospital (2 P.M.), the Royal London Ophtha
(10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and
Central London Ophthalmic Hospitals operations are performed da

## SOCIETIES.

DNESDAY (2nd).—OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Specimens will be shown by Dr. Fairbairn, Dr. Williamson, Dr. Berkeley, Dr. M. Kerr, and Dr. A. Routh. Paper:—Dr. Lowers: A Case of Primary Tuberculosis of the Cervix simulating Cancer and treated by Vaginal Hysterectomy.

IURSDAY (3rd).—RÖNTGEN SOCIETY (20, Hanover-square, W.).—8.30 P.M. Paper forwarded by Dr. Ch. Leonard (Philadelphia): X-ray Diagnosis of Renal Calculus.

IARVEIAN *SOCIETY OF LONDON* (Stafford Rooms, Titchborne-street, Edgware-road, W.).—8.30 P.M. Paper:—Dr. R. Bowles: The Practical Treatment of Functional Vasomotor Disturbances.—Mr. R. Johnson: Some Points in the Treatment of Tuberculous Disease of the Knee.

DAY (4th).—WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary, Greenwich-road, S.E.).—8.45 P.M. Discussion on Anæsthetics (introduced by Dr. B. Gardiner).

ITISH ELECTRO-THERAPEUTIC SOCIETY (11, Chandos-street, Caven-dish-square, W.).—8.30 P.M. Papers:—Dr. H. Walsham: The Dia-nosis of Thoracic Aneurysm by the X-rays (illustrated by the antern).—Dr. Sequeira: The Finsen Treatment of Lupus, Rodent lcer, &c. (illustrative cases will be in attendance at 8.15 P.M.).

ST LONDON MEDICO-CHIRURGICAL SOCIETY (Society's Rooms).—.30 P.M. Papers:—Dr. J. Allan: The Treatment of Malignant Disease by Electrical Currents of High Potential Frequency (with otes of cases).—Dr. A. Whitfield: A Case of Peculiar Intolerance f the External Application of Mercury.—Dr. J. D. Mortimer: emarks on 1000 Anæsthetisations.

## EOTURES, ADDRESSES, DEMONSTRATIONS, &c.

JRSDAY (3rd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. Hutchinson: Clinique. (Surgical.)

DAY (4th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. H. Tilley: Clinique. (Throat.)

## EDITORIAL NOTICES.

t is most important that communications relating to the torial business of THE LANCET should be addressed *usively* "TO THE EDITORS," and not in any case to any tleman who may be supposed to be connected with the orial staff. It is urgently necessary that attention be n to this notice.

*is especially requested that early intelligence of local events aving a medical interest, or which it is desirable to bring nder the notice of the profession, may be sent direct to his Office.*

*tures, original articles, and reports should be written on ne side of the paper only,* AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTI-FICATION.

*ters, whether intended for insertion or for private informa-ion, must be authenticated by the names and addresses of their writers—not necessarily for publication.*

*cannot prescribe or recommend practitioners.*

*al papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."*

*ters relating to the publication, sale, and advertising departments of* THE LANCET *should be addressed "To the Manager."*

*cannot undertake to return MSS. not used.*

## MANAGER'S NOTICES.

### THE INDEX TO THE LANCET.

E Index to Vol. II. of 1901, which was completed with issue of Dec. 28th, and the Title-page to the Volume, given in THE LANCET of Jan 4th.

### VOLUMES AND CASES.

OLUMES for the second half of the year 1901 are now ly. Bound in cloth, gilt lettered, price 18*s.*, carriage

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

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WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to *the Agent to whom the subscription is paid and not to* THE LANCET Offices.

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SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE. It has come to the knowledge of the Manager that in some cases higher rates are being charged, on the plea that the heavy weight of THE LANCET necessitates additional postage above the ordinary rate allowed for in the terms of subscriptions. Any demand for increased rates, on this or on any other ground, should be resisted. The Proprietors of THE LANCET have for many years paid, and continue to pay, the whole of the heavy cost of postage on overweight foreign issues; and Agents are authorised to collect, and do so collect, from the Proprietors the cost of such extra postage.

The Manager will be pleased to forward copies direct from the Offices to places abroad at the above rates, whatever be the weight of any of the copies so supplied. Address—THE MANAGER, THE LANCET OFFICES, 423, STRAND, LONDON, ENGLAND.

## METEOROLOGICAL READINGS.

*(Taken daily at 8.30 a.m. by Steward's Instruments.)*

THE LANCET Office, March 26th, 1902.

| Date. | Barometer reduced to Sea Level and 32° F. | Direction of Wind. | Rain-fall. | Solar Radia in Vacuo. | Maximum Temp. Shade. | Min Temp | Wet Bulb. | Dry Bulb. | Remarks at 8.30 a.m. |
|---|---|---|---|---|---|---|---|---|---|
| Mar. 20 | 29·39 | S.W. | ... | 65 | 49 | 43 | 46 | 48 | Stormy |
| " 21 | 29·26 | S.W. | 0·27 | 93 | 62 | 39 | 40 | 42 | Fine |
| " 22 | 29 24 | S.W. | 0·10 | 77 | 46 | 39 | 41 | 43 | Cloudy |
| " 23 | 29·35 | S.W. | 0·10 | 85 | 48 | 38 | 39 | 39 | Cloudy |
| " 24 | 29 57 | S.W. | 0·05 | 81 | 48 | 36 | 37 | 39 | Cloudy |
| " 25 | 29·42 | WNW | 0·13 | 84 | 51 | 38 | 40 | 43 | Cloudy |
| " 26 | 29·91 | N.W. | ... | 82 | 51 | 35 | 38 | 40 | Cloudy |

During the week marked copies of the following newspapers have been received:—*Eastern Evening News, Army and Navy Gazette, Clinical Journal, Nursing Record, Sanitary Record, The Rock, Nordiskt Medicinskt Arkiv, Wolverhampton and Coventry News, Middlesboro' Daily Gazette, Warwick and Warwickshire Advertiser, Wynberg Times, Reading Mercury and Oxford Gazette, Western Morning News, Echo, Glasgow Evening News, Surrey Herald, Manchester Guardian, Morning Leader, Star, South Wales Daily News, Standard, Freeman's Journal, Birmingham Post, South Wales Echo, Birmingham Mail, Hartlepool Mail, City Press,*

## Communications, Letters, &c., have been received from—

**A.**—Monsieur J. Astier, Asnières; Dr. E. Antrobus, Great Malvern; *Messrs. Allen and Hanburys, Lond.*

**B.**—Dr. E. F. Buzzard, Lond.; Messrs. Burgoyne, Burbidges, and Co., Lond.; Major E. H. Brown, I.M.S., Calcutta; Bedford County Hospital, Secretary of; T. B. Browne, Ltd., Lond.; Mr. J. P. Brooks, Wolverhampton; Mrs. Brown, Coniscliffe; Mr. T. B. Browne, Manchester; Messrs. F. B. Benger and Co., Manchester; Dr. Byrom Bramwell, Edinburgh; Mr. W. J. Beveridge, Caylloma, Peru; Messrs. C. Barker and Sons, Lond.; *Birmingham Gazette.*

**C.**—Dr. J. H. Crawford, Bradford; Messrs. Cosenza and Co., Lond.; Messrs. T. Christy and Co., Lond.; Cortland Wagon Co. Lond.; Mr. T. Carwardine, Bristol; Messrs. S. Clark and Co., Lond.; Dr. E. P. Cathcart, Munich; Messrs. W. P. and W. Cox, Leicester; Dr. Edgar du Cane, Swindon.

**D.**—Captain W. Dixon, Lond.; Davis's Feather Mills, Lond.; Messrs. Davis and Ornstien, Lond.; Denver Chemical Manufacturing Co., New York; Mr. Surendranath Deva, Allahabad, India.

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